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A Peer Reviewed Journal



Magadh Mahila College



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Magadh Mahila College



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MAGADH MAHILA COLLEGE

PATNA UNIVERSITY

3rd Cycle NAAC Accredited 'B+' Grade
'College with Potential for Excellence' (CPE)
Status Accorded by UGC

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अन्नया राज, ईशा कुमारी, मानसी एवं अंजु कुमारी





Films : A Study as Drama

Archana Jaiswal

Abstract:

Life is a text and meaning lies within the text. This text has been reflected through different works of art. Any genre of art, literature, fine arts, painting, architecture : all are of life, for life, and by life i.e life and art are interdependent. Films are no exception to it, as they emanate from life and reflect life. They come close to literature when perceived through different perspectives. If drama is a story in action, films can be taken as drama: if, a story, with a beginning, a middle and an end, becomes a novel and with the presence of music, figurative use of language and other poetic elements can be perceived as poems. The present paper is an attempt to focus on the different characteristics in films particularly Indian films that bring them quite close to drama. Different types of drama that flourished in different ages in different forms; be it Aristotle's concept of drama, Shakespearean drama, Revenge tragedies, Horror plays, Problem plays, Absurd theatre, can be easily perceived in the films down the ages. Even the aesthetics of Indian classical drama can be perceived in films. Before the advent of cinematography, drama and theatre were in vogue with different aims and objectives. Drama in an artistic way has been extolling tales about God and goddesses, heroes and valiant victories, historical epics, romantic tragedies, comic incidents, episodes and much more doing the same for years from now. Cinema and literature are two distinct but equally extraordinary works of art. But both of them are quite close to each other as they all deal with life. So,

though quite different in nature, films can be studied as drama and becomes close to literature.

Keywords: Text, architecture, genre, revenge, tragedies, comedies, absurd, aesthetics, cinematography.

Introduction:

***Life is a text and meaning lies within the text*¹.**

This text has been reflected through different works of art. Any genre of art, literature, fine arts, painting, architecture : all are of life, for life, and by life i.e life and art are interdependent. Films are no exception to it, as they emanate from life and reflect life, they come close to literature when perceived through different perspectives. If drama is a story in action, films can be taken as drama, if a story, with a beginning, a middle and an end, becomes a novel and with the presence of music, figurative use of language and other poetic elements can be perceived as poems. The present paper is an attempt to focus on the different characteristics in films particularly Indian films that bring them quite close to drama. Different types of drama that flourished in different ages in different forms; be it Aristotle's concept of drama, Shakespearean drama, Revenge tragedies, Horror plays, Problem plays, Absurd theatre, can be easily perceived in the films down the ages. Even the aesthetics of Indian classical drama can be perceived

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in films. Before the advent of cinematography, drama and theatre were in vogue with different aims and objectives. Drama, in an artistic way has been extolling tales about God and goddesses, heroes and valiant victories, historical epics, romantic tragedies, comic incidents, episodes and much more doing the same for years from now. Cinema and literature are two distinct but equally extraordinary works of art. But both of them are quite close to each other as they all deal with life. So, though quite different in nature, films can be studied as drama and becomes close to literature.

The growth and development of English drama goes back to mystery and miracles when the aim and objective of writing drama was religious, that is to propagate and spread moral ethical and particularly religious values among people. In England it was intended to spread Christianity, as the majority of the people were illiterate. So, by the performing art of drama the message of God was disseminated to the mass. Later, moral and cultural values were disseminated by means of morality plays. The earlier form of drama was very entirely religious in nature and content. The first tragedy in English was *Gorboduc* composed in 1561 by Thomas Sackville and Thomas Norton. Similarly Nicholas Udall compiled the first English comedy, *Ralph Roister Doister*. But drama acquired the true intent and colour in the hands of University Wits paving the path for Romantic drama. Then drama came out of its religious objective and started dealing with human life and human attributes like love, jealousy, hatred, revenge. In this way we have revenge plays as well as comedies and tragedies based on the the aesthetics laid down by Aristotle. Art is an Imitation. So is drama and so are the films.

***All forms of art, the art of painting, music and dance imitate life, as literature does* ².**

To Plato the activity of imitation is the womb and matrix of all arts ³. We distinguish Imitative arts from

one another by the various means employed. Second distinction is on account of nature of the objects represented. Either the objects are idealised or caricatured. So we have tragedy or comedy. The arts may be distinguished according to the mode of imitation. A poet may imitate life by the method of narration as in epics poets do or by representation of an action as in drama. Tragedy is essentially an imitation in language ornamented with various devices such as rhythm and melody. Unlike poetry, the imitation here is in the form of drama. Pity and fear are the tragic emotions the function of tragedy is to produce cathartic effect. Thus, according to Aristotle the six parts of drama are plot, characters, diction, thought, spectacle and melody. Tragedy is essentially an imitation not of persons but of action in life, of happiness and misery. All human happiness or misery takes the form of action ⁴. Actually, drama is a story in action, with a beginning, a middle and an end. Reversals and discoveries are most important elements in it and to bring about cathartic effect in the spectators is the aim of a tragedy. Imitation or mimesis used by Aristotle is portrayal, that does not mean literal copying. There can never be a literal transcript of things as they ought to be. Nor does art attempt to embody the objective reality of things but there sensible reality. Thus, according to Professor Butcher, art in Aristotelean theory is not a symbol but a semblance of reality. The work of imitative art is an image of an the impressions made by an independent reality upon the mind of the artist ⁵. Treading the path paved by Aristotle English drama travelled a long journey with several variations in the hands of different dramatists in different ages. Treading the path paved by Aristotle, English drama travelled a long journey with several variations in the hands of different dramatists, in different ages and we have plays: tragedies, comedies, dark comedies, horror plays, revenge tragedies, problem plays, historical plays etc. Whatever be the objective of this art form, be it art for arts' sake or art

for life's sake, it deals with life and emanate from life and is an imitation of life.

Cinema, by and far is serving the same purpose. All forms of cinema or television that involve fictional stories are forms of drama in the broader sense if their storytelling is achieved through actors who represent characters. A film is also a story in action with the same elements: plot, character, diction, thought, spectacle and melody. Films also have same cathartic effect when the spectators associate themselves with the characters and become emotional. Though, entertainment being the chief motive of Indian cinema, it has met several ends. Actually, cinema is also an art 'mimesis' of life where mimesis is portrayal not copying. So we have a variety of films propagating the religious, cultural, moral and ethical values of the nation. We have religious films like The Ramayana, The Mahabharata, Vishnu Puran etc extolling gods and Goddesses. Films are made on the lives of great men and the glorious past has been eulogised through historical movies like Maharana Pratap, Padmavati, Tanaji, Prithviraj Chauhan etc. A number of films on the theme of revenge like Agneepath, Badla are made. Haider is an adaptation of Shakespeare's Hamlet. Horror movies like Mahal, Wah Kaunthi, Raaz, Dhoondh are made with a lot of horror, blood shed and macabre, scenes in the tint of Jacobean drama. Elements of problem plays can be perceived in the movies dealing with different social issues and different -isms like nationalism, feminism, communism, secularism. Perused as a drama, there are both romance and realism. Human attributes of morality plays are reflected in the characters like Shaktimaan, Ravan where there is a constant conflict between the good and the evil. Mephistophilis can be perceived who wants to enjoy despotic power in the films and pervades darkness all around. Both inner and outer conflict are present in the movies. Conflict goes within the mind of the character as well as among the characters. Films like Krish, Koi mil Gaya reflect the

character of Dr. Faustus where misuse of knowledge brings the downfall. Characters of Shakespeare can be easily perceived in the movies where catastrophe falls on because of certain tragic flaws such as in the film Aapki Kasam the hero ruins his life just because of his shaking faith. Like drama films too have plot, thought, diction, music and spectacle. Some movies are tragic some are comic, while films are not out and out tragic. Comic reliefs are also the hero ruins his life just because of his shaking faith. Like drama films too have plot, thought, diction, music and spectacle. Some movies are tragic some are comic, while films are not out and out tragic. Comic reliefs are also provided by means of songs and comic characters. Along with comedians are given great role like the fools of Shakespeare to vociferate reality and great philosophies of life such as in the song "Khali dabba Khali bottle" (film-Neelkamal). Peripetia, discovery and suffering are also present in the films to have a far reaching impact upon the spectators. Catharsis is also achieved when spectators associate themselves with the characters' sufferings. This is how movies can be perceived as classical drama as well as romantic drama. Along with social drama, we have social movies dealing with the social issues. Movies have developed the concept of anti hero too as in the film Baazigar. Thus movies can be analysed on the basis of Western aesthetics of drama. If Indian aesthetics of drama are taken into consideration Indian movies are more akin to Indian aesthetics. Indian movies are replete with the eight sentiments or bhavas that are expressed by the actors. They are correspondingly love, mirth, anger, sorrow, energy, terror, disgust and astonishment. In addition, there are 33 feelings: despondency, weakness, apprehension, intoxication, weariness, indolence, depression, anxiety, distraction, recollection, contentment, shame, joy, education, stupor, arrogance, despair, passions, epilepsy, dreaming, awakening, indignation, dissimulation, fully assurance, sickness, insanity, death, fright and

deliberations that are expressed through movies. These emotions are perceived by the spectators in the actors and evoke a corresponding sentiment in the spectators. So the skill of acting becomes more important so that the desirable results can be found. Like Indian classical drama, Indian movies are blend of romance, realism and intrigues. To maintain the unity of time, place and action, we have soliloquies, asides and flashbacks in the movies. In this way, films are close to drama. If drama is a story in action, films are too. And its resemblance with drama brings it quite close to literature by making an effective use of language, by means of different devices used in literature such as figurative use of language. Literature is an art which is developed through writing while cinema brings to life those writings through sound, music, visuals and actors.

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माखनलाल चतुर्वेदी के काव्य में राष्ट्रीय चेतना

कुमारी श्वेता एवं शिप्रा प्रभा *

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सारांश :

साहित्य में राष्ट्रीयता की अवधारणा प्राचीन है। विश्व के प्राचीनतम ग्रंथ 'ऋग्वेद' में भी इसकी उल्लेख मिलता है। हिन्दी साहित्य में राष्ट्रीयता का स्वर सदैव प्रमुख रहा है। माखनलाल चतुर्वेदी आधुनिक युग के ऐसे कवि हैं जिनकी रचनाओं में राष्ट्र के प्रति समर्पण, बलिदान के भाव के साथ-साथ आत्मबल की भावना भी परिलक्षित होती है। उन्होंने भारत की भौगोलिक श्रेष्ठता, मानवतावादी एवं धार्मिक अखंडता के दृष्टिकोण को अपनी कविता का प्रत्यक्ष भाव बनाया है। उन्होंने राष्ट्र की रक्षा के लिए अपने सर्वस्व का त्याग किया है।

शब्द कुंजी : राष्ट्र, प्रवृत्ति, ऋग्वेद, अवशेष, साम्राज्य, सल्तनत, संकुचित, तत्कालीन

परिचय :

'साहित्य में राष्ट्र' नाम की उपलब्धि वर्तमान की न होकर प्राचीन है। विश्व के अत्यंत प्राचीन ग्रंथ 'ऋग्वेद' में भी 'राष्ट्र' शब्द के अवशेष प्राप्त होते हैं। प्राचीन काल में भारत भूमि पर

छोटे-छोटे राजाओं की सल्तनत होने के कारण वे अपने साम्राज्य को ही 'राष्ट्र' समझते थे। यह राष्ट्रीयता की संकुचित प्रवृत्ति तत्कालीन लोगों में थी। पृथ्वीराज चौहान, जयचंद राठौड़, हर्षवर्धन, चन्द्रगुप्त मौर्य, आदि वीर पुरुष अपने ही साम्राज्य को स्वयं का राष्ट्र समझते थे।

चंदवरदाई द्वारा रचित 'पृथ्वीराज रासो' में पृथ्वीराज के व्यक्तित्व व शौर्य की वीरगाथा को व्यक्त किया है और उसी के माध्यम से तत्कालीन समाज के जन-मानस में शौर्य, वीर व पृथ्वीराज के समान अपने राष्ट्र की रक्षा के लिए तत्पर रहने का संदेश प्रदान किया है। पृथ्वीराज रासो, विजयपाल रासो, खुमान रासो, जयचंद प्रकाश आदि रचनाओं में स्वराज की अस्मिता हेतु शत्रु राज्य से युद्ध वर्णन में राजाओं की वीरता का वर्णन किया गया है, जो तत्कालीन समाज में राष्ट्रीयता को प्रदर्शित करता है।

आदिकाल के पश्चात भक्तिकाल का आगमन होता है। इस काल में अपने पौरुष से हताश हिन्दू जाति के लिए अपने भगवान की भक्ति और करुणा की ओर ध्यान ले जाने का प्रयास किया गया था। कबीर, जायसी, सुर, तुलसी आदि जैसे महान प्रतिभाओं ने विचार रखने के लिए प्रेरित किया तथा अपनी राष्ट्रीयता संस्कृति से सभी को जोड़ने का प्रयास किया।

भक्तिकाल में जहां भक्ति का भाव प्रसरित था, वहीं रीतिकाल में श्रृंगारिकता अपने चरम पर थी। फिर भी कई ऐसे

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रचनाकार हुए जिन्होंने अपनी रचनाओं में राष्ट्रीयता को स्थान दिया। जैसे बिहारी द्वारा रचित निम्नलिखित पंक्ति ने कामभाव सेपूर्ण राजा जयसिंह की आँखें खोल दी और उन्हें अपने राज्य व जनता के हित के लिये सोचने पर विवश कर दिया—

‘नहिं परागु नहिं मधुर मधु, नहिं विकास इहिं काल।
अली कली ही सौं बंध्यों, आगैं कोन हवाल।।’
—बिहारीⁱ

वहीं भूषण भी ऐसे ही कवि थे, जो रीतिकालीन होते हुए शेर शिवराज की राष्ट्रीय भवना से युक्त रचनायें कर रीतिकाल में राष्ट्रीयता का परचम लहराया—

‘देवल गिरावते फिरवारे निसान अली,
ऐसे डूबेराव समय राव राने सबै गये लब की।
गौरा गनपति आप औरन कों डेत ताप,
आपनी ही बार सब मारि गये दबकी।।’ⁱⁱ

आधुनिक काल की शुरुआत भारतेन्दु युग से होती है। ‘भारतेंदुयुगीन कवियों का काव्य—फलक अत्यंत विस्तृत है। उनकी रचना प्रवृत्तियाँ एक ओर भक्ति काल और रीतिकाल से अनुबद्ध हैं तो दूसरी ओर समकालीन परिवेश के प्रति जागरुकता का भी उनमें अभाव नहीं है।’ⁱⁱⁱ प्रेमचंद का मानना था कि साहित्य समाज के आगे मसाल दिखाती हुई चलने वाली सच्चीई हैं, जसे समाज को नयी दिशा व विचार प्रदान करती है। जब अंग्रेजी सरकार भारतीयों पर अत्याचार कर रही थी, तब समाज में स्वाधीनता के भव को कवियों ने अपनी कविताओं के माध्यम से जागृत किया।

भारतेन्दु, माखनलाल चतुर्वेदी, राधाचरण गोस्वामी, जयशंकर प्रसाद, आदि कवियों ने जन—मानस में राष्ट्रीय भावना को अपने चरमोत्कर्ष तक पहुँचाया और युवा—वर्ग को अपने राष्ट्र की स्वतंत्रता व विकास के लिए हाथ बढ़ाने की प्रेरणा दी।

(अ) ‘निज भाषा उन्नति अहै, सब उन्नति को मूल।
बिन निज भाषा ज्ञान के, मिटै न हिय को शूल।।’
—भारतेन्दु हरिश्चंद्र^{iv}

(ब) ‘भीतर—भीतर सब रस चूसै,
हँसि—हँसि के तन मन धन मूसै।
जाहार बातन में अति तेज,
क्यों सखि सज्जन, नहिं अंगरेज।।’^v

राष्ट्रीयता स्वतंत्रता संग्राम में अपनी रचनाओं के माध्यम से अनेक कवितयों ने समाज को जागृत करने का कार्य किया है। कई ऐसे भी कवि हैं जिन्होंने न केवल अपनी रचना से अपितु प्रत्यक्ष रूप से भी राष्ट्रीय स्वतंत्रता संग्राम में भाग लेकर समाज

में राष्ट्रीयता की अलख जगाई हैं। माखनलाल चतुर्वेदी ऐसे हे कवि हैं।

आधुनिक हिन्दी साहित्य में राष्ट्रीय भावना व ओजपूर्ण रचनाएं करने वाले विख्यात कवि श्री माखनलाल चतुर्वेदी जी का जन्म 4 अप्रैल, 1889 ई. में मध्य प्रदेश राज्य के होशंगाबाद जिले के बाबई नामक ग्राम में हुआ था। वे आरम्भ से ही सहज, संवेदनशील एवं उत्साही व्यक्तित्व के व्यक्ति थे, जो देश की व्यवस्था व उसकी दशा देखकर निराश हो जाने वाले में से नहीं बल्कि उसने उसमें सुधार लाने का भी प्रयत्न किया और इसलिए 1910 ई. में अध्यापक पद से त्यागपत्र देने के पश्चात वह अपने साहित्य सृजन या लेखन कौशल के माध्यम से देश की स्वतंत्रता में भागीदारी देते हुए देशवासियों को जागृत व अपने अधिकारों के प्रति सेचत करने लगे। उनके पिता का नाम श्री नंदलाल चतुर्वेदी व माता का नाम सुंदरी बाई था।

1913 ई. में ‘प्रभा’ पत्रिका के सम्पादन के पश्चात वह गणेश शंकर विद्यार्थी के संपर्क में आए जिससे उनके देश—प्रेम और सेवाव्रत भाव का गहन प्रभाव पड़ा और 1921 ई. के असहयोग आंदोलन में राजद्रोह के आरोप में सरकार द्वारा उन्हें कारागार में बंद करने के कारण एक वर्ष कारावास में बिताना पड़ा और एक वर्ष बाद वहां से मुक्ति मिली। वहीं फिर उनके साहचर्य गणेश शंकर विद्यार्थी के कारागार में जाने के पश्चात उन्होंने ‘प्रताप’ पत्रिका का सम्पादन का कार्यभार संभाला और वहीं से उनके सम्पादन कार्य और साहित्यिक कृति में वृद्धि होती गयी। चतुर्वेदी जी पर गाँधीवादी विचारधारा का प्रभाव था। क्रांतियों में भाग लेने के कारण कई बार कारागार में गए थे। इन्होंने अपने अनेक कृतियों की रचना वहाँ रह कर ही की थी। इन पर माधवराव सप्रे का भी प्रभाव पड़ा है।

चतुर्वेदी जी को ‘पंडित जी’ के भी नाम से भी जाना जाता है। चूँकि उनका परिवार शुरू से वैष्णव संप्रदाय से जुड़ा था इसलिए उनके व्यक्तित्व पर भी इसका गहरा प्रभाव दिखता है। पंडित जी ने अपने लेखन शैली से देश के एक बहुत बड़े हिस्से में प्रेम की भावना को जागृत किया। उनके भाषण भी उनके लेखों की भांति ही शक्तिपूर्ण और देश प्रेम से ओत—प्रोत होते थे।

इन्होंने स्वतंत्रता आंदोलनों में सक्रिय रूप से भाग लिया और इसी कारण इनका उपनाम ‘एक भारतीय आत्मा’ है। इनके काव्यों में स्वतंत्रता के लिए जता को जगृत कराने के प्रयास के क्रम में स्वतंत्रता सेनानियों के त्याग व बलिदान के भाव को देश प्रेम के रूप में दर्शाया।

माखनलाल चतुर्वेदी के काव्य में प्रमुख रूप से देश-प्रेम की प्रेरणा व्यापक भावना दिखाई देती है। तत्कालीन युग में भारत देश पर अंग्रेजों का शासन था व अंग्रेजों की गुलामी से भारत को स्वतंत्र करने में उनकी कविताओं ने मुख्य भूमिका अदा की है, जो जन-मानस में प्रेरणा जागृत करती थी। इनके काव्य में राष्ट्रीयता का ओजस्वी स्वर मुख है। चतुर्वेदी जी ने राष्ट्रीय भावनाओं से ओत-प्रोत जितनी भी कवितायें रची हैं, उनमें उद्बोधन की शक्ति विद्यमान है जो निरंतर अपने राष्ट्र को ऊँचा उठाने की प्रेरणा देती हैं।

बलिदान, सिपाही, मरण ज्वार, पुष्प की अभिलाषा, राष्ट्रीय वीणा, अमार राष्ट्र, आदि ऐसी ही कविताएँ हैं, जिनमें चतुर्वेदी जी ने अपनी ओजपूर्ण राष्ट्रीय भावना को प्रदर्शित किया है। वह समस्यामयिक युगदृष्टा एवं राष्ट्रीय स्वर को उजागर करनेवाले सच्चे राष्ट्रीय कवि थे। उनके काव्य में अनन्य देश-प्रेम और निश्चल समर्पण की भावना है। यही देश-प्रेम कालांतर में उनके जीवन का एक शक्तिशाली स्वर बन जाता है।

माखनलाल चतुर्वेदी ने अपनी कविताओं में राष्ट्रीय भावना को भी समाज के हर रूप व भाव से जोर कर अपनी कविताओं में प्रदर्शित किया है। उनकी राष्ट्रीय भावना को हम निम्नलिखित बिंदुओं में स्पष्ट रूप से समझ पायेंगे—

(क) समर्पण की भावना

देश प्रेम से ओत-प्रोत उनकी कविता 'पुष्प की अभिलाषा' को कोई नहीं भूल सकता। इस कविता में उन्होंने नवीन उपमाओं से पुष्प की अभिलाषा को व्यक्त किया है। यह कविता तत्कालीन गुलाम भारतवासियों को अंग्रेजों के विरुद्ध जाकर देश के प्रति समर्पण के भाव को प्रकट करने के लिए प्रोत्साहित करती है और जन-मानस के मन को देश-प्रेम में प्रदीप्त करने का प्रयास करती है। पुष्प के माध्यम से देश के प्रति अपने मन की अभिलाषा को कवि ने व्यक्त किया है—

चाह नहीं, मैं सुरबाला के गहनों में गूँथा जाऊँ,
चाह नहीं प्रेमी—माला में, बिंध प्यारी को लहराऊँ,
चाह नहीं, सम्राटों के शव पर हे हरि डाला जाऊँ,
चाह नहीं, देवों के सिर सर चढ़ूँ, भाग्य पर ईठलाऊँ,
—'पुष्प की अभिलाषा'^{vi}

चतुर्वेदी जी पुष्प की अभिलाषा को व्यक्त करते हुए कहते हैं कि पुष्प की ऐसी कोई इच्छा नहीं है कि वह किसी कुँआरी के गहनों में गूँथकर उसके सौन्दर्य को बढ़ाएँ। वह यह भी नहीं चाहता है कि वह प्रेमी-प्रेमिका के प्रेम को प्रकट करने का साधन बने। पुष्प ईश्वर से निवेदन करता है कि हे ईश्वर, मैं बड़े

राजा—महाराजा एवं सम्राटों के शव पर न चढ़ाया जाऊँ। पुष्प यह भी नहीं चाहता कि वह देवी—देवताओं के सिर या चरण पर चढ़कर अपने भाग्य पर इठलाए कि उसने इतना ऊँचा आसन ग्रहण किया है।

'मुझे तोड़ लेना वनमाली।

उस पथ पर देना देना तुम फेंक।

मातृ—भूमि पर शीश चढ़ाने,

जावें वीर अनेक।।'

—पुष्प की अभिलाषा।^{vii}

पुष्प अपने अंतर्मन की अभिलाषा को संरक्षक से व्यक्त करते हुए कहता है कि तुम मुझे तोड़ कर उस पथ या रास्ते पर फेंक देना, जिस पथ से मातृ—भूमि की रक्षा करने के लिए वीर सैनिक जाते हैं, जिन्हें यह तक नहीं पता होता है कि मातृ—भूमि की रक्षा करने हेतु वे जीवित बचेंगे भी या नहीं, फिर भी वह अनपे परिवार सूँ देर रहकर अहर्निश कर्तव्य पथ पर रत होते हैं। पुष्प उस पथ पर स्वयं को फेंक देने की मांग करता है, जिस पथ में कठिन, कंटीले व पथरीले रास्ते हैं, ताकि उस कठिन, कंटीले व पथरीले रास्ते से पुष्प सैनिकों के चरणों के नीचे आकर उन्हें थोड़ी आराम प्रदान कर सके।

(ख) विद्रोह या क्रांति का स्वर

चतुर्वेदी जी ने जहाँ 'पुष्प की अभिलाषा' में पुष्प के माध्यम से आम-जन को देश के प्रति समर्पित करने के भाव को जागृत किया, वहीं 'कैदी और कोकिला' में एक स्वतंत्रता सेनानी के कारागार में बंदी होने के बाद उनपर हो रहे यातनाओं को प्रदर्शित करने के लिये कोयल का सहारा लिया है। इस कविता में अंग्रेजी शासन को काला शासन कहकर अपने विद्रोह के भाव को प्रकट किया है। जेल में बैठा कैदी कोयल को अपने दुःखों के बारे में बताता है कि किस प्रकार अंग्रेजों ने उसे चोर, डाकू और बदमाशों के बीच रखा हुआ है। उसे पेट भर खाने को भी नहीं दिया जाता है। कवि ने कोयल को संबोधित करते हुए कहा है कि यह वक्त अब मधुर गीत सुनाने का नहीं है, बल्कि आजादी के गीत सुनाने का है। कवि ने कोयल के माध्यम से अपनी इच्छा प्रकट करते हुए कहा है कि वह कोयल के समान स्वतंत्र नभ में जाकर उड़ना चाहता है और गुलामी के खिलाफ लड़ने के लिए लोगों को प्रेरित करना चाहता है। कवि ने कविता की निम्न पंक्तियों के माध्यम से अंग्रेजों का भारतीयों के प्रति उनके क्रूर व्यवहार का यथार्थ चित्रण है—

‘क्या ? देख न सकती जंजीरों का गहना ?
 हथकड़ियाँ क्यों ? यह ब्रिटिश राज्य का गहना,
 कोल्हू का चरक चूँ ? जीवन की तान
 गिट्टी पर अँगूलियों ने लिखे गान !
 हूँ मीट खींचता लगा पेट पर जूआ,
 खाली करता हूँ ब्रिटिश अकड़ का कुँआ।
 दिन में करुणा क्यों जग, रुलानेवाले,
 इसलिए रात में गजब ढा रही आली ?
 इस शांत समय में,
 अंधकार को बेध रो रही क्यों हो ?
 कोकिल बोलो तो !
 चुपचाप, मधुर विद्रोह—बीच
 इस भांति बो रही क्यों ?
 कोकिल बोलों तो?

—कैदी और कोकिला ^{viii}

1920 ई. में ‘तिलक’ नामक एक लंबी कविता लिखी थी,
 जिसमें भारत के सदैव आजाद होने की बात कही गयी है—

‘बंदी होवे वह दयाहीन
 तू भारतीय आजाद रहे।
 वह स्वर्ग टूट कर गिर जाये,
 यह आर्यभूमि आबाद रहे।’

—तिलक ^{ix}

(ग) राष्ट्रीय गौरव

माखनलाल चतुर्वेदी और अन्य क्रांतिकारी नेता स्वतंत्रता के लिए हमेशा तत्पर रहा करते थे और हमेशा क्रांतियों में भाग भी लिया करते थे। 1908 ई. में हिन्दू केशरी में आयोजित राष्ट्रीय आंदोलन और बहिष्कार निबंध प्रतियोगिता में उनको पहला स्थान मिला। अपने देश और गरिमामयी संस्कृति का वर्णन अपनी कविता ‘प्यारे भारत देश’ में किया है—

प्यारे भारत देश,
 गगन—गगन तेरा पथ पहरा
 पवन—पवन तेरा बल गहरा
 क्षिति—जल—नभ पर डाल हिंडोले
 चरण—चरण संचरण सुनहरा
 ओ ऋषियों के त्वेष

प्यारे भारत देश ! ^x

इस कविता में चतुर्वेदी जी ने अपने देश की महत्ता व यश को दर्शाया है।

(घ) त्याग की भावना

‘एक भारतीय आत्मा’ नाम माखनलाल चतुर्वेदी जी के लिए अत्यंत योग्य उपनाम हैं क्योंकि यह उपनाम उनके व्यक्तित्व को स्पष्ट रूप से सबके समक्ष प्रकट करता है। उन्होंने भारत और भारतीयता की अस्मिता को बनाए रखने व आगे बढ़ाने के लिए उसकी रक्षा में अपना पूरा जीवन समर्पित कर दिया। वह परतंत्रता को न स्वीकार कर स्वतंत्रता के लिए कारावास का कष्ट झेलने में भी सुखी थे। ‘भारतीय आत्मा’ शब्द उनके देश के प्रति प्रेम व समर्पण को स्पष्ट करता है, जहाँ प्रेम वह ‘भारत’ को अपना देश व खुद को उसकी आत्मा मानते हैं।

चतुर्वेदी जी में देश के प्रति सम्मान व देश-प्रेम अपने चरमोत्कर्ष की सीमा पर था। उन्होंने खुद को और अपने देश के सभी जवानों को सिपाही माना है, जो देश की स्वतंत्रता में आगे बढ़े थे। उनकी कविता ‘सिपाही’ की इन पंक्तियों में हम देश सकेंगे कि उन्होंने किस प्रकार एक सिपाही के मनोभावों को व्यक्त किया। सिपाही अपने देश की रक्षा करने के लिए तत्पर रहता है और वह अपने देश-प्रेम व अपने ईमान को नहीं बेचने की बात करता है।

‘गिनो न मेरी स्वास
 छूए क्यों मुझे विपुल सम्मान ?
 भूलों में इतिहास
 खरीदे हुए विश्व — ईमान !!
 अरि मुझे का दान,
 रक्त तर्पण भर का अभिमान,
 लड़ने तक महमान,
 एक पूंजी है तीर — कमान।
 मुझे भूलने में सुख पाती
 जग की काली स्याही,
 दासों दूर, कठिन सौदा है
 मैं हूँ एक सिपाही !’

—सिपाही ^{xi}

(ङ) आत्मबल की भावना

चतुर्वेदी जी ने आत्मबल की भावना कूट-कूट कर भरी हुई है। उनका मानना था कि हमारी आत्मा ही हमें सचेत करने के लिए प्रेरित करती हैं। चतुर्वेदी जी की आत्मा भी देश-प्रेम के लिए उनमें चेतना का निर्माण करती रही है। उनकी कविता ‘निश्चल’ में हम यह स्पष्ट रूप से देख पाते हैं—

‘दो आज्ञा आदर से पालू, तंग जगह में काड़ों बंद,
 दुख और एकांत—चिंतना, दोनों का लूटू आनंद,

वे हथकड़ियाँ मृदुल बेड़ियाँ, गनी, कोट, कोडे स्वच्छन्द
देने में तुमको बल देवे इन सबके हित करुणा—कंद ।’
—निश्चल^{xiii}

चतुर्वेदी जी के कहने का तात्पर्य है कि अपने मन के विशाद को विश्वास एवं आत्मविश्वास में बदलने का प्रयास करना चाहिए, जिसके सहारे वह अंग्रेजों द्वारा लगाई जानेवाली बेड़ियों, हथकड़ियों का बोझ एवं एकांत की यंत्रणाओं को भी सहाने की शक्ति निर्माण करता है। अतः माखनलाल चतुर्वेदी राष्ट्रीय चेतना के मनुष्य के अंदर आत्मबल तथा आत्मगौरव की मजबूत बुनियाद पर निर्भर मानते हैं।

(च) अध्यात्मिक की भावना

चतुर्वेदी जी ने राष्ट्रीयता या राष्ट्रीय भावना को प्रदर्शित करने के लिए हर सूक्ष्म—से—सूक्ष्म उदाहरण का प्रयोग किया है। साथ ही साहित्य को हर बार एक नए तरीके से प्रत्यक्ष रूप में दर्शाया है। वह आध्यात्म के माध्यम राष्ट्रीयता को दर्शाने में सफल हुए हैं। वह आराधना को देश सेवा से भिन्न नहीं मानते। कहीं—कहीं तो देश सेवा को आराधना से श्रेष्ठतर घोषित किया है।

(छ) भौगोलिक श्रेष्ठता

चतुर्वेदी जी ने भारत माता के प्रति अपनी प्रेम—भावना को भारत की भौगोलिक श्रेष्ठता को काव्य में व्यक्त करते हुए बताया है। उन्होंने भारत की भौगोलिक सीमाओं में आबद्ध देश की श्रेष्ठता एवं उसकी उत्कर्षता को दर्शाया है। माखनलाल चतुर्वेदी को भी अपने देश के हिमालय पर बड़ा गर्व था और इसे ही उन्होंने अपनी कृति ‘हिमकिरीटीनी’ में व्यक्त किया है। उन्होंने भारत माता व हिमालय पर्वत का मानवीकरण करते हुए उसको सर्वश्रेष्ठ बताया है—

‘जिसके सिर हिम का मुकुट लसित,
जिसके अंगों गंगा लपटी,
हिनग से अमल कुमारी तक,
शोभित मेरी यह पंचवटी ।’^{xiii}

इन पंक्तियों में कवि ने भारत माता की भूमि को अपनी माता मानते हुए कहा है कि हमारी भू—माता अर्थात् मातृ—भूमि के सिर पर शान से हिमालय पर्वत मुकुट के समान विराजमान है। वहीं भारत माता की गोद में शीतल धाराओं से लिपटी गंगा के अंगों की धारा बहती है और ऐसा लगता है कि मानो भारत माता से गंगा गले लगाए बैठी है। कवि आगे कहते हैं कि हिमालय पर्वत की चोटी से निकलने वाली नदी की धाराओं से लेकर भू—माता के चरण ढोते सागरों का पवित्र जल, सब भारत

माता पंचवटी के समान शोभा बढ़ा रही है। चतुर्वेदी जी द्वारा किया गया हिम पर्वत का चित्रण उनकी कविता में विद्यमान उनकी राष्ट्रीय चेतना को पुलकित करता है।

(ज) जातीय एकता

चतुर्वेदी जी ने अपने काव्य के माध्यम से जहां आत्मबल, समर्पण, बलिदान आदि भावों के अंतर्गत राष्ट्रीय चेतना को दर्शाया है, वहाँ राष्ट्रीय एकता को बनाए रखने में भ्रूजी उनकी कविताएं सफल हुई हैं। उन्होंने अपनी कविता के माध्यम से जातीयता से देश को मुक्त करने की बात कही है। वह राष्ट्र की एकता व अखंडता को बनाए रखना चाहते थे। उन्होंने जातिभेद, धर्मनिरपेक्ष होकर रचनाएं की। आजादी से पूर्व देश में पनप रही जातीयता और प्रांतियता पर प्रहार करते हुए सन् 1914 में उन्होंने अपनी कविता ‘चेतावनी’ में कहा था—

‘जातियता का भाव देखो, है यहाँ जगने लगा,
प्रांतियता का पाप इनको छोड़कर भागने लगा ।’
—चेतावनी^{xiv}

(झ) धार्मिक अखंडता

माखनलाल चतुर्वेदी ने कभी नहीं चाहता कि भारत खंडित हो। प्रारंभ से लेकर स्वातंत्र्योत्तर काल तक हमेशा वे भारत देश की एकता एवं अखंडता की ही कामना करते रहे। स्वतंत्र्योत्तर भारत में देश की एकता और अखंडता के लिए हिन्दू—मुस्लिम में एकता और सामंजस्य की सर्वाधिक आवश्यकता थी। उनके मतानुसार हिन्दू—मुस्लिम एक ही है। मंदिर—मस्जिद का आपस में कहीं पर भी टकराव नहीं होना चाहिए, बल्कि सहयोग और सहिष्णुभाव होना चाहिए—

‘मंदिर में था चंद चमकता, मस्जिद में मुरली की तान
मक्का हो चाहे वृंदावन, होते आपस में करबान ।।
—जलियाँवाला की बेदी’

(ट) मानवतावादी स्वर

जब देश स्वतंत्र हो गया, तब चतुर्वेदी जी की कविताओं का राष्ट्रीय स्वर मानवतावादी स्वर बनकर आया। स्वतंत्रता के पश्चात की अपनी रचनाओं में वे सत्ता में बैठे स्वाधीन, पदलोलुप और निष्क्रिय लोगों को देखकर दुःखी दिखाई देते हैं, जो उनकी रचना के माध्यम से प्रकट हुआ है। सन् 1958 में लिखी गयी कविता ‘वीरव्रती’ में इन्होंने स्वाधीनता के सुंदर स्वप्न को बिगाड़ने वाले स्वार्थी तत्वों को ललकारा है और इसके परिमार्जन के लिए युवाओं का आह्वान किया है। उनकी उस ललकार में भी देश—प्रेम या राष्ट्रीय चेतना स्पष्ट रूप में झलकता है—
‘स्वर बादलों अपना, वीरव्रती ! वह स्वर बदलों ।’

उपर्युक्त विवेचन से हम स्पष्ट रूप से पाते हैं कि माखनलाल चतुर्वेदी राष्ट्रीय चेतना के कवि हैं। उन्होंने अपनी राष्ट्रीय चेतना में अपनी निजी चेतना का सामूहिक परन्तु सुंदर अभिव्यक्ति किया है। उनकी राष्ट्रीय चेतना में राष्ट्र के प्रति समर्पण, बलिदान के भाव के साथ—साथ आत्मबल की भावना को भी अभिव्यक्त किया गया है। यही मानवता को दर्शाते हुए धार्मिक अखंडता के दृष्टिकोण को कविता का प्रत्यक्ष भाव बनाया है। उनकी रचनाओं में विद्रोह या क्रांति का ओजस्वी स्वर मुखरित है। जिसमें राष्ट्रीयता को आध्यात्म के माध्यम से भी दर्शाया है। उन्होंने अपने काव्य में भारत की भौगोलिक श्रेष्ठता को भी कविता का विषय बनाया है। उन्होंने राष्ट्र की रक्षा के लिए अपने सर्वस्व का त्याग किया है।

ⁱ आचार्य रामचन्द्र शुक्ल, हिन्दी साहित्य का इतिहास, वाणी प्रकाशन, नयी दिल्ली, 2021, पृ. 206

ⁱⁱ Kavykosh.org

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^{xii} Kavykosh.org

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A Critique of David Hume's Empiricism

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Abstract:

The article explores the epistemological views of David Hume, a Scottish Enlightenment philosopher known for his influential work on philosophical empiricism, skepticism, and naturalism. It delves into Hume's empiricist stance & his distinction between two kinds of knowledge: relations of ideas and matters of fact. The article outlines Hume's skepticism regarding causation, his concept of impressions and ideas, and his division of knowledge into these categories.

Hume's empiricism is contrasted with rationalism, and his theory of knowledge is rooted in sensory experience. He argues that knowledge is derived from impressions (direct sensory experiences) and ideas (faint copies of impressions). He asserts that all knowledge ultimately stems from impressions and ideas, and these concepts are the building blocks of human understanding. However, Hume's view on

causation challenges the notion of necessary connections between events, leading him to question the validity of our knowledge about cause-and-effect relationships.

The article also examines Hume's response to skepticism. While he is often seen as a skeptic, his position is described as "moderate skepticism." Hume acknowledges that while reason cannot solve all doubts, there are areas where empirical knowledge is practical and reliable. His philosophy is criticized for potentially undermining the foundation of knowledge, particularly his denial of causation and the coherence of experience into a unified whole.

It further discusses Hume's influence on later philosophical movements, such as logical positivism, which sought to synthesize empiricism with insights from mathematical logic. It also highlights some critiques of Hume's philosophy, including his account of sense-perception and the challenge of reconciling his empiricism with the broader scope of human knowledge and understanding.

In conclusion, the article provides a comprehensive overview of Hume's empiricist philosophy, skepticism, and his contributions to the ongoing debate between empiricism and rationalism. It reflects on the tensions between Hume's radical empiricism and the broader implications for the nature and limits of human knowledge.

Keywords: Empiricism, Scepticism, Causation, Impressions, Ideas.

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Introduction:

The search for knowledge that is both absolute and certain has been a continuous pursuit throughout human history. From the time of Aristotle onwards, a robust epistemological tradition has emerged, primarily grounded in human experience. This tradition, however, diverges from the aspiration of attaining absolute knowledge. Epistemology, a branch of philosophy, is devoted to exploring the essence, origins, validity, and scope of knowledge.

Within epistemology, two prominent schools of thought stand out: rationalism and empiricism. These schools present contrasting perspectives on the acquisition of knowledge. Rationalism posits that knowledge is derived through reason, while empiricism contends that knowledge is gained through sensory experiences. This dichotomy has led to a rich and dynamic discourse in the field of epistemology.

A noteworthy exemplar of this discourse is the doctrine of empiricism. This philosophical theory asserts that knowledge is derived exclusively, or predominantly, from sensory experiences. Empiricists argue that the pursuit of absolute and all-encompassing knowledge is impractical, especially when practical knowledge can be incrementally enhanced through reliable methods.

Key figures advocating for empiricism include Francis Bacon, Thomas Hobbes, John Locke, David Hume, J.S. Mill, and Alexander Bain. Empiricists construct systems of knowledge with a high probability of truth, even if complete certainty remains elusive.

David Hume emerges as a preeminent figure in the history of empiricism and metaphysics. His brand of radical empiricism distinguishes him as a consistent and coherent philosopher. According to Hume, genuine knowledge is founded on experimentation, and any concept beyond the realm of sensory perception is mere fanciful speculation.

David Hume, left a lasting legacy through his influential system of philosophical empiricism, skepticism, and naturalism. He spent much of his life in Edinburgh and was recognized for his contributions to various fields, including philosophy, history, economics, and essays.

Hume's philosophical journey involves a critical engagement with human understanding. He aspired to establish a comprehensive theory of human cognition, one that would serve as the bedrock for notions of reason, the mind, and morality.

At the core of Hume's empirical theory lies his deep-seated belief in sensory experiences as the foundation of knowledge. He embraced Locke's empiricism, further refining it into sensationism. According to Hume, the human mind comprises perceptions, categorized into impressions and ideas. Impressions are vivid perceptions, while ideas are faint replicas of impressions, often termed images.

Hume further distinguishes between simple and complex perceptions, breaking down the latter into smaller parts. He links simple ideas directly to impressions, asserting that these concepts are impossible to form without prior sensory experience. Complex ideas, on the other hand, can be constructed through relevant impressions, even without direct experiences of the exact concept.

Hume's exploration delves into the principles of association that connect the disparate elements of knowledge. These principles include resemblance, contiguity, and cause and effect. Resemblance pertains to associations between ideas representing similar objects. Contiguity involves linking ideas connected in time or space, while cause and effect relate to ideas representing causal relationships.

The laws of association, according to Hume, are subjective and automatically meld impressions and ideas. There is no requirement for innate ideas or a priori reasoning to forge these connections.

A pivotal point in Hume's philosophy is his treatment of the principle of cause and effect. He contends that causality lacks inherent reality, and the idea of a necessary connection between events is unfounded. Rather, humans perceive constant conjunctions between events and erroneously infer causality from habit and past experiences. Hume's exploration of causation leads him to question the certainty of induction, introducing the problem of induction into the philosophical discourse.

Hume's distinction between two categories of human knowledge, relations of ideas and matters of fact, leads to his separation of mathematical and logical truths from empirical truths. Relations of ideas are demonstrable through thought alone, while matters of fact are contingent on experience. This separation, often referred to as "Hume's Fork," shapes his views on different kinds of knowledge.

In examining Hume's position, critics point out shortcomings in his account of sense perception and his skepticism about causation. They argue that Hume's theory does not adequately explain how perceptions lead to knowledge of physical objects. Hume's conclusions also face challenges related to the necessary and universal aspects of knowledge.

Significance of the Study:

The significance of studying this article lies in its ability to deepen our understanding of David Hume's philosophy and its far-reaching impact on the realms of philosophy, epistemology, science, and beyond. By engaging with Hume's ideas, individuals are equipped to explore complex philosophical questions, challenge conventional wisdom, and contribute to ongoing dialogues about the nature of human knowledge and the foundations of our understanding of the world.

Hume's philosophy bridges disciplines such as philosophy, psychology, cognitive science, and history. The study of his ideas encourages interdisciplinary

exploration, facilitating connections between different fields and fostering a holistic understanding of human cognition, perception, and knowledge formation.

Hume's philosophy encourages individuals to engage in critical thinking and question conventional beliefs. By analyzing his arguments, individuals are prompted to assess the validity of their own assumptions, beliefs, and sources of knowledge. This fosters a culture of intellectual curiosity and promotes a more nuanced understanding of the complexities of reality.

Objective of the Study:

The main objective of the study on 'A critique of David Hume's Empiricism' is to examine David Hume's position and also to show that in as much as we agree that human beings acquire knowledge through sense experience. Sense experience alone cannot constitute or guarantee knowledge. Just as Jacques Maritain pointed out that every philosophical system contains some truth and tells something about the reality. Some philosophies, however, exaggerate their claims and this is where they run into problems.

This is so with David Hume, he ran into this kind of problem and this was because though knowledge can be acquired through sense experience, he exaggerated the position by maintaining that knowledge can only come through sense experience.

It therefore becomes part of the objective of this study to point out some of these problems in order to show that though sense experience leads to knowledge, however, knowledge does not cease there. There are some limitations to the senses in epistemological procedure so that whatever information we receive through the senses are subjected to judgement before it is accepted.

Hypothesis of the Study :

There are issues with David Hume's empiricist philosophy. He moves beyond empiricism and enters

scepticism in order to support his worldview. His suggested theory of sense impressions and ideas raises so many issues that it calls into question the veracity of sensory perception. This study tries to highlight some of Hume's empiricism's most significant features while also highlighting its flaws. At the conclusion of our research, we hope to have a greater knowledge of his philosophy and the issues it raises. Additionally, we ought to be able to criticize the fundamental problems with his viewpoint.

Methodology:

The method adopted in this work is of critical study. We've focused on in-depth data collection relative to the topic and attempted to have a contextual understanding. This is our subjective interpretation of the collected data. Since the work is on David Hume's empiricism, the first step would be to present a general overview of empiricism to have a better holistic understanding related to this topic. After this we will narrow our attention down to Hume's notion of the subject matter of empiricism. It will be after presenting these that we will therefore settle down to criticize. The information present here is purely a secondary data collected from various sources of information like websites, research papers, articles and some books.

Review of Literature:

For our topic we referred to some of these books: Y Masih's "A Critical History of Western Philosophy" "Hume: An Intellectual Biography" by James A. Harris - A comprehensive exploration of Hume's life and ideas, including his empiricism, skepticism, and contributions to philosophy. "Hume on Causation" by Helen Beebe - This book delves into Hume's theory of causation and examines his views on how we come to understand cause and effect relationships.

David Hume :

Hume is one of the greatest empiricists in the history of epistemology and metaphysics who has

distinguished himself as a consistent and coherent radical empiricist. According to him, the only true knowledge is experimental, and any concept that is not available to sense perception is mere fanciful thinking.

David Hume (born David Home; 1711 - 1776) was a Scottish Enlightenment philosopher, historian, economist, librarian and essayist, who is best known today for his highly influential system of philosophical empiricism, skepticism, and naturalism.

Spent most of his life (1711-1776) in Edinburgh, apart from a period at La Fleche, the Jesuit college where Descartes had studied. Worked as a diplomat and a librarian, but held no university position. Was turned down for the Chair of Moral Philosophy at the University of Edinburgh in 1744. Why? Because of his skeptical and heretical opinions.

Wrote A Treatise of Human Nature (1739-1740). Got an indifferent reception. He then wrote An Enquiry Concerning Human Understanding (1748) in an attempt to produce a more accessible version of the Treatise. Still got lackluster reviews.

- In his life, he was better known for his six-volume History of England. Today, Hume is largely (widely, and favorably) known for his philosophical work.

- Hume's overarching goal is to present a comprehensive theory of human understanding. He thought such a theory is the key to providing a foundation for our conceptions of reason, the mind, and morality.

Hume's Empiricism- Hume's theory of knowledge was very much influenced by Newton's scientific view of the world and John Locke's theory of knowledge. He also accepted Berkley's argument that we have no reason to believe in "material substances" that exist independently of our senses.

Hume develops Locke's empiricism into sensationism in his "Treatise of Human Nature". A central doctrine of Hume's philosophy is that the mind consists of perceptions, or the mental objects which are present to it, and which is divided into two categories. All the perceptions of the human mind resolve themselves into two distinct kinds, which are "Impressions and Ideas". All knowledge comes from impressions and ideas. Ideas are faint copies of impressions, which are called images in modern psychology. Impressions are lively perceptions. There are impressions of sensations (External Perception), and impressions of reflection (Internal Perception). These are the original materials of knowledge. Ideas or images are faint and indistinct copies of impressions; they are feebler than impressions. From this, Don Garret has coined the term Copy Principle, referring to Hume's doctrine that all ideas are ultimately copied from some original impression, whether it be a passion or sensation, from which they derive.

The difference between impressions and ideas consists in the degree of force and liveliness, with which they strike upon the mind. Those perceptions which enter with most force and violence, can be named impressions, and, under this it is comprehended all our sensations, passions and emotions, as they make their first appearance in the soul. By ideas, the faint images of these impressions in 'thinking and reasoning' is meant.

Simple and complex- After establishing the forcefulness of impressions and ideas, these two categories are further broken down into simple and complex: "simple perceptions or impressions and ideas are such as admit of no distinction nor separation", whereas "the complex are the contrary to these, and may be distinguished into parts".

When looking at an apple, a person experiences a variety of color-sensations-what Hume notes as a

complex impression. Similarly, a person experiences a variety of taste-sensations, tactile-sensations, and smell-sensations when biting into an apple, with the overall sensation-again, a complex impression. Thinking about an apple allows a person to form complex ideas, which are made of similar parts as the complex impressions they were developed from, but which are also less forceful. Hume believes that complex perceptions can be broken down into smaller and smaller parts until perceptions are reached that have no parts of their own, and these perceptions are thus referred to as simple.

Basically, simple idea corresponds to an impression, and we cannot have one of these concepts without having had an experience of it beforehand. Complex ideas can be formed from relevant impressions, without having had an experience of the exact concept. For example, the color red is a simple idea as we cannot conceive of two or more separate ideas that form the concept of the color red. A red chair is a complex idea, as we can conceive the color red and the concept of a chair as separate from each other.

According to Hume, ideas that do not represent something in reality is an abstract idea, and, therefore, meaningless. The idea of a "unicorn" is an example of an abstract idea because there is no unicorn in reality, in the first place.

Principles of association- Impressions and ideas, which constitute the matter of knowledge, are disconnected from one another. They are connected to one another by laws of association. Regardless of how boundless it may seem; a person's imagination is confined to the mind's ability to recombine the information it has already acquired from the body's sensory experience (the ideas that have been derived from impressions). In addition, "as our imagination takes our most basic ideas and leads us to form new ones, it is directed by three principles of association,

namely, resemblance, contiguity, and cause and effect":

- The principle of resemblance refers to the tendency of ideas to become associated if the objects they represent resemble one another. For example, someone looking at an illustration of a flower can conceive an idea of the physical flower because the idea of the illustrated object is associated with the physical object's idea.

- The principle of contiguity describes the tendency of ideas to become associated if the objects they represent are near to each other in time or space, such as when the thought of a crayon in a box leads one to think of the crayon contiguous to it, an inkpot suggests a pen owing to the law of contiguity.

- The principle of cause and effect refers to the tendency of ideas to become associated if the objects they represent are causally related, which explains how remembering a broken window can make someone think of a ball that had caused the window to shatter, a fire suggests burning owing to the law of causation.

The laws of association are purely subjective. Discrete impressions and ideas are automatically combined with one another according to these laws. They do not require any innate ideas or a priori forms of reason to connect them with one another.

Principle of Cause and Effect- The law of cause and effect is one of the most important concepts in Hume's theory of knowledge. Hume argued, causality cannot be real because in reality, only what we experience are the proceeding and succeeding events separately and not any causal relation between the two events. All other metaphysical concepts are not real because they do not generate impressions and therefore cannot be experienced. To demonstrate his utter rejection of metaphysics, Hume campaigned for the burning of every book that contains metaphysics.

Sensations aren't produced by matter. There is no production or effectuation. There is no causal force or power which produces an effect, because it is never perceived. A fire burns. The visual sensation of a fire is followed by the sensation of burning. A cause is an invariable antecedent; and an effect is an invariable consequent. There is only an inner bond of association between the idea of fire and the idea of burning owing to their constant conjunction in our experience.

The nature of experience is this. We remember to have had frequent instances of the existence of one species of objects; and also remember, that the individuals of another species of objects have always attended them, and have existed in a regular order of contiguity and succession with regard to them. Thus, we remember to have seen that species of object we call flame, and to have felt that species of sensation we call heat. We likewise call to mind their constant conjunction in all past instances. Without any further ceremony, we call the one cause and the other effect, and infer the existence of the one from that of the other. Thus, contiguity and succession are not sufficient. It is the relation of the constant conjunction which produces the mental habits of regarding things necessarily connected. Now on the basis of past experience and on our remembrance of the constant conjunction we make transition to necessary connection.

Hume crafted his own theory of causation, formed through his empiricist and sceptic beliefs.

According to Hume, it is by means of the relation of cause and effect that we are enabled to make, more or less reasonable, predictions and conjectures that go beyond the data of perception and memory. However, for Hume, in reality there is no necessary connection between two events, between cause and effect. The idea of a necessary connection is produced in the mind not through reason a priori, but through habit or custom.

There is (necessary) connection only through experience (in common life and practice) which is based on habit. The only evidence assuring us of any real existence and matters of fact is experience, that is,

- 1) the present testimony of our senses,
- 2) the records of our memory, and
- 3) the causal (experiential) reasoning based on the empirically observed regularities of past experience.

Hume describes or gives two definitions of cause in his Treatise. In this description psychological and philosophical analysis are interwoven.

a) We may define a cause to be 'An object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects that resemble the latter'. This is based on philosophical analysis.

b) 'A cause is an object precedent and contiguous to another, and so united with it that the idea of the one determines the mind to form the idea of the other, and the impressions of the one to form a livelier idea of the other.' This is based on psychological analysis.

Hume Writes:

"Knowledge of reality can only be derived from a careful observation of the 'constant conjunction' between contingent events. Where such constant conjunction is observed, we are inclined to attribute a causal relationship between events designated as cause and effect".

Kinds of Knowledge: Hume divided all of human knowledge into two categories: relations of ideas and matters of fact. Mathematical and logical propositions (e.g., "that the square of the hypotenuse is equal to the sum of the squares of the two sides") are examples of the first, while propositions involving some contingent observation of the world (e.g., "the sun

risers in the East") are examples of the second. Hume's separation between matters of fact and relations of ideas is often referred to as "Hume's Fork".

Relations of Ideas: Since this type of knowledge is not based on experience, the subject of knowledge does not exist (only things that exist can be experienced). The truth of this type of knowledge is demonstrable or can be proven. It is demonstrably certain. Discoverable by thought alone (a priori). It cannot be denied without contradiction. They represent universal bonds between ideas that mark the cornerstones of human thought.

Matter of Facts: Since this knowledge is gathered through experience, the subject of this type of knowledge exists. The truth of this knowledge is known only through experience; therefore, logic or reason cannot provide any proof for this type of knowledge. All knowledge of matters of fact represents a causal relationship; therefore, causality is the condition under which any empirical knowledge can be developed. They are dependent on the observer and the experience. They are often not universally held to be true among multiple persons.

A lot of philosophers tried to mathematicise the matter of facts and relations of ideas. Mathematicising consisted in holding that intuitive insight into the fundamental principles of nature guaranteed certainty in knowledge. Against these mathematicising attempts of philosophers, Hume contended the following:

1. Propositions of mathematics differ in kind from propositions concerning matter of facts. Naturally factual propositions cannot be confused with mathematical propositions. In other words, mathematical certainty with regard to factual propositions cannot be obtained or demonstrated.

2. No amount of observation or experiment can guarantee the truth of future events. Every rational attempt to base factual proposition on uniformity of nature did the law of causation is bound to fail.

3. Even the certainty of mathematical reasoning cannot be ultimately guaranteed because of the frailty of the judging powers of man.

4. However, Hume holds that man is not guided by reason alone. Nature, custom and habits determine human thinking. This natural propensity in man.

Problem of Induction- Hume maintained that no knowledge, even the most basic beliefs about the natural world, can be conclusively established by reason. Rather, he maintained, our beliefs are more a result of accumulated habits, developed in response to accumulated sense experiences. Among his many arguments Hume also added another important slant to the debate about scientific method-that of the problem of induction. Hume argued that it requires inductive reasoning to arrive at the premises for the principle of inductive reasoning, and therefore the justification for inductive reasoning is a circular argument. Among Hume's conclusions regarding the problem of induction is that there is no certainty that the future will resemble the past. Thus, as a simple instance posed by Hume, we cannot know with certainty by inductive reasoning that the sun will continue to rise in the East, but instead come to expect it to do so because it has repeatedly done so in the past.

Hume concluded that such things as belief in an external world and belief in the existence of the self were not rationally justifiable. According to Hume these beliefs were to be accepted nonetheless because of their profound basis in instinct and custom. Hume's lasting legacy, however, was the doubt that his skeptical arguments cast on the legitimacy of inductive reasoning, allowing many skeptics who followed to cast similar doubt.

Further development of Empiricism- oEmpiricists in the 20th century have generally reverted to the radical distinction between necessary truths, as found

in logic and mathematics, and empirical truths, as found elsewhere. Necessity is confined by them, however, to logic and mathematics, and all other truths are held to be merely contingent. Partly for this reason and partly because it has been held that the apparatus of modern logic may be relevant to philosophical problems, 20th-century empiricists have tended to call themselves "Logical Empiricists".

- The next step in the development of empiricism was Logical Empiricism (or Logical Positivism), an early 20th century attempt to synthesize the essential ideas of British Empiricism (a strong emphasis on sensory experience as the basis for knowledge) with certain insights from mathematical logic that had been developed by Gottlob Frege, Bertrand Russell and Ludwig Wittgenstein. Logical Positivism is a school of philosophy that combines empiricism, the idea that observational evidence is indispensable for knowledge of the world with a version of rationalism, the idea that our knowledge includes a component that is not derived from observation.

- Essentially, logical positivism is empiricism pushed to extreme, absolutely as far as it can go. It is antimetaphysical, anti-idealist, and convinced that science alone can provide knowledge. Knowledge exists only in the form of empirically confirmed propositions.

- This resulted in a kind of extreme Empiricism which held that any genuinely synthetic assertion must be reducible to an ultimate assertion which expresses direct observations or perceptions.

- Until recently, Hume was seen as a forerunner of logical positivism. According to the logical positivists (in summary of their verification principle), unless a statement could be verified by experience, or else was true or false by definition (i.e., either tautological or contradictory), then it was meaningless. Hume, on this view, was a proto-positivist, who, in

his philosophical writings, attempted to demonstrate the ways in which ordinary propositions about objects, causal relations, the self, and so on, are semantically equivalent to propositions about one's experiences.

Support Theories- Immanuel Kant agrees with the empiricists that all knowledge begins with experience. He raises an epistemic question which borders on metaphysics, namely "Is there any knowledge that is independent of experience and even of all impressions of the senses? Such knowledge is entitled a priori and distinguished from empirical, which has its source a posteriori, that is in experience?" His question was whether there is something such as analytic or a priori judgement? In doing this, Kant is pre-empting a viable condition for a meaningful discussion of a non-experimental being. He is implying that metaphysics without epistemology is impossible.

- On this dichotomy, Hume drew the conclusion that any metaphysical proposition must be meaningless since it would be either analytic or synthetic. Thus, from Hume it was already becoming apparent to Kant that empiricism denies the possibility of metaphysics while upholding the truths of mathematics and natural science.

- Logical Positivism also favors the empiricist philosophy. According to the logical positivists (in summary of their verification principle), unless a statement could be verified by experience, or else was true or false by definition (i.e., either tautological or contradictory), then it was meaningless.

WAS HUME A SCEPTIC? Scepticism is the attitude of doubting knowledge claims set forth in various areas.

Hume analyzed the furniture of the mind in terms of fleeting impressions. Anything called knowledge not derived from impressions, according to him, could not be based on reason. Taking impression as his touchstone he called in question the validity of the

concepts of substance, causality etc., which make up knowledge proper. He after a careful analysis of the main categories of thought came to the conclusion that there is no substance, neither matter nor self. We are left with passing impressions only. His most careful search into causation showed that there could be no necessary connection between the impressions. Nothing remains, - the vast structure of philosophy crumbles to dust. Hume philosophy finds itself in the midst of ruins of its own making. Paradoxical it may sound but it is quite true that Hume's too much faith in the science of psychology, the science of his own making, was the main cause of his scepticism.

However, it may be held that Hume could not be regarded as a sceptic for he allowed the possibility of mathematical knowledge. Hume rejected the demonstrations of geometry because they are based on the absurd principle of infinite divisibility of extension. But the algebraic and arithmetical demonstration, according to him, maintains 'a perfect exactness and uncertainty'. Unfortunately, he does not tell us, 'How are these ideas of algebra and arithmetic derived? For an inquiry into them might have revealed that they too, like other ideas, are not derived from any impressions.

Anyway, he maintains that the rules of the demonstrative sciences are 'certain and infallible' but due to our frail faculties our application of them is notoriously fallible. So even here knowledge is only probable. Therefore, "having thus found in every probability, beside the original uncertainty inherent in the subject, a new uncertainty derived from the weakness of that faculty, which judges, and having adjusted these two together, we are obliged by our reason to add a new doubt derived from the possibility of error in the estimation we make of the truth and fidelity of our faculties." This quotation shows that Hume was a total sceptic. But the total scepticism is self-contradictory. The doubting of everything leads

also to the doubt of that theory which doubts everything, i.e., scepticism itself becomes doubtful. Hume himself was aware of this and points out, "whoever has taken the pains to refute the cavils of this total scepticism, has really, disputed without an antagonist".

A few lines he writes, "should it be here asked... whether I be really one of those sceptics, who hold that all is uncertain, and that our judgement is not in anything possessed of any measures of truth and falsehood; I should reply, that this question is entirely superfluous, and that neither I, nor any other person was ever sincerely and constantly of that opinion".

In the light of the last question, we have to modify our judgement about Hume. No doubt he was, to a certain extent, sceptic and as such he became a potent force in the history of thought. But in recent years, the careful analysis of the writings of Hume by Laing, Laird, Kemp Smith and Church shows that he was a 'moderate sceptic' and not a total sceptic. Besides, his scepticism, as is popularly held, is not the logical outcome of empiricism. It is not empiricism, but reason which fails to dispel the dark clouds of scepticism.

Hume was moderate in his scepticism for he maintained that reason apart from imagination cannot solve our doubts but then there could be, he hoped and partly advanced, a system of thought based on our natural propensities.

"We Need to Suspend our Judgement when we Delve into Subjects Remote from the Affairs of Common Life and Experience".

Hume's position is famously known as "moderate scepticism".

Critique:

Hume's account of sense - perception is unsatisfactory. How can our perceptions - either impressions or ideas - give rise to knowledge of physical objects?

The impressions of sense are interrupted, as well as being part of, and dependent on us, whereas physical objects are relatively permanent, and independent and distinct from us. Hence, they cannot be known by sense alone, nor can they be inferred by an argument from effect to cause.

For to know that a given sensation was due to a certain material thing, we would have had to be able to observe the two separately and notice the constant conjunction between them. And our ability to observe the material thing apart from the sensation is precisely the question at issue.

The absurdities of Hume's accounts of sensory perception and of the mind arise from the starting point of his philosophy - the doctrine of impressions and ideas. Hume supposes them to be undeniable elements of which experience is composed, but in fact they are nothing but the fragile elements of a metaphysical ghost exploded by Hume himself.

- As an empiricist, Hume starts with an epistemological foundation which is essentially the same as Berkley's, but he carries out the empiricist program without Berkley's rationalist retention of what accounts to the innate concept of "mind" or "spirit". Thus, it can be said that Hume's empiricism is a "pure" uncompromising empiricism.

- Experience cannot establish a necessary connection between cause and effect, because we can imagine without contradiction a case where the cause does not produce its usual effect...the reason why we mistakenly infer that there is something in the cause that necessarily produces its effect is because our past experiences have habituated us to think in this way.

- Hume denies the existence of mind as a permanent and identical entity and its active powers. He regards discrete impressions and ideas as the source of our knowledge. But merely atomic

impressions or sensations and ideas with no inner bond of connection cannot account for the unity of knowledge.

- The laws of association cannot account for the unity of knowledge. They cannot constitute the inner bond of connection among impressions and ideas. The mind is a series of mental state. It cannot associate them with one another. The laws of association are unintelligible without the synthetic activity of the mind. Discrete sensations cannot account for the laws of association.

- There are certain universal and necessary elements in knowledge. Experience cannot give universal and necessary truths. It can give only particular and contingent truths. But merely particular truths cannot carry out the purposes of our life.

- We tacitly believe in the uniformity of nature and the law of causality in our activities of life. They cannot be given by experience. They are pre-suppositions of induction, which cannot be derived from experience by generalization.

- Experience gives us sensations only. They are meaningless, unless they are interpreted by reason.

Conclusion :

To sum up, it may be claimed that Hume's endeavor to turn experience into impressions and his rejection of causation as a philosophical tenet are what led to his scepticism. He reduced experience to ideas because he was an empiricist, and ideas cannot exist without impression. Although there is a relationship between cause and effect, we have no impression of it, hence causality is outside the realm of experience. We therefore have a tendency to observe events unfold sequentially. It suffices to cast doubt on all of one's knowledge of the "matter of facts" only to question the certainty of causation as a knowable connection. He became sure of one thing: experience alone is insufficient to solve many epistemological and

philosophical puzzles. And it is plainly evident in Immanuel Kant's philosophy, where he not only harmonized reason and experience but also restored causation as the fundamental tenet of human consciousness. Hume was at least somewhat effective in defending his position as a pure empiricist philosopher, unlike Locke and Berkeley, and it really doesn't matter since everything ultimately leads to scepticism. Hume's philosophy seemed to us to be completely useless and unrelated because, in line with his own notion of scepticism, there can never be certainty; there can only be probability. His thesis also loses credibility after the event that renders it empty.

Although David Hume's empiricism is excellent in the context of knowledge, a persistent empiricist will ultimately destroy the fundamental basis of knowledge. Hume himself admitted that excessive scepticism might contradict oneself and undercut one's own arguments. We think more deeply than a collection of impressions, which is the epistemological, scientific, and ontological inheritance of humanity. It would be naive to reduce them to mere impression bundles, as Hume would have us believe.

Suggestions-Future work in this area can build upon Hume's ideas while addressing some of the limitations and counterarguments that have emerged over time. Researchers can delve into the intersection between empiricism and other philosophical frameworks, such as rationalism, to explore how these different perspectives can inform and complement one another. Additionally, exploring the advancements in cognitive psychology, neuroscience, and epistemology since Hume's time can provide new insights into the processes underlying human knowledge and perception.

Investigation into the nature of causation and the problems of induction, as presented by Hume, can shed light on how we arrive at knowledge and make

predictions about the world. This might involve integrating contemporary scientific and philosophical advancements to provide a more comprehensive understanding of causation and the grounds for making empirical claims.

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Influence of Carbohydrates on the Growth of *Microsporum canis*, a Keratinophylic Fungus

Namita Kumari

Abstract:

During our investigation, some fungal species were isolated which are Keratinophilic and dermatophytic. This group of fungi are potentially pathogenic, causing so many skin diseases in human beings and animals, such as ringworms, mycoses, moniliasis, histoplasmosis, dermatophytosis, maduromycosis, aspergillosis, candidiasis etc. Among twenty eight different fungal isolates from different keratin containing materials such as feathers, nails, hairs (Nigam and Kushwaha 1989) and soils from different localities of Patna, Microsporum canis had been selected to see the influence of different carbohydrates on the growth of the fungus. Carbohydrates play a major role in promoting our health, they form a major part of our food and help a great deal in building strength in the body by way of generating energy and obviously it will also affect the growth of fungus also. So in this project we had analysed the growth of Microsporum canis on about about 15 different carbohydrates as Laevulose, Glucose, Xylose, Dextrose, Fructose, Sucrose, Maltose, Lactose, Raffinose, Sarbose, Pectin, Cellulose, Starch, Mannitol, Sorbitol and one control. A very significant result occurred.

Keywords : Keratinophylic fungus, Carbohydrates, Growth, Pathogenic.

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Introduction:

We isolated a number of fungal species which are Keratinophilic and dermatophytic nature. This group of fungi is potentially pathogenic, causing so many skin diseases in human beings and animals. Among twenty eight different fungal isolates from different keratin containing materials such as feathers, nails, hairs and soils (Ramesh 1999) of Patna, *Microsporum canis* (Brouta et al 2001, Viani F C et al 2001) had been selected to see the influence of different carbohydrates on the growth of the fungus which causes havoc to human beings. Carbohydrates play a major role in promoting our health, they form a major part of our food and help a great deal in building strength in the body by way of generating energy and obviously it will also affect the growth of fungus. So in this project we had analysed the growth of *Microsporum canis* on about about 15 different carbohydrates such as Laevulose, Glucose, Xylose, Dextrose, Fructose, Sucrose, Maltose, Lactose, Raffinose, Sarbose, Pectin, Cellulose, Starch, Mannitol, Sorbitol and one control. Result obtained will give a very important information regarding its nature of growth and survival on different nutritional carbohydrates.

Methods and Methodology:

Microsporum canis was grown on Sabouraud Dextrose Agar medium in petridishes at 25 °C for

10 days. 4m.m.bits were cut after incubation period and aseptically transferred to the sterilized 50 m.l. liquid medium. The growth of *Microsporum canis*, a Keratinolytic fungus under different carbohydrates was observed replacing the soluble and insoluble carbohydrates (Table-1) by dextrose in the composition of Sabouraud dextrose liquid medium and grown at 25 °C and pH 5.8 adjusted with the help of 0.1 M KH_2PO_4 for 15 days. After expiry of this incubation period the mycelia mat was separated by filtration on dried and weighed filter paper, dried in an incubator at 60 °C for 24 hours and then in desiccator over fused CaCl for further 24 hours. The actual weight of the mycelium was calculated after subtracting the weight of the filter paper.

Table- 1

Carbohydrates	Mean dry weight in m.g.
Laevulose	521.000 +-3.786
Glucose	492.300+-1.433
Xylose	217.666+-1.452
Dextrose	450.666+-3.480
Fructose	402.666+-3.712
Sucrose	194.666+-2.603
Maltose	989.333+-0.666
Lactose	119.333+-5.207
Raffinose	208.666+-1.333
Sarbose	391.666+-1.666
Pectin	321.000+-1.666
Cellulose	907.666+-1.453
Starch	247.666+-1.453
Mannitol	533.333+-8.819
Sorbitol	391.000+-0.577
Control	194.333+-1.202

Table -2

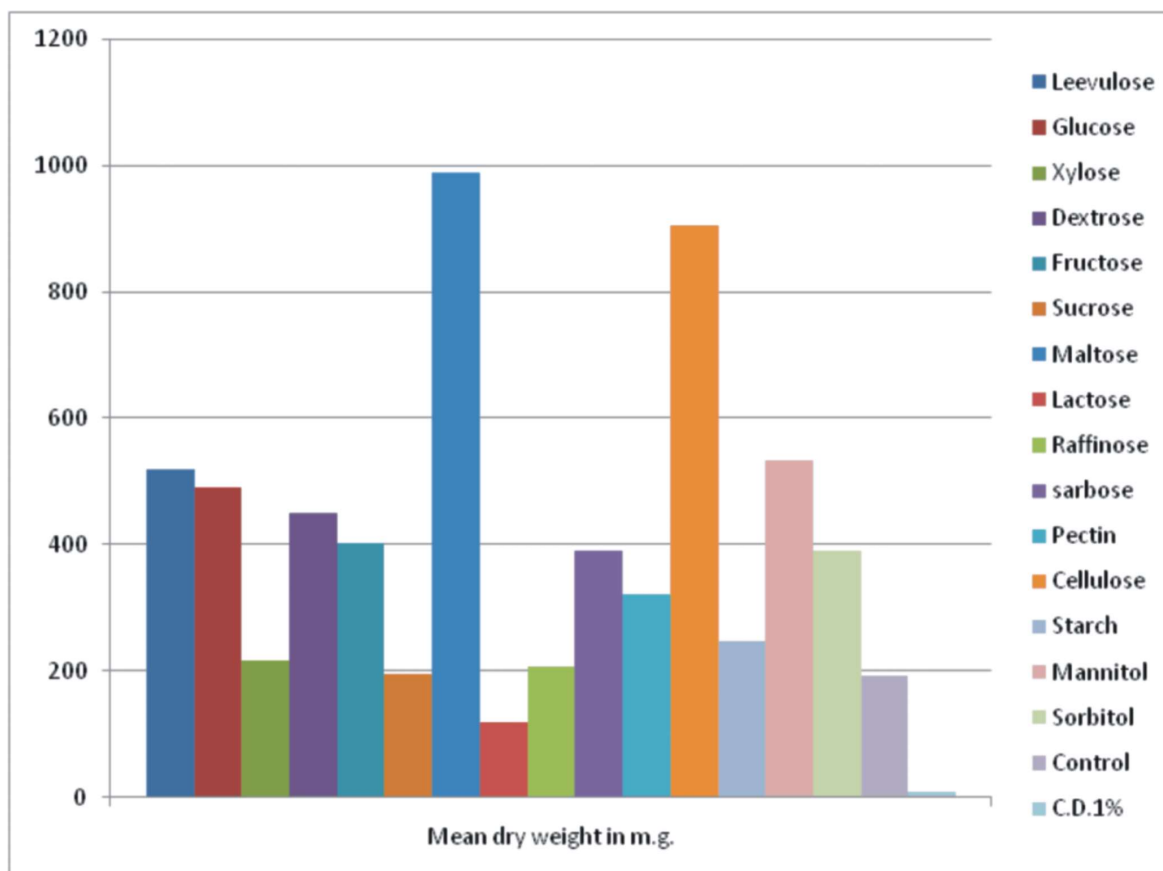
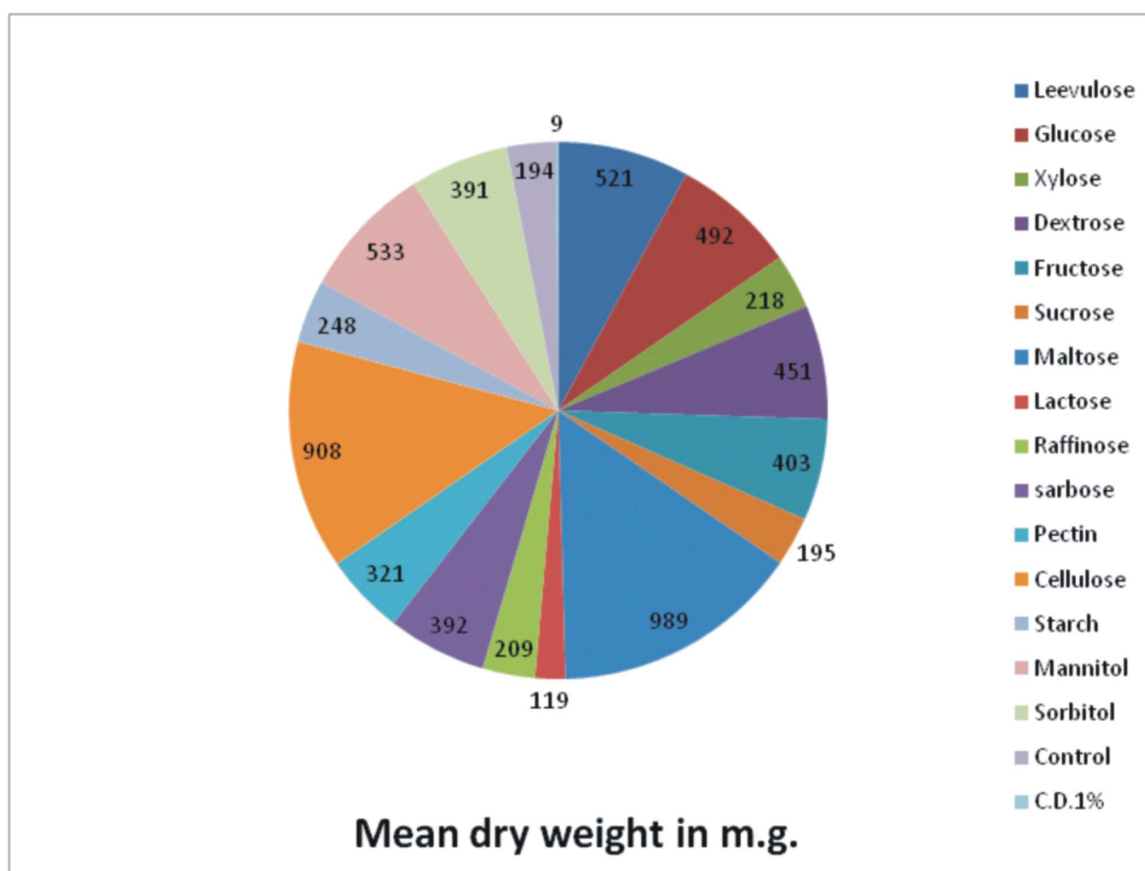


Table-3



Results:

It appears in above table that Maltose supported the best growth of *M. canis* while the worst even worse than control was recorded due to Lactose. The growth of the fungus on carbohydrates in descending order may be arranged as follows:

Maltose > Cellulose > Mannitol > Laevulose > Glucose > Dextrose > Fructose > Sarbose > Pectin > Starch > Xylose > Raffinose > Sucrose Control > Lactose.

Discussion:

As the very scanty report on the influence of carbohydrates on the growth, cultural characteristics and morphology of the keratinophilic fungus, is available but the result of investigation provided a clear picture of growth of the fungus.

The luxuriant growth of the fungus on cellulose is very remarkable due to the fact that the fungus under

reference has been reported to cause *Tinea capitis* and *Tinea corporis* of man and animals (Surendran et. Al. 2014) reflects that the dermatophytic fungi may also behave as good cellulolytic ones or the present behaviour might be due to the difference in strain which was not ascertained in the present scheme.

Scanty growth on pectin and starch indicates feeble pectinolytic and amylolytic enzyme activities. Best growth on Maltose and relatively lesser growth on Glucose indicate that Maltose is utilized at least partially as such not after complete simplification to the Glucose units of which the disaccharide is made.

Growth on complex sugar polymers, at least, reflects the saprophytic behaviour of the fungus corroborating the finding of Szathmary (1936), Muende and Webb (1937), Gordon (1953), Ajello (1953), Durie et al. (1955), Lurie, H.I. & M. Way (1957) and Fuentes et al (1955).

It is noteworthy that the growth on sucrose and the control are insignificant, while that in Lactose is significantly lower than control.

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□



Giloy : Application in Covid and its Future Use

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Abstract:

Giloy (Tinosporacordifolia) is a herbaceous vine of the family Menispermaceae that is indigenous to tropical regions of the Indian subcontinent. It has been in use for centuries as traditional medicine to treat various disorders, diseases and infections. The Ministry of Ayush, Government of India has approved it clinically as being safe for use. All parts of Giloy plant, such as stems, leaves and roots are proved to have health benefits. People, are using it to treat a wide range of issues, including fever, infections, diarrhoea and diabetes. It is reported that Giloy is an immunity booster and proenhance of antioxidant.

Keyword: Giloy, alkaloids and Antioxidant.

Introduction:

Giloy (*Tinosporacordifolia*) of family Menispermaceae is a climbing shrub that grows on

other trees. The plant is native to India but also found in China and tropical areas of Australia and Africa. It is an essential herbal plant Giloy in Ayurvedic and folk medicine, where people use it as a treatment for a wide range of health issues (Ray Kalayan et al. 2022). All parts of the plant are used in Ayurvedic medicine. However, the stem is thought to have the most beneficial one. The Ayurvedic Pharmacopoeia of India has approved the plants stem for use in medicine. Giloy is also called giloe, guduchi, an amrita etc. The word "giloe" is a Hindu mythological term. It refers to a mythical heavenly elixir that keeps celestial beings eternally young.

It is a climber herb having green to woody stems and with leaves in the shape of heart. Recently, during Covid days giloy has occupied to every kitchen in India, it was used as tablets, powder, and liquid or even the whole plant (Agarwal A. et al. 2002). A Giloy became a major part and constituent of most of the herbal medications during the pandemic which have helped in providing immunity. People who regularly have taken dose of giloy during those times become resistant to Covid.

Material and Methods:

A part of fresh giloy stems or leaves. First of all, Wash the giloy stem, remove the outer husks and cut

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the stems into smaller pieces of 2-3 inches length. Mash the stems inside the given quantity of water and allow it to settle overnight for about 10-12 hours. In the following morning, vigorously macerate the partially mashed giloy stem so as to release the mushy starchy material into the liquid. Filter the mixture a few times through mesh to remove any woody hard particles of stem. Keep the liquid aside uninterrupted for 4-5 hours so that the filtrate separates from the residue. Carefully remove the supernatant liquid and collect the starchy sediment onto a tray. Air-dries the sediment under the fan and stores it in air-tight vessels for future use.

Procedure:

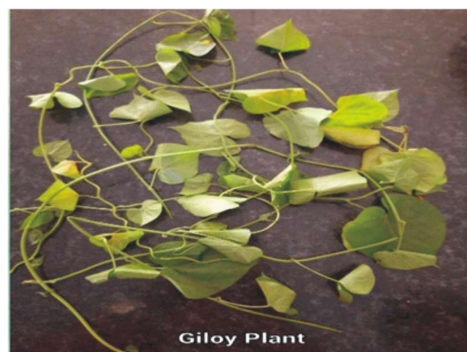
- 2ml of the plant extract was taken in a test tube. The extract was mixed with 2ml of Chloroform. This was further mixed with 2ml of Acetic Acid. The whole solution was all put together in a single test tube and shaken well. The initial colour of the solution was purplish-violet which after some time turned to blue. This indicates the presence of glycosides.

- 2gms of plant powder was taken in a test tube. 2ml of ethanol was poured in the test tube with powder. The mix was heated till all the solvent evaporated. The mix was boiled till all of ethanol was evaporated. The residue that was left after evaporation was steroid.

- Plant was kept in a beaker. The beaker was filled with ethanol till the plant fully submerged in it. The whole setup was covered with tin foil and left for 3-4 days. After the given time, the plant was taken out of the solvent. The solvent are boiled till evaporation. The solvent after removing the plants was brought to boil. After several minutes of boiling, a blackish residue was seen at the bottom of the beaker. The residue was terpene.

Photographs

A. Giloy Plant :



B.) GLYCOSIDES:



C.) STEROIDS:



D.) TERPENES:



Results and Discussion:

All the three experiments were successfully performed. The three main components of Giloy were Glycosides, Steroids and Terpenes, all there have great medicinal use in the, present as well as in the future.

The works which have conducted tells us about the diversified use of Giloy in the medicinal field. The experiments of the plant Giloy and how it can be consumed, in every possible way as powder form, liquid form tablets etc. the important components will be highly effective for the consumer. The active components that are isolated from the plant which are glycosides, steroids and terpenes have their own biological ways and roles in disease targeting and immunity building.

Futuristic Use:

- Glycosides have always been extensively used in the medical field. Recently major research programs are being carried out with glycosides in treatment of all sorts of heart related diseases and disorders.

- Steroids are used as all sorts of pulmonary diseases. It is being extensively used in the treatment asthma. Recently, steroids are being used as in testosterone to treat the "wasting syndrome".

- It has the future potential in advancement of drugs in the anti-tumour field. A number of terpenes obtained have been studied and came out to be chemo-preventive. The cells that lose their contact inhibition and lead to cancerous tumour formation get their sense of cell-to-cell contact back and hence do not stick together, preventing the cancerous formation. Other than this, terpenes also have direct calming effect on the body of the user. They have the power to influence the neurotransmitters in our brain that elevates our mood and increases serotonin level in our blood.

Conclusion :

Giloy (*Tinosporacordifolia*) is exhibiting several health benefits to society. It acts as anti-inflammatory,

antipyretic and anti-cancer agent. Giloy is also used for treating diarrhoea and vomiting. It acts as immunity booster. Research has to be conducted to establish all the pharmacological properties of Giloy.

Acknowledgement :

No work can be done and no result can be achieved without a good and perfect guidance.

We would like to thank our Principal, Dr. Namita Kumari for providing us with all support that was needed in the completion of our CPE project. Under guidance of Dr. Sweta Kumari, We have done this minor research work on Giloy.

I am highly obliged to Dr. Pushpanjali khare and Dr. Surendra Prasad sir for their suggestions and ever available help throughout this work. I am sincerely thankful to lab assistant Pallavi ma'am for providing lab equipments and Department of Chemistry for providing chemicals; we have successfully found the result.

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Sterilization of Water Using Bleaching Powder

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Abstract:

Water is essential for life and no one can think existence of life without it on our planet. With the growing population on Earth, the demand of portable water has increased to a large extent. Distribution of water for human use is not uniformly distributed and people have to intake impure water which causes water borne diseases such as typhoid, cholera etc. As a result, there is a requirement of portable water management for its reach to every person. Many nearby resources of water are available for drinking that

contains contaminants which can be disinfected and can be used for drinking. One of such disinfecting methods is Chlorination with easily available bleaching powder. In this research paper, the authors have dragged the attention towards disinfection of water with minimum use of bleaching powder. Mainly during rainy seasons when large proportion of our state gets covered with floods and no pure water for drinking, sterilization can be done to avoid water borne diseases. With bleaching powder this can be done with less expense and less technology requirements. The authors have found that the river water of their locality was more infected as compared to the tap water & RO water of their department and also calculated the right dosage of the bleaching powder required to disinfect the resource.

Keywords: *Chlorination, bleaching powder, portable, cholera, typhoid, disinfection.*

Introduction:

Water is an important and essential ingredient in our quest for survival on this planet. With the increasing world population, the demand for drinking water has also increased dramatically and therefore it is very essential to identify resources of water from which we can use water for drinking purposes. It is also very essential for carrying out various metabolic processes in our body and also regulates temperature of the body.

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A daily average of 1 gallon per man is sufficient for drinking and cooking purposes. A horse, bullock or mule drink about 11 gallon at a time. Standing up, an average allowance of 5 gallons should be given for a man and 10 gallons for horse or a camel. In order to fulfill such a huge demand of water it needs to be purified and supplied in orderly and systematic way. Many available resources of water do not have in drinkable form either the water contains excess of calcium or magnesium salts or any other impurities which make it unfit and unsafe for drinking.

There are many methods for Purification of water ³. Some of them are:

- Boiling
- Filtration
- Bleaching Powder Treatment
- SOIDS (Solar Water Disinfection) And the list goes on.

Boiling: This is the most commonly used water purification techniques in use today. But in industrial or large-scale purification of water, the water losses due to evaporation will be quite high and the amount of purified water obtained will be very less.

Filtration: This is also used for purification of water but it can't be used for removing foreign chemicals and impurities that are miscible with water.

Solids (Solar water Disinfection): This method uses the combination of heat and Ultraviolet light which kill the organisms. This method is recommended by United Nation for disinfection of water using Soft Drink Bottles, Sunlight and a black surface at least in hot nations with regular intense light. Water-filled transparent bottles placed in a horizontal position a top of flat surface in strong sunlight far around 5hrs will kill microbes in the water. The process is made even more safe and effective if the bottom half of the bottle is blackened. Major drawback of this technique is that it can't be used in countries with cold weather. Therefore, we need a purification technique which can

be used anytime and anywhere and does not require any third-party content. Also is economically feasible on both normal and large scale. Hence, we look at the method of purification of water using the technique of treatment by bleaching powder commonly known as "chlorination"

Benefits of chlorination are:

- Proven reduction of most bacteria and viruses in water.
- Residual protection against recontamination.
- Proven reduction of diarrhea disease incidence.
- Scalability and low cost.

Drawbacks of chlorination are:

- Relatively low protection against protozoa.
- Potential taste and odour objections.
- Potential long-term effect of chlorination by-product.
- Lower disinfection effectiveness in turbid waters.

Chlorination is most appropriate in areas with a consistent supply chain for hypochlorite solution with relatively lower turbidity water, and in urban, rural and emergency situations where educational messages can reach users to encourage Correct and consistent use of hypochlorite solution.

Background of the study:

The Broad Street Cholera outbreak was a severe outbreak that occurred in 1854, which spread through water. The epidemic seemed less acute in areas where Sand filter were installed. John Snow found that cause of this outbreak is water pump contamination by sewage water. He applied Chlorine for purification of water and proves helpful. After sometime, negative Effect of this element were discovered. Chlorine vaporizes much faster than water and it was linked to the aggravation and cause of respiratory disease ¹.

In 1902, calcium hypochlorite and ferric chloride were mixed in a drinking water resulting in both coagulation and disinfection drinking water. Chlorination and filtration helped to virtually eliminated the disease like cholera, Typhoid fever etc. During the treatment process, chlorine is added to drinking water as elemental chlorine (chlorine gas), sodium hypochlorite solution or dry hypochlorite.

As, importantly only chlorine-based chemicals provide "Residual Disinfectant" levels that prevent microbial regrowth and helps to protect treated water throughout the distribution system. To this day, bleaching powder remains the most commonly used drinking water disinfectant and the disinfectant for which we have the most scientific information. However, bleaching powder also reacts with the organic matter, naturally present in water such as decaying leaves. Current scientific data shows that the benefits of bleaching our drinking water are much greater than any health risks from THMs (trihalomethanes) and other bi-product. Although other disinfectants are available, bleaching powder remains the choice of water treatment experts. When used with the modern water filtration methods, chlorine is effectively against the virtually all micro-organism.

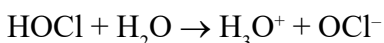
Bleaching water is easy to apply and small amount of the chemical remain in the water as it travels in the distribution system from the treatment plant to the consumer's tap. This level of effectiveness ensures that micro-organisms cannot re-contaminate the water after it leaves the treatment.

Methodology ²:

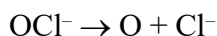
When chlorine is added to water, it forms hypochloric acid.



Depending upon the pH value, hypochlorous acid passing expires to hypochlorite ions:-



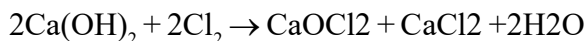
This falls apart to chlorine and oxygen atoms:



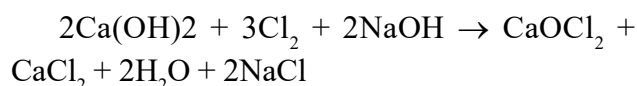
HOCl (Hypochlorous acid) [Electrically neutral] and Hypochlorite ions (OCl^-) [Electrically negative] will form free chlorine when bond together this results in disinfection. Both substances have very disinfecting behaviour. Hypochlorous acid is more reactive and is stronger disinfectant than hypochlorite.

Bleaching powder or Calcium hypochlorite is a chemical compound with formula $\text{CaO}(\text{Cl})_2$. It is widely used for water treatment and as a bleaching agent. This chemical is considered to be relatively stable and has greater available chlorine than sodium hypochlorite (liquid bleach). It is prepared by either sodium or calcium process ⁴.

Calcium Process:



Sodium Process:



In order to do the experimental work to achieve the objective of the study, the authors have followed following steps:

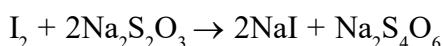
1. Preparation of solutions for titration

● *A known solution of bleaching powder:*

For this research work, the authors have prepared 1% bleaching powder solution. To prepare the solution, 2.5 gm of bleaching powder was added to 150ml of distilled water in a conical flask of 250ml capacity. The conical flask was corked and as a result, suspension of the mixture was obtained. The suspension was filtered through glass wool. The filtrate so obtained was diluted to 250ml and corked.

- *10% potassium iodide solution:* It was prepared by dissolving 10 gm of potassium iodide in 100 ml of distilled water.

- **Starch solution:** It is prepared by making paste of 1gm of starch in 10ml of distilled water and adding it to 100ml of boiling water. The solution so obtained by filtering it with filter paper. This act as indicator for titration for the research work.
- **0.001N $\text{Na}_2\text{S}_2\text{O}_3$ solution:** This was prepared by dissolving 0.25 gm of thiosulphate in 1000ml of air free distilled water. The solution so obtained was standardised on the principle of redox iodometric titration with potassium iodate as primary standard solution. The reaction given below describes the process.



2. Determination of maximum Chlorine released for disinfection by the bleaching powder: 10 ml of bleaching powder solution was poured in a conical flask and 10ml of 10% KI solution was added to the conical flask. The flask was closed with the help of cork and shaken vigorously. After this, the said mixture

was titrated against 0.001 N sodium thiosulphate taken in the burette. When the solution turned light yellow, 1ml of starch indicator was added which result in change of colour to blue. The solution was again titrated till blue colour disappears. The titration was represented till three concurrent reading was obtained. This reading was considered as standard solution of distilled water.

3. Determination of amount of chlorine released from bleaching powder to disinfect the samples taken for the research: For RO Water, 10 ml of bleaching powder solution and 10 ml of RO water was mixed followed by addition of 10 ml of 10% KI solution as stated earlier was added and shaken. After this, the said mixture was titrated against 0.001 N sodium thiosulphate taken in the burette. When the solution turned light yellow 1 ml of starch indicator was added which result in change of colour to blue. The solution was again titrated till blue colour disappears. The titration was repeated till three concurrent reading was obtained. The same procedure was repeated for tap water and river water also.

Result and Discussion:

Table I
Titration table for Bleaching Powder

Sl. No.	Volume of sample taken	Volume of Bleach	Volume of 10% KI	Volume of sodium thiosulphate solution 0.001N			
				Initial reading	Final reading	Difference	Concurrent reading
1.	50 ml	10 ml	10 ml	0.0	20.5	20.5	19.9ml
2.	50 ml	10 ml	10 ml	20.5	40.4	19.9	
3.	50 ml	10 ml	10 ml	40.4	60.3	19.9	
4.	50 ml	10 ml	10 ml	20.0	39.9	19.9	

Table II
Titration table for RO Water of Chemistry Dept. MMC, Patna

Sl. No.	Volume of sample taken	Volume of Bleach	Volume of 10% KI	Volume of sodium thiosulphate solution 0.001N			
				Initial reading	Final reading	Difference	Concurrent reading
1.	50 ml	10 ml	10 ml	0.0	16.6	16.6	16.5 ml
2.	50 ml	10 ml	10 ml	16.6	33.1	16.5	
3.	50 ml	10 ml	10 ml	33.1	49.6	16.5	
4.	50 ml	10 ml	10 ml	16.5	33.0	16.5	

Table III
Titration table for River Water of Krishna Ghat

Sl. No.	Volume of sample taken	Volume of Bleach	Volume of 10% KI	Volume of sodium thiosulphate solution 0.001N			
				Initial reading	Final reading	Difference	Concurrent reading
1.	50 ml	10 ml	10 ml	0.0	10.0	10.0	9.0 ml
2.	50 ml	10 ml	10 ml	10.0	19.0	9.0	
3.	50 ml	10 ml	10 ml	19.0	28.0	9.0	
4.	50 ml	10 ml	10 ml	28.0	37.0	9.0	

Table IV
Titration table for Tap Water of Chemistry Dept. MMC, Patna

Sl. No.	Volume of sample taken	Volume of Bleach	Volume of 10% KI	Volume of sodium thiosulphate solution 0.001N			
				Initial reading	Final reading	Difference	Concurrent reading
1.	50 ml	10 ml	10 ml	0.0	12.0	12.0	11.5 ml
2.	50 ml	10 ml	10 ml	12.0	23.5	11.5	
3.	50 ml	10 ml	10 ml	23.5	45.0	11.5	
4.	50 ml	10 ml	10 ml	15.0	26.5	11.5	

Calculations

1. RO water (Sample 1)

Amount of bleaching powder used to disinfect 50 ml of RO water

= (19.9 – 16.5) ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution

= 3.4 ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution.

Since 250 ml bleaching powder solution contains 2.5 g bleaching powder.

1 ml of bleaching powder solution contains 2.5/250 = 0.01 g of bleaching powder.

10 ml of CaOCl_2 consumes 19.9 ml $\text{Na}_2\text{S}_2\text{O}_3$

1 ml of CaOCl_2 consumes = 19.9/10

= 1.99 $\text{Na}_2\text{S}_2\text{O}_3$

So, 1 ml of 0.001 N $\text{Na}_2\text{S}_2\text{O}_3$ solution consumes 10 / 1.99 ml of CaOCl_2 solution.

Volume of CaOCl_2 solution required to disinfect 50 ml of RO water = $3.4 \times 10/1.99$ ml

$3.4 \times 10/1.99$ ml of bleaching powder solution contains = $3.4 \times 10 \times 0.01/1.99$ gm of CaOCl_2
= 0.17 gm of CaOCl_2

50 ml of RO Water required 0.17 gm CaOCl_2
Amount of bleaching powder required to disinfect 1 litre of water is = $0.17 \times 1000/50$

= 3.42 gm of CaOCl_2

2. River water (Sample 2)

Amount of bleaching powder used to disinfect 50 ml of River water

= (19.9 - 9.0) ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution

= 10.9 ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution.

Accordingly,

Volume of CaOCl_2 solution required to disinfect 50 ml of River water = $10.9 \times 10/1.99$ ml

$10.9 \times 10/1.99$ ml of bleaching powder solution contains

= $10.9 \times 10 \times 0.01/1.99$ gm of CaOCl_2

= 0.55 gm of CaOCl_2

50 ml of River Water required 0.55 gm CaOCl_2

Amount of bleaching powder required to disinfect 1 litre of water is

= $0.55 \times 1000/50 = 11$ gm of CaOCl_2

3. Tap water (Sample 3)

Amount of bleaching powder used to disinfect 50 ml of Tap water = (19.9 – 11.5) ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution = 8.4 ml of 0.001 N of $\text{Na}_2\text{S}_2\text{O}_3$ solution

Accordingly,

Volume of CaOCl_2 solution required to disinfect 50 ml of Tap water = $8.4 \times 10/1.99$ ml

$8.4 \times 10/1.99$ ml of bleaching powder solution contains

= $8.4 \times 10 \times 0.01/1.99$ gm of CaOCl_2

= 0.42 gm of CaOCl_2

50 ml of Tap Water required 0.42 gm CaOCl_2

Amount of bleaching powder required to disinfect 1 litre of water is

= $0.42 \times 1000/50 = 8.4$ gm of CaOCl_2

From the data that the authors have calculated, it can be said that due to the presence higher impurities in river water due to surface run off and throwing garbage and sewage into the river. Beside this tap water collected from the laboratory of Chemistry Dept. also contain impurities greater than RO water. From the result we have obtained it is clear that 8.4 gm, 11 gm & 3.4 gm for sterilization of tap water, river water and RO water respectively.

Conclusion :

From the above results obtained it can be easily concluded that the Ganga's water of Krishna ghat, Patna Bihar is having more pathogenic impurity as compared to Ganga's water from Gandhi ghat, Patna. Furthermore, the water from Ganga's is more impure as compared to laboratory tap water and station tap water.

Sterilizing through bleaching powder is a convenient method. It leaves no impurities and shows no harmful effect if the bleaching powder is taken in right amount. Using the above procedure, we can calculate the amount of bleaching powder required for any sample of water and then take it in large amount if the water is to be disinfected in large scale as in household needs. The only cause using bleaching powder to disinfect water instead of any other method is that it kills all germs and bacteria due to its chemical action and provides us with a pure sample of water to use for all purposes.

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Studying the Effectiveness of Commonly used Antacids by Its Acid Neutralizing Property

Taniya Raj, Pratiksha Kumari, Antra Kumari and Amrita Prasad *

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Abstract:

Gastric acidity is the most basic problem of the entire world. People usually take commercially available antacids to alleviate these symptoms. Nearly everyone has indigestion and stomach irritation issues. Most cases of indigestion are short-lived and don't require high doses of medicines, so it is important for us to know the adequate dose of antacids. The present study aimed at identifying the neutralizing properties of some commonly used antacids. Antacids are bases that react stoichiometrically with acids. Five antacids (Digene, Eno, Zintac, Pantos DSR, and Aciloc) were taken from the pharmacies and were subjected to the study on their acid neutralising property. The number of moles of acid that can be neutralized by a single tablet of

a commercial antacid was determined by back titration method. The results suggested Digene to be more effective at affordable price whereas Pantos DSR could be consumed during severe issues of acidity. Aciloc was found to be less effective as compared to other antacids studied.

Keywords: Antacids, Digene, Neutralising property, ENO, Pantos DSR.

Introduction:

Antacids neutralizes the gastric acid secreted in stomach for digestion. These are helpful agents in treating mild occasional heartburn and are used as supplementing prescription drugs in more severe diseases. They are cost effective and relatively safe; however, they can cause some side effects. Antacids are the oldest effective medications for heartburn. Chalk (calcium carbonate) has been chewed for centuries to provide some relief and is still popular. Most commercially available antacids are combinations of aluminium and magnesium hydroxide ¹. Some effervescent antacids contain sodium bicarbonate, that old household remedy for tummy aches known as "baking soda." Antacid tablets are slow acting and have less neutralizing power than a liquid form of antacid. Tablets must be chewed to interact well with gastric acid. For most, the

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convenience of tablets far outweighs these slight disadvantages. It works by neutralizing the stomach acid that causes heartburn². We can buy many antacids without a prescription. Liquid forms work faster, but to treat heartburn tablets are taken because they are easy to use. All antacids work equally well, but they can cause different side effects. Antacids can be taken about 1 hour after eating or when we have heartburn³. If we are taking them for symptoms at night, we should not take them with food. Antacids cannot treat more serious problems, such as appendicitis, a stomach ulcer, gallstones, bowel problems like pain, nausea, vomiting, bleeding bowel movements, darkened bowel movements, bloating or cramping etc. To know the effectiveness of antacids initially the crushed antacids sample were mixed with known amount of excess acid⁴. The resulting acidic solution was titrated with a known strength of base to know the neutralising property of that very tablet. The solution of antacids which requires less amount of base to neutralise the remaining acid was considered to be more effective antacid.

Materials And Method:

Five antacids were used for this study Zintec, Eno, Aciloc, Digene Pantos DSR and was purchased from

local pharmacy. Chemicals used were Conc. HCL, NaOH Pellets and glassware used were burette, conical flask, beaker, watch glass, distilled water, weighing machine, spatula

Procedure:

Initially, each antacid tablet was dissolved in a known excess amount of acid in a conical flask. The resulting solution remains acidic as the tablet did not provide enough moles of base to completely neutralize the acid. The solution was titrated with base to know neutralising property of that very tablet. Firstly, a standard solution of 0.15 M HCL and 0.15 M NaOH was prepared. 10gm of each antacid was weighed and crushed using mortar and pestle. It was then transferred into a conical flask and 25ml of 0.15 M of HCL was added to each sample. 2-3 drops of phenolphthalein indicator were added. At first antacids neutralizes the amount of acid of each sample, and then samples were titrated against 0.15 M NaCl solution. The reading on the Burette was recorded. The conical flask was swirled to mix the acid and the alkali. A change in colour was observed. All the above steps were repeated 3 times until we get 3 concurrent results and then it was recorded.

Observation:

The following result has been observed for different antacids used.

ZINTAC TABLETS

S. No	Volume of HCL in (ml)	Burette reading of NAOH in (ml)			Concurrent reading	Indicator
		Initial	Final	Difference		
1	25	0	2.5	2.5	2.5	Phenolphthalein
2	25	2.5	5	2.5	2.5	
3	25	5	7.5	2.5	2.5	

ACILOC

S. No	Volume of HCL in (ml)	Burette reading of NAOH in (ml)			Concurrent reading	Indicator
		Initial	Final	Difference		
1	25	0	3	3	3	Phenolphthalein
2	25	3	6	3	3	
3	25	6	9	3	3	

ENO

S. No	Volume of HCL in (ml)	Burette reading of NAOH in (ml)			Concurrent reading	Indicator
		Initial	Final	Difference		
1	25	0	2.8	2.8	2.8	Phenolphthalein
2	25	2.8	5.6	2.8	2.8	
3	25	5.6	8.4	2.8	2.8	

DIGENE

S. No	Volume of HCL in (ml)	Burette reading of NAOH in (ml)			Concurrent reading	Indicator
		Initial	Final	Difference		
1	25	0	1	1	1	Phenolphthalein
2	25	1	2	1	1	
3	25	2	3	1	1	

PANTOS DSR

S. No	Volume of HCL in (ml)	Burette reading of NAOH in (ml)			Concurrent reading	Indicator
		Initial	Final	Difference		
1	25	0	0.8	0.8	0.8	Phenolphthalein
2	25	0.8	1.6	0.8	0.8	
3	25	1.6	2.4	0.8	0.8	

Results And Discussion

S. No	Antacids name	Amount of NaOH required to neutralize excess of HCl	Effectiveness of antacids
1	Aciloc	3	Low
2	Eno	2.8	Moderate
3	Zintac	2.5	Moderate
4	Digene	1	High
5	Pantos DSR	0.8	High

Results showed that Digene was more effective at affordable price because its digestion starts from mouth itself. Digene is having high basic character as compared to other so it neutralizes the formed HCl in the stomach to give instant relief. Pantos DSR could be consumed for severe issues of acidity. Aciloc is

less effective as compared to other antacids studied. It has also been reported that zintac is not good for pregnant women due to presence of drug, child could be at the risk of side effects.

Conclusion:

From the above data we can finally conclude that chewing Digene tablets are more effective than others and in liquid form it is found to be further more effective. It is also available at affordable price in every nearby medical shops.

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A Comparative Study of Maternal and Child Health Care Status of Bihar and Kerala

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Abstract:

In the present paper a comparative study of maternal and child health indicators based on the data of National Family Health Survey of Bihar and Kerala has been attempted. Maternal health involves number of components like health of a woman during pregnancy, childbirth and postpartum care. Its successful implementation is quite complex in nature. State of Jharkhand has witnessed major changes since its formation. Large variations are found in maternal and child health status in the two states. High prevalence of girl child marriage in Bihar is responsible of birth complications in the state. Both in maternal and in child health, performance of Kerala is better than that of Bihar. Government responsibility henceforth increases and a careful examination about the performance of these states in maternal and child health indicator reflects that more

expenditure and planning is required to achieve desired goals in this area.

Keywords: Maternal health, Child Health, Maternal Mortality Rate, Anaemia

Introduction:

Health has been defined as a state of complete physical, mental and social well-being by WHO. In other words, it can be said that health is the absence of any disease or impairment. Further, maternal health refers to the health of women during pregnancy, childbirth and the postpartum period. It revolves around the health of a pregnant, both at the time they give birth and also during the phase of child raising. According to WHO even though motherhood is being considered as a fulfilling natural experience, quite a large number of females specially from developing and under-developed countries faces health problems and sometimes they even die. Therefore, investment in female health is quite important.

In 2013, the government of India adopted reproductive maternal, new-born, child and adolescent health framework. Main objective of this framework revolves around the causes and solution of problems of high mortality and morbidity among women and children. Further it also focuses on the

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issues of access and utilization of health care facilities. Major causes of high maternal mortality among females as identified by WHO has been from excessive bleeding to obstruct labour. Anemia and malaria among expecting mothers is also responsible for this high mortality. At all India level, large variations have been observed in maternal and child health indicators.

As per the report of NITI Aayog (2021), Bihar has performed dismally poor in maternal and child health indicators. On the other hand, the performance of Kerala has been quite impressive. In the above context, present paper tries to analyse using some variables the status of maternal and child health of Bihar and Kerala.

Review of Literature:

Health status of any population reflects its social and economic well-being. Government has always to health care services including maternal health care facilities to India's population through a number of policy documents. States like Kerala have performed well and "Kerala Model Health System" is often viewed as a rare combination of higher order human development and not so noticeable pattern of consistent exponential economic growth. However, in recent times, this model is facing problems because of demographic transition in the state which is reflected in the pattern of morbidity and hospitalization. Bihar on the other hand, has low longevity and performs poor in terms of medical and educational facilities and has the lowest rate of reported morbidity. Studies in this context have reported some interesting findings

(Gupta, Raju Kumar, 2022), explained with the help of statistical analysis that Rajasthan has better status and UP and Bihar have worst status in terms of Infant Mortality Rate (IMR). In terms of Under 5 Mortality Rate, Orissa and Rajasthan have a better status while UP and Bihar have worst status in EAG States. Therefore, an effective policy is required and important for the betterment of UP and Bihar especially among the EAG States.

(Yadav, Arvind K., 2021) aimed to examine the

currents status and socioeconomic determinants of antenatal services, skilled birth attendance and post-natal services in four EAG states of India. The study highlighted that female education, mass media exposure, women's autonomy and economic status were significantly related with the use of maternal healthcare services.

(Mishra, Prem Shankar, 2023) explained women with multiple vulnerabilities were less likely to utilise essential MCH (maternal and child health) services. Women who faced vulnerabilities in all dimensions were less likely to have received four or more ANC (antenatal care) and postnatal care than those who were not deprived of any vulnerabilities.

(Roy, Shreyasi, 2020) explained the EAG states have lagged behind in controlling population growth to manageable levels. The government can improve the situation by enhancing the delivery, uptake and utilization of maternal and child health services.

(Halder, 2020) explained infants born in poorer families tend to die in large numbers. The Government should invest in these states in order to reduce the Infant Mortality Rate and ensure better performance of the health factors that which will increase the life of the infants.

(Shama Firdaush, 2018) in her study assessed the health status of Muslim and Hindu women across states of India. Looking at the condition of the states individually, found that states like Kerala, Uttarakhand had the higher proportion of Hindu women whereas Assam, Jammu and Kashmir, Rajasthan had the higher percentage of Muslim women having better health facilities. In contrary were the states like Andhra Pradesh, Jharkhand and others where the health status of Hindu as well as Muslim women was found worse than others.

Objective of the Study:

The main objective of the study is to assess the maternal health and child healthcare situation of Bihar and Kerala based on NFHS-3, NFHS-4 and NFHS-5 data sheets.

Materials and Methods:

The study is basically a narrative description in which the NFHS fact sheets of both these states were used. The data sets were compared with each other (NFHS-3 and NFHS-4) for various maternal health indicators in both these states. The indicators compared in this study includes Ante-Natal Care (ANC) services, institutional delivery, age at marriage, IMR, TFR, anemia, child vaccination status.

For the purpose of comparative analysis percentage distribution tables are plotted.

Results and Discussion:

Antenatal check-up is an important event for better maternal healthcare throughout pregnancy. There are 4 mandatory ANC visits required for optimal maternal care. The data shows increase in antenatal check-up percentage from 11.2% (NFHS-3) to 25.2% (NFHS-5) in Bihar but there is a decline in percentage from 93% to 90.1% and then 78.6% in Kerala.

Table 1: Antenatal Checkups in Bihar and Kerala (percentages)

Mothers who had at least four Antenatal care (%)			
STATE	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	11.2	14.4	25.2
Kerala	93.0	90.1	78.6

Source: Various Rounds of NFHS

Institutional deliveries in both Bihar and Kerala has increased as reported by NFHS-5 compared to NFHS-4 datasheets. Kerala shows 100% institutional

delivery while Bihar is at 76.2 %. The percentage of institutional deliveries in public facilities is less in Kerala as compared to Bihar.

Table 2: Institutional Delivery in Bihar and Kerala (percentages)

Percentage (%) of Institutional Deliveries			
STATE	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	19.9	63.8	76.2
Kerala	99.5	99.8	99.8
Percentage (%) of Institutional Deliveries in Public Facilities			
Bihar	3.5	47.7	56.9
Kerala	35.6	38.3	34.1

Source: Various Rounds of NFHS

As far as Anemia is concerned, nearly one-third (31%) of pregnant women in Kerala are anemic and two- fifth (39%) of children aged 6 - 59 months in Kerala are anemic. Meanwhile, the figures are quite alarming for Bihar where 64% of women have anemia.

It has increased by 3% points since NFHS - 4 and more than two- thirds (69%) of children aged 6 - 59 months are anemic. The overall prevalence of anemia in children has increased from 64% in NFHS -4 to 69% in NFHS - 5.

Table 3: Anaemia among females and children in Bihar and Kerala (percentages)

Percentage of pregnant women aged 15-49 who are anemic (%)			
STATES	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	60.2	58.3	63.1
Kerala	33.8	22.6	31.4
Percentage of children aged 6-59 months who are anemic (%)			
Bihar	78	63.5	69.4
Kerala	44.5	35.7	39.4

Source: Various Rounds of NFHS

Age at marriage also helps in defining maternal health of a female. There is no denying to the fact that females have double burden of diseases and this burden increases when they are married at an early age. Maternal mortality bears a direct relationship with

age at marriage. Those married at an early age are more vulnerable to birth complications. Data reveals that higher percentage of females are married before age 18 in Bihar (40.8%) as compared to Kerala (6.3%). This fact needs to be considered by policy makers.

Table 4: Age at Marriage in Bihar and Kerala (percentages)

Percentage of women age married before age 18 years (%)			
STATE	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	69.0	42.5	40.8
Kerala	15.4	7.6	6.3

Source: Various Rounds of NFHS

Total Fertility Rate indicates total number of children a female can have in her reproductive period. The figures for Bihar are high even in 2019-20 (NFHS-5). In Bihar on an average a female has 3 three children

which is greater than the replacement level of 2. On the other hand, in Kerala a female on an average has only 1.8 children which is less than the replacement level. This needs to be controlled for Bihar.

Table 5: Total fertility rate (Children per Woman)

STATE	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	4.0	3.4	3.0
Kerala	1.9	1.6	1.8

Source: Various Rounds of NFHS

One of the most important indicators of child health, Infant Mortality Rate shows a dismal picture of Bihar in providing proper health care facilities to

children of the state. Even in 2019-20 (NFHS-5), IMR in Bihar is 46.8% as compared to Kerala where the figures are just 4.4%.

Table 6: IMR in Bihar and Kerala (percentages)

Infant mortality rate (IMR)			
STATE	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	62	48.1	46.8
Kerala	15	6	4.4

Source: Various Rounds of NFHS

As far as Immunization is concerned, nearly 71% children aged 12- 23 months received all basic vaccinations in Bihar while in Kerala, 78% of children received all basic vaccinations. Studies have confirmed

that socio-economic and demographic factors play an important role in the utilization of health services than mere accessibility of health care facilities.

Table 7: Vaccination status in Bihar and Kerala (percentages)

Children age 12-23 months fully immunized (BCG), Measles and three doses - each of Polio and DPT			
STATES	NFHS-3 (2005-06)	NFHS-4 (2015-16)	NFHS-5 (2019-21)
Bihar	32.8	61.7	71.0
Kerala	75.3	82.1	77.8

Source: Various Rounds of NFHS

From the latest NHFS-5, it is clearly evident that Antenatal checkup is an important event for better maternal healthcare throughout pregnancy. Bihar shows the poorest performance for utilization of antenatal care. The decline in ANC visit in Kerala was due to natural calamities and Nipah outbreak. The proportion of pregnant women getting four or more ANC is a global benchmark indicator to track maternal health programmes. The percentage of mother protected against tetanus has shown increasing in Bihar but it has decreased in Kerala as compared to NFHS-4. On the other hand, institutional deliveries has showed a marginal increase of registered pregnant women in Bihar while Kerala has achieved 100% institutional deliveries but the percentage of institutional birth in public facilities is less as compared to Bihar.

ANC is considered as the key element in healthcare delivery system. It consists of various routine clinical examination and investigation for assessing healthy motherhood. The caste discrimination, rituals and beliefs in declining the ANC services in certain areas prevents women from accessing healthcare system. Limitations in infrastructure, unavailability of professionals healthcare workers and midwives in rural areas reasons hamper access to ANC. Similarly, neonatal care is of utmost importance from the perspective of maternal health and the survival of the baby as well. The baby needs immediate care after the birth. Hence, institutional care with the help of concerned specialists is required for the survival and well being of the baby. The situation of Bihar has also improved but it will take time to reach equal to that of Kerala. The situation of Bihar is improving year-by-year. There is an immediate need to check this rising trend. Maternal Mortality rate (MMR) has drastically improved in Bihar while Kerala has yet again emerged on top when it comes to maternal and child health, with the state recording the lowest maternal mortality rate.

Conclusion:

Given the status of maternal health of Bihar and Kerala, Improvement in the performance of maternal health related activities pregnancy, child birth and post partum care, etc. is highly necessary. Bihar has the highest prevalence of girl child marriage with around 41% as compared to Kerala which leads to early child birth resulting in various maternal complications. As per various reports, Anemia is rampant among pregnant women age 15 - 49 in Kerala which infers that their women health is in peril but, it has low infant mortality rate than Bihar because it has adequate provision of basic health and education facilities. Kerala has again emerged on top when it comes to maternal mortality rate (MMR) in the country. Thus, Child marriage is a key determinant of high fertility, poor maternal and child health.

To sum, health profile of a female in Kerala is much better than that of females in Bihar. Often, women's health is regarded as synonymous with reproductive health. For them, Central government has introduced several policies such as Janani Suraksha Yojana, Janani-Shishu Suraksha Karyakram and Pradhanmantri Surakshith Matritva Abhiyan to address problems in maternal health care. State needs a strategy for achieving state-specific goals. Efforts needed by the state of Bihar in this respect should be more focused and determined as compared to the state of Kerala.

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Satyagraha : Its Essence and Emergence

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Abstract:

Gandhi's satyagraha is a necessary outcome of his theory of truth and nonviolence. Gandhi opts and pleads for satyagraha as the most appropriate method of conflict resolution. Gandhi believed that Satyagraha went hand-in-hand with ahimsa. Ahimsa is the belief that every living creature and inanimate object should not be intentionally harmed. Ahimsa is a guiding principle of Gandhi's Satyagraha practices of civil disobedience and non-cooperation. Every action taken should not include violence. Satyagraha is exclusive of any use of force at all and was political in nature. Passive resistance was seen as a meek form of protest. This philosophy is cardinal to the Mahatma's teaching. The main objective of this paper is to find the true meaning of Gandhian concept of Satyagraha and its various sources. This paper also concentrates on the difference between Satyagraha and Passive Resistance.

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Keywords : Satyagraha, Gandhi, Origin, Truth, Indian, Passive Resistance

Introduction:

The Gandhian philosophy of satyagraha is a natural outcome of the supreme concept of truth. Satyagraha means the exercise of the purest soul-force against all injustice, oppression and exploitation. For Gandhiji, Satyagraha was not just a means of non-violent struggle but it became the philosophy of his life. By giving the concept of Satyagraha, Gandhiji showed mankind to win over greed and fear by love.

Meaning of Satyagraha:

In Satyagraha, there is two words-satya and agraaha. Satya is truth and agraaha is one's eagerness to follow the principles of truth, one's zeal for the knowledge of truth. If one is enthusiastic and eager to follow the principle of truth, then it is satyagraha. Gandhi defined 'Satyagraha' as the "vindication of truth, not by infliction of suffering on the opponent but on one's own self." ¹ A satyagrahi hates evil but not the evil-doer. Satyagraha demands:

- 'Sat'-Truth; implies openness, honesty and fairness
- 'Ahimsa'-Refusal to inflict injury upon others
- 'Tapasya'-Willingness for self-sacrifice

Satyagraha is literally holding on to the truth and it means, therefore, Truthforce. Truth is soul or spirit. It is, therefore, known as soulforce. It excludes the use of violence because man is not capable of knowing the absolute truth and, therefore, not competent to punish.² Gandhi considered satyagraha a moral prerogative of the human being which is concerned with every aspect of life. Calling satyagraha as *Kamdhenu*,³ Gandhi believed that it was useful both for a satyagrahi and his adversary⁴ because it brought both of them near to Truth (or in Gandhi's words near to God). R. R. Diwakar expounds the moral context of satyagraha. He says:

In satyagraha, the opponent is not an enemy to be destroyed or defeated. He is a person who is to coexist with the satyagrahi. He is, therefore, to be helped to become a better man for himself and for the society."⁵

The satyagrahi is therefore obligated to enter into reason and discussion with his opponent in order to awaken the sense of justice and fairness in him. In Gandhi's view the law of satyagraha, the law of love is an eternal principle. And that is why he non-cooperated with all that was evil, whether it was associated with his own wife, son or even himself.⁶ The theory of satyagraha sees means and ends as inseparable. The means used to obtain an end are wrapped up in and attached to that end. Therefore, it is contradictory to try to use unjust means to obtain justice or to try to use violence to obtain peace. As Gandhi wrote, "They say, 'means are, after all, means'. I would say, 'means are, after all, everything'. As the means so the end..."⁷

The concept of satyagraha is spiritual in essence. If we follow the methods of satyagraha, the power of truth works which is superior than any other physical force. It is a force that works silently and apparently slowly. In reality, there is no force in the world that is so direct or so swift in working.⁸ In satyagraha we want to see the truth through surrender to the Will of God. The seeker wants to pursue the truth, but while

pursuing the truth he feels the necessity of surrendering to the Will of God. He feels that it is the Will of God that is giving him the capacity to follow the path of truth, and it is the Will of God that will give him the capacity to see the truth. A satyagrahi relies upon God for protection against the tyranny of brute force.⁹

For Gandhi, Satyagraha was a transformation for its own sake. The end product of transformation through Satyagraha he called "Swaraj." Gandhi wrote: "We reap exactly as we sow." Getting revenge on one's oppressor would not lead to Swaraj, because revenge is an act of hatred and therefore cannot be part of Satyagraha. According to Dalton, Gandhi felt that freedom from oppressors obtained through revenge would be a mere absence of external rule, but not true freedom.

Reverence to the opposition was one of the unique features of the satyagraha preached by Gandhi. Under no circumstance, should the opposition or the flag of the opposition be insulted in a Satyagraha movement. Resistance on the part of the authorities would be expected, but a true Satyagrahi had to bear all hardships, including physical assault with patience, not ever stooping to anger and to defend the faith even at the cost of life. Gandhi believed that the Satyagrahis had to be extremely strong in inner strength and moral courage in order to do that, and also realized that could not be achieved unless the Satyagrahis maintained a pure and simple life.

When using satyagraha in a large-scale political conflict involving civil disobedience, Gandhi believed that the satyagrahis must undergo training to ensure discipline. He wrote that it is "only when people have proved their active loyalty by obeying the many laws of the State that they acquire the right of Civil Disobedience."

He therefore made part of the discipline that satyagrahis:

- appreciate the other laws of the State and obey them voluntarily

- tolerate these laws, even when they are inconvenient
- be willing to undergo suffering, loss of property, and to endure the suffering that might be inflicted on family and friends ¹⁰

The word Satyagraha is often most loosely used and is made to cover veiled violence. But, as the author of the word, Mahatma Gandhi said that it excludes every form of violence, direct or indirect, veiled or unveiled, and whether in thought, word or deed. It is breach of Satyagraha to with ill to an opponent or to say a harsh word to him or of him with the intention of harming him...Satyagraha is gentle, it never wounds. It must not be the result of anger or malice. It is never fussy, never impatient, never vociferous. It is the direct opposite of compulsion. It was conceived as a complete substitute for violence. ¹¹

A euphemism sometimes used for Satyagraha is that it is a "silent force" or a "soul force". ¹² It arms the individual with moral power rather than physical power. Satyagraha is also termed a "universal force," as it essentially "makes no distinction between kinsmen and strangers, young and old, man and woman, friend and foe." ¹³

Origin of Satyagraha:

To understand the origins of satyagraha, it is vital to remember the personal life-journey of Gandhi. His search for truth was rooted in him from his early childhood. School days marked the beginnings of 'experiments' with meat-eating and smoking which in turn led to 'stealing.' His courage to confess his wrongs to his father and the willingness to undergo reparation manifest a desire to hold to truth at any cost. The classical incident at the school where he did not oblige his teacher to copy from his companion's slate in order to deceive the school inspector, reflects another incident of 'a resolute desire to follow' one's own path.

But this early faith in truth was transformed in a proper policy when he reached South Africa in 1893 and faced the adverse conditions there. Gandhi

developed his theory of Satyagraha to meet the threat of racial discrimination against people of Indian origin in South Africa and later to meet the situation created in India by the repressive policy adopted by the Government to put down the national movement for freedom from foreign rule.

Initially Gandhian movement was termed as Passive Resistance but Gandhi was fully aware that it did not fully describe his principles. And as the struggle advanced, the differences between the two movements i.e. satyagraha and passive resistance movement became quite visible. Besides he also wanted an Indian name through which he can easily motivate Indians in their fight against oppression and injustices made to them in South Africa.

Therefore he offered a nominal prize through 'Indian Opinion' to the reader who would find out a suitable name to describe his movement against the Asiatic law Amendment Ordinance introduced in to Transvaal Legislature Council in 1906. As a result Maganlal Gandhi ¹⁴ coined the word 'Sadagraha'. This gave him a clue and he wrote, "I liked the word, but it did not fully represent the whole idea I wished to connote. I therefore corrected it to 'Satyagraha.'" ¹⁵

Difference between Satyagraha and Passive Resistance:

Satyagraha can be easily differentiated from passive resistance. To begin with, satyagraha is a dynamic force because it contemplates action in resistance of injustice. Passive resistance is compatible with internal violence towards the enemy but satyagraha stresses continuous cleansing of the mind. It emphasizes even inner purity. Passive resistance is mainly contemplated at a political level. Satyagraha can be practiced at all levels-domestic, social and political. Satyagraha goes beyond passive resistance in its stress on spiritual and moral teleology because the final source of hope and consolation for the satyagrahi is God.

The Gandhian theory of satyagraha is far more comprehensive than the passive resistance as advocated in India in 1906-1908 against partition of Bengal. Bal Gangadhar Tilak and Aurobindo Ghosh would not condemn violence on moral grounds. But Gandhi accepted the absolution of ahimsa. The passive resistance of 1906-1908 was a political technique of limited application. Sometimes it meant only Swadeshi and boycott, while at other times it was extended to cover disobedience of unjust laws and decrees. The Gandhian theory of satyagraha is a philosophy of life and politics and it contemplates stupendous mass action for paralyzing the total structure of a despotic government. As Gandhi himself put it:

Satyagraha differs from Passive resistance as the North pole from the South. The latter has been a weapon of weak and does not exclude the use of physical force or violence, for the purpose of gaining one's end; whereas the former has been conceived as a weapon of the strongest, and excludes the use of violence in any shape or form.¹⁶

Satyagraha is a positive doctrine of resistance. Love, non-violence, and suffering are the basic principles of satyagraha whereas there is no scope for love in passive resistance. Passive resistance may be offered side by side with the use of arms. Satyagraha and brute force, being each a negation of the other, can never go together. Satyagraha may be offered to one's nearest and dearest; passive resistance can never be offered to them unless of course they have ceased to be dear and become an object of hatred to us. Thus passive resistance is, according to Gandhi, a 'negative' concept and has little in common with the active principle of love on which Satyagraha is based.¹⁷

Unlike passive resistance, satyagraha aims at settlement between the two parties through mutual love and understanding. It does not try to humiliate opponent in any way. As Gandhi once remarked to Miss Agatha Harrison, "The essence of non-violent

technique is that it seeks to liquidate antagonisms but not the antagonists."¹⁸

In non-violent fight one has, to a certain measure, to conform to the tradition and conventions of the system one is pitted against. Avoidance of all relationship with the opposing power, therefore, can never be a Satyagrahi's object but transformation or purification of that relationship. Unlike this, Passive Resistance had no power to change man's hearts.¹⁹ Gandhi contrasted *satyagraha* (holding on to truth) with *duragraha* (holding on by force), as in protest meant more to harass than enlighten opponents. He wrote:

There must be no impatience, no barbarity, no insolence, no undue pressure. If we want to cultivate a true spirit of democracy, we cannot afford to be intolerant. Intolerance betrays want of faith in one's cause.²⁰

Gandhi repeatedly warned of the dangers involved in focusing upon the misdeeds of the opponent. "After all", he observed, "no one is wicked by nature....and if others are wicked, are we the less so? That attitude is inherent in satyagraha."²¹ Earlier, Gandhi had written, "Whenever I see an erring man, I say to myself, I have also erred",²² and again, in opposing the use of sitting dharna, he explained: "We must refrain from crying 'shame, shame' to anybody, we must not use any coercion to persuade other people to adopt our way. We must guarantee to them the same freedom we claim for ourselves."²³

In other words, a satyagrahi should try to understand the viewpoint of other people. He should be flexible enough to bear all types of opposition. He must not be very rigid in his attitude.

Roots of Satyagraha in Hindu Culture:

The theory of satyagraha is not invented by Mahatma Gandhi himself. Prahlad,²⁴ the first individual Satyagrahi, offered Satyagraha against the tyranny of his cruel father. It was not known then that it was what Satyagraha meant.²⁵ According to Gandhiji, "the principle called Satyagraha came into being before

that name was invented. Indeed when it was born, I myself could not say what it was." ²⁶ The essential elements of satyagraha -truth, non-violence, self-suffering had, for the Hindu, roots in their corresponding traditional precepts. ²⁷ Since time immemorial fasting is an integral part of Hinduism. The Manu Smriti mentions some of the traditional methods of fasting unto death in order to get back the loan that was once given. ²⁸ Rajatarangini refers to some resorting to fasts in order to justice or protest against the abuses. ²⁹

In spite of the fact that Gandhi studied in the west, the main source of his inspiration was always Hinduism. It can be traced essentially to the Gita ideal of karmayogin. The story of Harischandra captured his heart and confirmed his desire to be truthful. The repetition of Ramanama as a remedy against all fears became a practice from early childhood. ³⁰

The basic signs of Gandhi's Satyagraha or non-violent direct action were visible in Indo-Aryan's ancient practice of sacrifice. It has been argued by K.L. Shridharani ³¹ that between the original form of human and animal sacrifice and its contemporary manifestation in satyagraha, it has undergone the intellectual refinement of the Upanishads and humanistic transfusions from Jainism and Buddhism. ³² Belief in the power of the concentrated will, especially when accompanied by fasting and penance was common to Hindu and Jain alike and such ideas must have been known to young Gandhi from his early boyhood.

Satyagraha and its off shoots - non-violence and civil-resistance, are nothing but new names for the law of suffering. ³³ Gandhi attached great importance to suffering. He wrote, "Nothing can shake me from the conviction that given a good cause, suffering for it advances it as nothing has done." ³⁴ Gandhi's contribution lies in the fact that he applied the age old Indian tradition of ahimsa and self-sacrifice to the social polity and displayed its inherent power and strength which can be used for bringing positive change in the society.

Impact of Western thinkers on Gandhian idea of Satyagraha:

As we have noticed how self-sacrifice is deeply rooted in tradition but the stimulus for their reformulation along Gandhian lines came chiefly from the west, either through personal contact or from reading. The Sermon on the Mount in the New Testament made a profound impression on Gandhi. Christ's words "Love your enemies; pray for them that persecute you," have played a decisive role in moulding Gandhi's policies. Gandhi called Jesus the prince of Satyagraha. ³⁵

In the formulation of the idea of satyagraha three people namely Thoreau, Ruskin and Tolstoy played an important role. Henry David Thoreau ³⁶ was the well known American anarchist who refused to pay his taxes as a protest against slavery in America. Thoreau's almost single-handed fight against slavery imbued Gandhi with faith that it is not the number of the resisters that counts in a satyagraha, but the purity of the sacrificial suffering.

Next came the name of Ruskin ³⁷ who like Gandhi preached the supremacy of the spirit and trust in the nobility of human nature which formulates the key point of satyagraha. Ruskin's *Unto this Last* influenced Gandhi's concept of soul force as a substitute for physical force and changed him as a person. Besides he emphasizes the priority of social regeneration to mere political reform ³⁸ which is the basic aim of satyagraha.

The third one is Count Leo Tolstoy ³⁹ who produced such lasting effect upon Gandhi that he considered himself, "a devoted admirer who owes much in life to him." ⁴⁰ Tolstoy called Satyagraha- Soul force and love force. In his view real progress can be achieved only by spiritual force which works as a guiding principle for Gandhi.

But it was Mahatma Gandhi who gave a serious thought to the theory and practice of Satyagraha and made it very dynamic, rationale, scientific, positive

and universally acceptable and applicable under all circumstances to resolve all kinds of conflicts. His Satyagraha was inspired by boundless love and compassion. It is opposed to sin, not sinner, the evil, not evildoer. Many countries have witnessed popular movements for freedom, equality and peace, which drew inspiration from the life and methods of Mahatma Gandhi.

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An Assessment of Body Mass Index (BMI) of Teaching and Non-Teaching Women Workers

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Abstract:

Food and nutrition are basic indispensable needs of humans. A healthy diet is essential for good health and nutrition. Healthy foods are those that provide us with the nutrients we need to sustain our body's well-being and retain energy. Everyone needs food to live, but too little food, too much food, or the wrong type of food has negative consequences for health, we can become overweight or obese and undernourished and at risk for the development of several diseases. Usually, weight is calculated to be

appropriate on the basis of height of people. A simple tool to measure fatness or leanness in adults is body mass index (BMI). Nowadays women are also employed in various working sectors in order to increase their socio-economic status. In Patna (Bihar), teachers represent one of the most important, large and growing sectors of workforce as it is a major hub for education. For the purpose of this study, 50 women workers (25 teaching and 25 non-teaching) have been selected by using purposive sampling technique and data were collected through questionnaire method. Results were analysed in percentage. The study aims at assessing the BMI status among women workers of Magadh Mahila College. It was concluded that maximum number of employees possess normal BMI among which non-teaching employees possess good results in every category. The study suggests that every women worker should be able to calculate their BMI on regular basis by using BMI online calculators or different BMI applications in order to keep a check on their normal body weight for good health.

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Keywords: BMI, women workers, overweight

Introduction:

There are many ways to keep a check on our health which includes regular health checkups, clinic visits, healthy eating habits and a simple tool can be used to keep a check on our health is BMI. Body Mass Index (BMI) is used as an indicator of whether or not a person is overweight or underweight. BMI is

accepted as a better estimate of body fatness and health risk than body weight. It is also called Quetlet Index. $BMI = \text{Weight (kg)} / \text{Height}^2 \text{ (m)}$

The following classification scheme is endorsed by the ICMR.

Grading of obesity based on BMI.

Obesity	>25.0
Overweight	23- 24.9
Normal	18.0 – 22.9
Underweight	< 18

Doctors can easily calculate BMI from the heights and weights they gather at each check-up; BMI tables and online calculators also make it easy for individuals to determine their own BMI. According to Aryal, B. (2020) teachers need to focus on improving their lifestyle and activities to better their conditions and present healthy role modelling. Age-wise relationship was found with BMI and hypertension. More the age, higher was the BMI category and so was the blood pressure. Risky situation of BMI and hypertension among senior teachers could create a threat to the teachers' wellbeing and a setting for poor observational learning to the students. Fabunmi et al. (2019) reported that there is a significant direct relationship between weight, percent body fat, body mass index and age. There was also significant direct relationship between weight, percent body fat, body mass index and length of service as teachers. It was concluded that almost half of the participants were either overweight or obese. According to Monica et al. (2018) there is a need to promote healthy lifestyle for school teachers that can be achieved through appropriate health education and interventional measures. According to Saroja et al. (2020) there is an urgent need to implement population focused, community-based

programs to tackle the ever-increasing problem of obesity. Nurses as public health workers have a key role in the prevention and management of overweight and obesity. Sharma et al. (2022) stated that maximum number of study subjects belonged to the age group of 14-15 years. Majority study participants were females. Majority of study subjects belonged to Hindu religion. Majority of participants belonged in mixed dietary pattern. Prevalence of overweight and obesity was found. According to Singh, A. & Smriti. (2021) increase in body mass index has a positive effect on balance and functional mobility as the population falling under overweight BMI had poorer values for balance and mobility tests as compared to the individuals who had underweight and normal BMI. BMI is a useful tool for calculating where a person will understand whether the weight falls on the scale from underweight to overweight. This will also help people in maintaining a moderate weight. A normal BMI can help with better sleep, improved circulation, and even better energy throughout the day and also lower the risk of various diseases. Therefore, the aim of this study was to find out the status of BMI of teaching and non-teaching women workers.

Methodology:

The locale of the study was Magadh Mahila College, Patna University, Patna. For the purpose of this study, 50 women workers (25 teaching and 25 non-teaching) of Magadh Mahila College, Patna University, were selected. Data for the study in the present research were collected by questionnaire method by using purposive sampling. Results were analyzed in percentage.

Results and Discussion:

The present research was conducted in order to assess the BMI status among teaching and non-teaching women workers of Magadh Mahila College. The information obtained from this study is as follows:

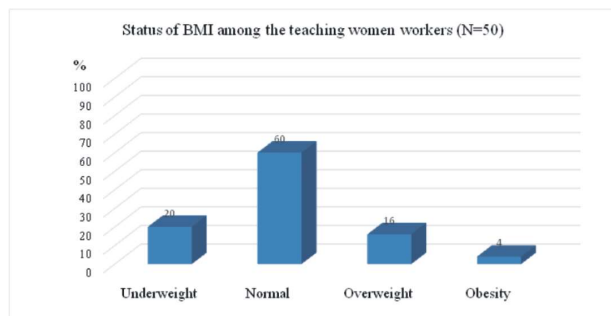


Fig 1: Status of BMI among the teaching women workers

Figure 1 clearly shows the status of BMI among the employees of Magadh Mahila College. Maximum number of employees possess normal category which is a good sign. Least number of employees possess obesity category. In line with the findings of Singh, A. & Smriti. (2021) wherein he stated that increase in body mass index has a positive effect on balance and functional mobility as the population falling under overweight BMI had poorer values for balance and mobility tests as compared to the individuals who had underweight and normal BMI.

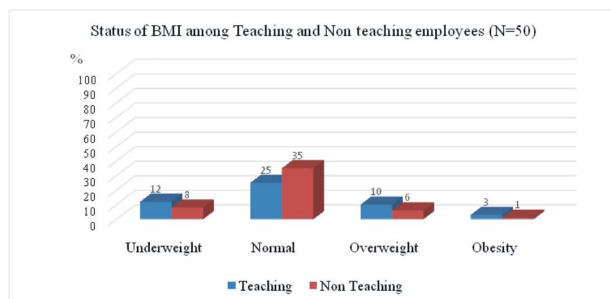


Fig 2: Status of BMI among Teaching and Non teaching employees

Figure 2 depicts the status of BMI among Teaching and Non Teaching employees of Magadh Mahila College. Non-Teaching employees possess good result in every category. The reason behind this is lifestyle, nature of job and duration of job of non-teaching employees. Teaching employees need to focus more on their daily lifestyle. Sedentary mode of working affects the general health of teaching

employees.

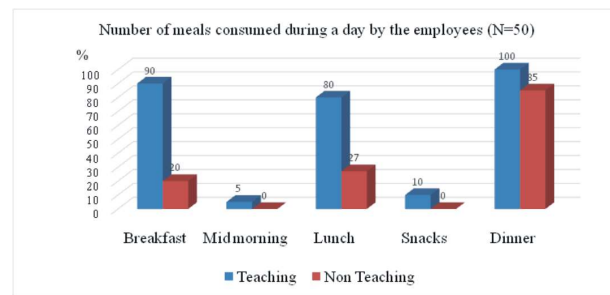


Fig 3: Number of meals consumed during a day by the employees

Figure 3 highlights the number of meals consumed during a day by the employees of Magadh Mahila College. Teaching employees consume a greater number of meals during a day as compared to non-teaching employees. Teaching employees generally skip mid-morning and snacks. Sedentary mode of working of teaching employees affect their general health while non-teaching employees are moderate working people which is good for their general health.

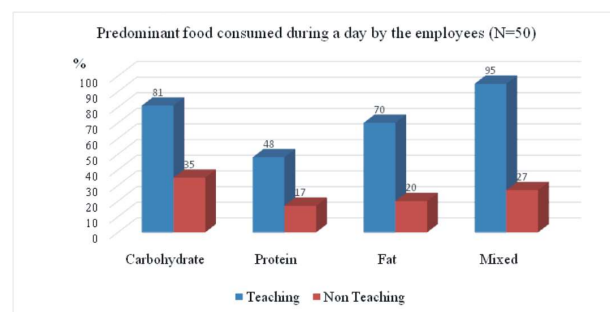


Fig. 4: Predominant food consumed during a day by the employees

Figure 4 represents the predominant food consumed during a day by the employees of Magadh Mahila College. Teaching employees consume more of mixed type of food which includes carbohydrate, protein and fat while non-teaching employees have irregular type of food eating, nothing is predominant in their daily diet. Non-teaching employees should consume balanced diet in order to maintain their general health and activities.

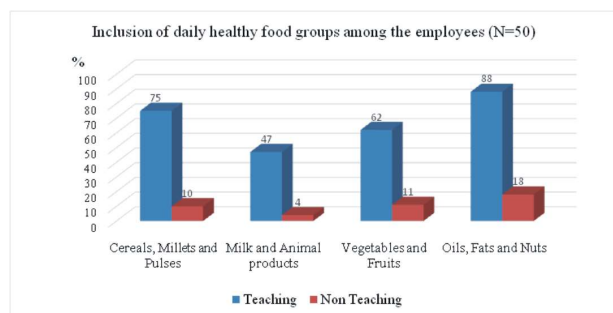


Fig 5: Inclusion of daily healthy food groups among the employees

Figure 5 reveals the inclusion of daily healthy food groups among the employees of Magadh Mahila College. Maximum number of teaching employees consume healthy food groups in their daily diet while non-teaching employees are not consuming all the healthy food groups in their daily diet. Consumption of balanced diet is necessary for maintaining good health which should include cereals, millets and pulses, milk and animal products, vegetables and fruits and oils, fats and nuts.

Conclusion:

Maximum number of employees among teaching and non-teaching possess normal category. Very few employees possess obesity category which is a good. Non-Teaching employees possess good result in every category. Sedentary mode of working affects the general health of teaching employees. Teaching employees consume a greater number of meals during a day as compared to non-teaching employees but they generally skip mid-morning and snacks. Teaching employees consume more of mixed type of food which includes carbohydrate, protein and fat while non-teaching employees are having irregular eating habits throughout the day. Maximum number of teaching employees consume balanced diet which includes healthy food groups while non-teaching employees are not consuming all the healthy food groups in their daily diet.

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Online Education: Opportunities And Challenges With Reference To Covid-19 Pandemic

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Abstract:

This study attempts to analyze various opportunities & challenges of online education to teachers, students, educational institutions & society especially in the context of Covid -19 pandemic. It has also provided the overview of future prospects of online education in India and suggestions to minimize the challenges & make online education more effective for future generation.

Keywords: Online Education, Covid 19 Pandemic, Opportunities, Challenges, Teaching, E- learning

Introduction:

Online Education refers to a method of carrying out teaching, learning & training processes through technology. It is also called e-learning. It is a new technique of learning through internet. Development of computers, emergence of internet & inclusion of

Information & Communication technology has transform education system from classroom teaching to online teaching. Education has been one of the major areas disrupted by the Covid -19 pandemic. It has changed the scenario of education sector in multiple ways and started new way of learning, which is called elearning.

The growth of technology has brought tremendous change in almost every sphere of life. Technology has also affected the process of education. The traditional i.e., face-to- face education has experienced a remarkable change in the last 10 years. Although face-to-face education is still consider the norm, but acceptance of online courses is increasing. Some of the reasons for the exponential growth of online education is that it is instant, online, anywhere accessible, self-driven and on the go, thereby, online learning turns out to be more and more practiced. Many traditional universities started to share their courses online. It represents an easy and comfortable method to achieve knowledge in almost every field, from law and accounting, to human sciences, such as psychology and sociology or history and political science. Online learning is a great alternative to

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traditional universities, especially for people who cannot afford the time and money to take real courses.

The major reason for the phenomenal growth in online education is MOOCs (Massive Open Online Courses). According to Kaplan, Andreas M.; Haenlein, Michael (2016), MOOCs are online courses which are aimed at unlimited participation and offer open access through the web. MOOCs have gained lot of popularity since the time of its development in 2008. Over 800 universities around the world have launched at least one MOOC till date. According to report by Class Central, the number of students who had registered for MOOCs by 2017 was 81 million which has been gradually increased to 180 million by 2020. The list of top MOOC provider by registered users includes Coursera, edX, Future Learn and Swayam. In 2020, providers launched over 2800 courses, 19 online degrees, and 360 micro-credentials. With educational institutions closed due to the COVID-19 pandemic, the government has been encouraging online education to achieve academic continuity. The pandemic brought many people into online education. According to a report by Class Central, One-third of the learners that ever registered on a MOOC platform joined in 2020. Most high-end private and public institutions have made the switch smoothly using online platforms such as Zoom, Google Classrooms, Microsoft teams, etc., while many find it a herculean task.

Objectives of the Study:

- ❖ To explore the growth of educational technology in terms of online learning.
- ❖ To analyse the opportunities and challenges of online learning after the Corona Virus pandemic.
- ❖ To give some suggestions and recommendations for the success of online mode of leaning.

Research Methodology:

The study is descriptive and tries to understand the importance of online learning in the period of

pandemics such as CoVid-19. The problems associated with online learning and possible solutions were also identified based on previous studies. This study is completely based on the secondary data, a systematic review was done in details for the collective literature.

Secondary sources of data used are (a) journals (b) books (c) search engines (d) company websites and scholarly articles (e) research paper and other academic publications.

Review of Literature

Khan (1997) defined online learning as the "delivery of instruction to a remote audience using the web as an intermediary".

Elaine Allen, Jeff Seaman (2011) defined, "online courses as those in which minimum 80 percent of course content is delivered online and face to face instruction are those courses in which less than 80 percent of content is delivered online".

Hall (1997) defined web-based training as "instruction that is delivered over the internet or over a company's intranet".

Herman T. & Banister, had done a research on comparison of cost and learning outcomes of traditional and online coursework.

Another research done by Dr. Fahad N. at Fahad investigates the student attitude and perceptions of 186 university students from different colleges towards effectiveness of mobile learning in their studies. Their research findings indicate that students perceive mobile technologies as an effective tool in improving their communication & learning skills.

Concept of Online Education:

Online Education is electronically supported learning that relies on the internet for teacher/student interaction and the distribution of class material. Computer-based training, Web-based training, Internet based training, Online training, E-learning (electronic learning), M-learning (mobile learning),

Computer-aided distance education - online education goes by many names and comes in variety of styles, but at its core¹.

Online Education encompasses a tremendous number of topics, subject areas, disciplines and degree programs. In its broadest terms, online education simply means acquiring knowledge through the use of instruction provided via internet. More specifically, this education is acknowledged to be pedagogical rather than self-selected. In other words, reading an article about birds in a periodical online wouldn't be classified as "online education", but enrolling in a video course about ornithology given by a teacher would be considered online education².

Online education can also be defined as an approach to teaching and learning, representing all or part of the educational model applied, that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction, and that facilitates the adoption of new ways of understanding and developing learning. The common denominator is the use of technology and electronic devices to enhance learning.

Types of Online Education:

The online class definition has changed over several years, and in terms of format, the online learning definition can take many forms. Followings are different forms of online education³:

I. A Synchronous Online Learning

Asynchronous Online Courses do not take place in real-time. Students are provided with the content and assignments and are given a time frame to complete course works and exams. There is time gap between the instructions provided and response of the learners. In these types of courses, Interaction usually takes place through discussion boards, blogs and wikis. As a result, there is no class meeting time. Asynchronous online learning environments are effective for students with time constraints or busy schedules.

II. Synchronous Online Learning

Synchronous Online Courses take place in real-time. These types of courses require the instructor and all enrolled students to interact online simultaneously. In this form of online learning, the instructions are provided on the spot, as in face-to-face teaching. There is interaction between the participants using available audio-visual aids like chat, virtual classrooms, audio- and video-conferencing. Synchronous learning environments enable students to participate in a course from a distance in real time.

III. Hybrid courses

Hybrid courses, also known as blended courses, are learning environments that allow for both in-person and online interaction. Typically, hybrid courses meet in person several times during a semester and provide for computer-based communication in between those face-to-face sessions.

Characteristics of Online Education:

The most primary characteristic of online education is the nature of learning. Depending upon the nature, the learning experience is termed 'didactic' when the learning material is literally handed over to the student and they cannot change it. And, 'active' when the student has control over the learning process. In the Interactive type, the learning content evolves as the courses progresses and co-learners interact; the instructors act as facilitators and help in the evolution of learning.

Online teaching is generally highly socialized to engage learners and colleagues. What we are missing from one-one communication is superseded by online communication technology. A socially-driven online tutor can seamlessly integrate social networks into online courses and the fully integrated online teaching system.

One of the distinguishing features of virtual learning platform from traditional classrooms is not just the flexibility of delivering lessons but also the interactive and collaborative nature. Online learning platforms

also offer students greater freedom to engage with online courses and respond according to the inputs. Flipped classrooms, gamified lessons, animations are all examples of how online classrooms have grown increasingly collaborative and engaging.

Innovation is the core center of online learning for both teachers and learners. Online teaching systems provide new ways for teachers to deliver inspired and effective learning contents. Learners interact with online courses in new ways, showing what works and what doesn't in online learning. In the future, the virtual classrooms are expected to expand to advanced technology like Artificial Intelligence and Virtual Reality.

Hence, Online Education is a procedure of gaining skills and knowledge through electronic devices like computers, mobiles, laptops, etc. using internet. The students can get it in different forms/formats. Online education makes it possible for tutors or mentors to reach all the students more flexibly and teach them the relevant skills more efficiently.

Online Education & Covid-19 Pandemic:

The sudden outbreak of a deadly disease called Covid-19 caused by a Corona Virus (SARSCoV-2) shook the entire world. The World Health Organization declared it as a pandemic. This situation challenged the education system across the world and forced the educators to shift to an online mode of teaching overnight. Many academic institutions that were earlier reluctant to change their traditional pedagogical approach had no options but to shift entirely to online teaching - learning.

Several areas are affected worldwide and there is a fear of losing this whole ongoing semester or even more in the coming future. Various schools, colleges, and universities have discontinued in - person teaching. As per the assessment of researchers, it is uncertain to get back to normal teaching anytime soon. As social distancing is pre- eminent at this stage, this will have negative aspect on online opportunities. Educational units are struggling to find options to deal with this challenging situation.

Online Education in India:

Online education in India has come a long way with the development of technology. India is one of the nations that are developing at an exponential rate in terms of technology. With the population of more than 1.3 billion, the availability of high-speed internet and smart phones, India has the most number of technologically driven persons. The rise of the internet has changed the way of life in India. People like to do everything online, they shop online, do business online, make friends online, learn online etc. While ecommerce being the most significant online industry, online education and learning stand right next to it. With the ever-increasing information available on the internet and the countless number of online courses many people in India prefer to learn online

Online Education in India During Covid-19

Since countries all over the world have gone into lockdowns due to Covid- 19, educational institutes have been no exception. During the Covid-19 outbreak in the entire nation, the country is facing major crisis in many sectors but the worst hit sector is the education sector, as most of the exams have been cancelled during the final assessments. Students and teachers are struggling to have access to uninterrupted and seamless quality of internet connection. At the same time, the country should not compromise student's much desired academic progress.. The aim is to effectively continue with the academic cycles of the students and not let the lockdown affect their learning. UGC has started some of the following digital initiatives of MHRD & UGC along with their access links for school students as well as UG and PG level education ⁴:

1. SWAYAM online courses: provides access to best teaching learning resources which were earlier delivered on the SWAYAM Platform may be now viewed by any learner free of cost without any registration. Students/learners who registered on SWAYAM (swayam.gov.in) in the January 2020 semester can continue their learning as usual.

2. UG/PG MOOCs: hosts learning material of the SWAYAM, UG and PG (Non- Technology) archived courses.

Link-https://ugcmoocs.inflibnet.ac.in/ugcmoocs/moocs_courses.php.

3. e-PG Pathshala: hosts high quality, curriculum-based, interactive e-content containing 23,000 modules (e-text and video) in 70 Post Graduate disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences.

4. e-Content courseware in UG subjects: e-content courseware in 87 Undergraduate courses with about 24,110 e-content modules is available on the CEC website at <http://cec.nic.in/>.

5. SWAYAMPRAKASHA: is a group of 32 DTH channels providing high quality educational curriculum based course contents covering diverse disciplines such as arts, science, commerce, performing arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc. to all teachers, students and citizens across the country interested in lifelong learning. These channels are free to air and can also be accessed through cable operator.

6. National Digital Library: is a digital repository of a vast amount of academic content in different formats and provides interface support for leading Indian languages for all academic levels including research disciplines, all popular form of access devices and differently-abled learners. Link- <https://ndl.iitkgp.ac.in/>

7. Shodhganga: is a digital repository platform of 2,60,000 Indian Electronic Theses and Dissertations for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access.

8. e-Shodh Sindhu: provides current as well as archival access to more than 15,000 core and peer-reviewed journals and a number of bibliographic, citation and factual databases in different disciplines

from a large number of publishers and aggregators to its member institutions including centrally-funded technical institutions, universities and colleges that are covered under I2(B) and 2(f) Sections of the UGC Act. Link- <https://ess.inflibnet.ac.in/>

9. Vidwan: is a database of experts which provides information about experts to peers, prospective collaborators, funding agencies policy makers and research scholar in the country. It is hoped, that these ICT initiatives, which cover a broad range of subjects and courses and have been prepared by experts, will provide an excellent learning site for life-long learners.

Future of Online Learning in India

Online learning in India is going to be the key face of future education in the subcontinent. It is surprising to see how smart technologies are changing the overall educational framework in the country. The penetration of digital education into the hinterland / rural market is evolving fast. Affordable high-speed internet and direct-to- device technologies are empowering rural students to study courses online and improve their skills and knowledge.

Challenges of Online Education in India

The challenges of online education in India are multifaceted. Some of these challenges which need to be overcome are⁵ :

1. Insufficient digital infrastructure: Although Government of India is taking initiative to develop digital infrastructure but a lot need to be done in this direction. High speed internet and stable power supply are the biggest problem. India stands 70th worldwide on internet speed and stability.

2. Limited social interaction: Since online education can be accessed at home or any other convenient place, there is very limited direct interaction with the teacher and other people doing the course. Most of the discussion takes place through e mail, chat room or discussion groups. There isn't any campus atmosphere to improve social interaction.

3. Questionable credibility of degrees:

Although industry has started recognizing online degrees, there are still a lot of fraudulent and non-accredited degrees being offered online. The number of scam operators is rising who are offering fake certificated which does not have any credentials. These scams not only losses the credibility of the online certificates but also the faith of prospective employer in online programs.

4. Motivation: Some students need the push to get to the class. In case of self paced online programmes, student may procrastinate. The dropout rate in online education is very high. Self motivation and discipline is required to complete the assignments and upload them timely. If you have difficulty working independently, staying organized and meeting deadlines, you might struggle in an online program.

5. Language of the Course: India is a multi-linguistic country, and a vast majority of the population comes from rural areas. The content offered by most of the online courses is in English. Hence, those students who are not able to speak English struggle with the availability of language content. Hence, it is the duty of computer professionals, educators, administrators, language content creators, and content disseminators, to sit together and give a viable framework and standard solution to the learners knowing only Indian languages.

6. Monotony: The most significant challenges associated with online learning is monotony and boredom induced by increased exposure to the screen as well as the modus operandi of sitting at one restricted spot for prolonged hours. The onus of breaking this boredom or fatigue lies with the teachers and the educational institution. There is a need for a consistent endeavor to make the session as interactive as feasible.

7. Restricting cheating instances: Accept it or not, there are quite a few students who try to leverage the easy way to success. It has become easier for them to cheat while using online learning system.

While we agree that this is primarily about being self-disciplined, educational institutions should look at minimizing the possibility of students subverting the sanctity of assessments that are used to improve the learning of the class and the student too.

8. Conducting assessments: Assessing a student in the right manner is an integral component of the education system. Under normal circumstances, students are made to take a test or appear in an examination on school premises; unfortunately that's not a possibility now. In online learning, assessing students through a Multiple-Choice Question (MCQ) mechanism is still feasible as a stop-gap but real learning is measured by conducting a subjective assessment - this is one of the biggest challenges for traditional edtech solutions that are predominantly MCQ based. Another related hindrance is checking the assessments also.

9. Internet connection strength: One of the major stumbling blocks with regard to online learning is the lack of strong and stable internet connections, as the ones conventionally used at homes have either low bandwidth or have exhausted their limits.

Just the process of logging in for a class itself becomes a cumbersome process for students and teachers alike. Even as upgrading the broadband connection is a prima facie solution, but it certainly isn't a fool-proof one.

10. Not all teachers are tech-savvy: Many teachers in the school/college do not have laptops or are familiar with the digital medium, so they are not comfortable with online teaching.

11. Increase in screen time: Parents are concerned about too much overall screen time (mobile, television, gaming, laptop) including education now.

12. Parents, children need time to understand medium: Parents and students have not been exposed to this new system of learning and will take to adapt to the new form of education.

Thus, there are a lot of challenges which are faced by people in online education. These are needed to be solved by providing adequate training to both teachers and students, improving connectivity, strengthening internet, developing proper infrastructure, etc.

Opportunities in Online Learning in India:

Change in technology is offering many opportunities for all stakeholders in the online education sector which includes entrepreneurs, education providers and learners. Some of the factors offering different opportunities in this domain include:⁶

1. Mobile Learning: According to a report in Stastia (2018), in the year 2017 there were 320.57 million people who accessed the internet through their mobile phone. This figure is projected to increase to 462.26 million by the year 2021. The surge in users is credited to availability of 4G internet and smart phones at very low price. Going forward, IAMAI hopes that the National Telecom Policy (NTP) 2018, which is focusing on new technologies like 5G, will promote better quality data services at more affordable prices and help address the digital divides that will promote internet penetration in the rural areas through mobile internet.

2. Investor's Interest: A large number of entrepreneurs are venturing into online education as this is expected to see an uptrend in the next 10 years. Credit also goes to the Digital India campaign, the cultural importance given to education and falling mobile data prices. Hence the online education sector will continue to spark more interest among entrepreneurs, investors and attract more funding.

3. Blended Model: Today we find convergence of the offline education and online education, it will be continuing in future also. This concept of blended learning combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student, but student has some control over time, place, path, or pace. This model

will take advantage of both face-to-face classroom practices combined with computer-mediated activities. In future, there will be virtual classrooms where face to face offline pedagogy will be aided by digital courses on practical knowledge and soft skills.

4. New Courses: Today the most popular courses in online education are related to IT which includes subjects like big data, cloud computing, and digital marketing. But in future demand for different types of courses in unexpected subjects such as culinary management, photography, personality development, forensic science, cyber law, etc. will increase.

Suggestions and Conclusions

Some useful steps for smooth functioning of Online Learning are as suggested below ⁷

1. Online platforms with enhanced safety and safeguarding measures, especially for virtual learning tools should be ensured. The devices must have the latest software updates and antivirus programs otherwise the security of personal data may be compromised as one can hack the digital devices.

2. All the teacher should given the training on how to use online teaching tools such as various online teaching platform including teachable, thinkable, etc.

3. All should follow the new guidelines released by UNICEF and partners to keep kids safe during online classes.

4. Schools should monitor good online behaviours of children while conducting online classes.

5. Parents should ensure that children's devices have the latest software updates and antivirus programs. They should work with children to establish rules for how, when, and where the internet can be used. They should also speak to their children on how and with whom they are communicating online.

6. Social networking platforms should enhance online platforms with more safety measures, especially while using virtual learning tools.

7. Government should take necessary steps to train all stakeholders of education on online learning platform to tackle such crisis of lockdown during any pandemics. Government should create awareness on online education with safety measures for children and take measures to create awareness on cyber security.

8. Online learning is not affordable for all including the poor and disadvantaged groups of the society. So necessary steps should be taken by Government / educational institutions to minimize this gap between privileged and unprivileged learners.

9. Learners and educators must be familiar with Web-based interactions such as email, discussion boards and chat rooms before joining online classes.

10. Government/educational institutions should adopt the policy to provide free internet and free digital gadgets to all learners in order to encourage online learning as a result of which people would get engaged themselves during lockdown and remain safe from pandemics.

Conclusion:

Online Education is an emerging learning system for future. During the lockdown period for Covid-19, online education is the best platform to keep learners/educators engaged and safe by maintaining social distancing. Govt. of India has initiated different online learning platforms to continue educational activities during lockdown period which are also been utilized by UNESCO and World Bank. Online Learning method utilizes various applications of the internet to distribute classroom materials and help learners and educators interact with one another. Using the various technologies available for Online Learning, educators can provide a more interactive online learning experience by delivering real-time, synchronous video conferencing. Online learning is considered as future learning process and this platform has a potential of overall change in pedagogy of teaching learning in the modern world. However, necessary steps must be taken to train all stakeholders of education on online learning platform. Government/

educational institutions should adopt the policy to provide free internet and free digital gadgets to all learners in order to encourage online learning as a result of which people would get engaged during lockdown and remain safe from pandemics.

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A Study of the Impact of Binge-Watching of OTT Platform Among Young Adults

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Abstract:

OTT delivered "over the top" of any other platform. It deliver a variety of shows and contents that has captured the attention of youth and they have started to being involved in "Binge-Watching" behavior. The present study was taken to explore and understand how young adults have been affected and what are the impacts of Binge-Watching of OTT platform on them and in different dimensions of Binge-Watching behavior who will have higher involvement and impact - male or female. The sample of study comprised of 100 young adults consisting of 50 males and 50 females from different localities of Patna district. From this study it was found that in most of the dimensions male young adults had more involvement and impact in comparison to the female young adults. This shows that there is more impact of Binge-Watching of OTT platform on male young adults in some of the dimensions.

Keywords: Over the top, Binge-Watching behavior, COVID-19.

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Introduction:

OTT Platform a revolutionary platform. OTT stands for "Over The Top" and refers to any streaming service that delivers content over the internet. The service is delivered "over the top" of any other platform. Viewers can access video content through OTT apps in any device like Smartphone, Smart TV, tablet, desktop, computer, laptop etc. with internet. Unlike traditional video streaming platforms varied stories that are not restricted by censorship, box office or demography. OTT gives a viewing experience with greatly improved sound and visual quality, provided the consumers have a stable internet. Some of those platforms are Netflix, Amazon Prime Video, Disney+ Hotstar, Voot, Zee5, ALT Balaji etc. The most famous example of OTT platform is YouTube. It provides video directly to viewers on any device over the internet. COVID-19 and other factors that led OTT across the globe. Binge-Watching is to watch multiple episodes of television program in rapid succession, by means of DVDs or digital streaming. People may have experienced adverse effects related to binge watching. Moreover, streaming channels often had promotions during the COVID-19 pandemic, and this practice may have promoted binge-watching and its correlates.

Aims and Objectives:

- To study the impact of Binge-Watching of the OTT platform on the young adults.
- To understand the Binge-Watching behavior of the young adults.
- To know the response of the individuals about what kind of emotions Binge-Watching of OTT platforms trigger in them.

Rationale:

- Binge-Watching is a relatively new phenomenon which has emerged with the advent of OTT platforms.
- It is concerned with most of the young adults now.
- It might also help young adults to understand the impact of Binge-Watching and how it influences their life.
- It might help young adults to manage their Binge-Watching of OTT platform after knowing its impact and influence on their life.

Hypothesis:

The hypothesis of this research are as follows:

- There will be significant impact on both male and female young adults.
- There will be more impact of OTT platform on males than that of the females in the dimension of engagement.
- There will be more impact of OTT platform on males than that of the females in the dimension of pleasure preservation.
- There will be more impact of OTT platform on males than that of the females in the dimension of binge watching.
- There will be mThere will be more impact of OTT platform on males than that of the females in the dimension of dependency.

- There will be more impact of OTT platform on males than that of the females in the dimension of loss of control.

Methodology:

Sample The sample of the study consisted of a total of 100 young adults from Patna District which comprised of 50 male young adults and 50 females young adults. Incidental cum purposive sampling has been used to select the sample.

Tools and techniques: Different tools and techniques were employed in carrying out this study. A detailed description of tools and techniques used in this study are as follows:

Personal information sheet: The information was sought was their names, educational qualification, socio-economic status, demographic details, locality.

Binge-watching Engagement and Symptoms Questionnaires: was originally developed by Maeve Flayelle, Natale Canale, Claus Vogele, Laurent Karila, Pierre Maurage and Joel Billieux in 2019. The scale consists of a total of 40 questions and it is further divided into 7 subscales or dimensions which are as follows: Engagement, Positive emotion, desire/savouring, pleasure preservation, binge watching, dependency, loss of control.

Items are scored on a 4-point likert scale ranging from 1 (strongly disagree), 2 (disagree) 3 (agree) 4 (strongly agree), with an average score calculated for each subscale

Procedure:

Before the actual administration of the test the samples were informed about the purpose of the study and the aims of the study. Consent form was prepared was also taken from each of the respondents. A Google form was prepared to conduct the survey and to get the data from the respondents. The respondents were made to

understand the purpose of the study and they were given all required instructions to fill the form properly and nature of the test and how to answer.

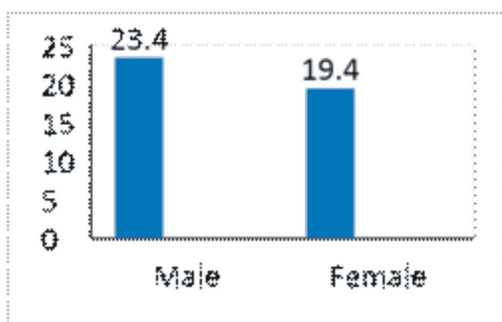
Results and Discussion:

To reach certain conclusion it was essential to organize and classify the obtained data. Hence, the data were tabulated and represented graphically for verification of the hypothesis and clear view of information.

First of all mean of scores of 50 males and 50 females was calculated respectively which can be seen as follows:

Dimension wise mean and SD was also calculated which can be inferred from following representation:

1. Engagement:

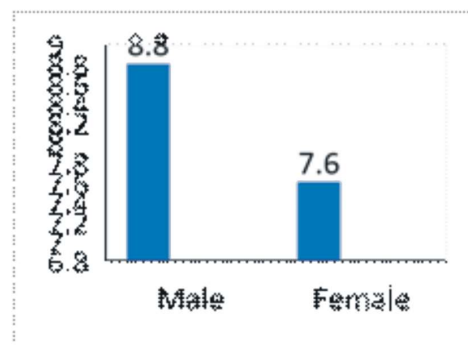


(Table. 4.1)

Engagement	Mean	SD	t-ratio	df	p-value
Male	23.1	7.105	2.96	98	P < 0.01
Female	19.4	5.295			

In the engagement dimension mean of male was 23.1 and mean of female was 19.4 and the difference is highly significant at 0.01 level. Thus, it shows that male are more engaged in binge-watching.

2. Pleasure Preservation:

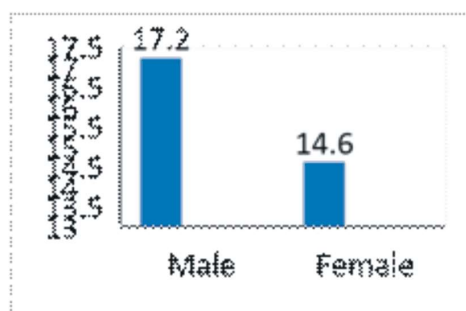


(Table. 4.2)

Pleasure Preservation	Mean	SD	t-ratio	df	p-value
Male	8.8	2.63	2.31	98	P < 0.05
Female	7.6	2.65			

In the pleasure preservation dimension, mean of the male young adult is 8.8 and mean of female young adults is 7.6 and this difference is significant at 0.05 level. Thus, it shows that in pleasure preservation of binge-watching male young adults are more involved.

3. Binge-watching:

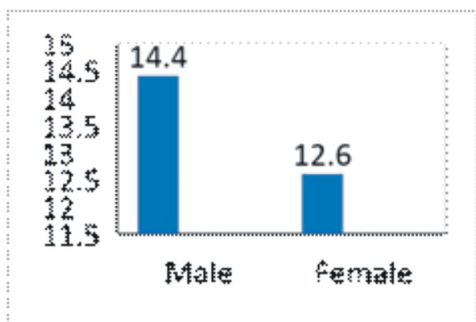


(Table.-4.3)

Binge-Watching	Mean	SD	t-ratio	df	p-value
Male	17.2	4.05	2.89	98	P < 0.01
Female	14.6	4.9			

In the Binge-watching dimension, mean of the male young adults is 17.2 and mean of the female young adults is 14.6 and this difference is significant at 0.01 level . Thus , it shows that in Binge watching dimension male young adults have more involvement and it has a significant impact on them.

4. Dependency:

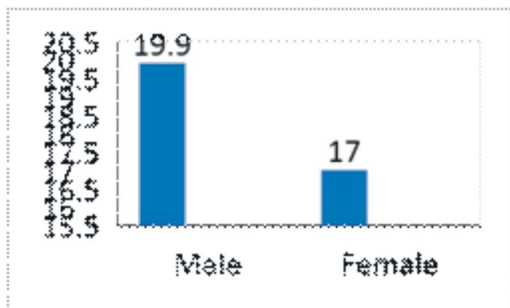


(Table. 4.4)

Dependency	Mean	SD	t-ratio	df	p-value
Male	14.4	4.4	2.21	98	P<0.05
Female	12.6	3.7			

In Dependency dimension, mean of male young adults is 14.4 and mean of female young adults is 12.6 and difference is significant at 0.05 level. Thus, it shows that in Dependency dimension, male young adults have significant impact and they are more involved.

5. Loss of control:



(Table 4.5)

Loss of control	Mean	SD	t-ratio	df	p-value
Male	19.9	5.35	2.95	98	P<0.01
Female	17	4.7			

In Loss of control dimension , mean of male young adults is 19.9 and of female is 17 and this difference is significant at 0.01 level. Thus, it shows that in this dimension male are more involved and it has significant impact on them.

Conclusion:

The title of the present research is "Impact of Binge-Watching of OTT platform on young adults." The purpose of the research was to understand the impact of binge-watching behavior of OTT platform on young adults and it's dimensions. The sample consisted of 100 participants comprised of 50 males and 50 females of Patna district. The participants were administered on the Binge-Watching Engagement and Symptoms questionnaire.

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The Psychological and Physical Impact of Online Classes on College Students

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Abstract:

The purpose of the study is to understand the psychological and physical impact of online classes on college students. Methods: Purposive and snowball sampling methods were used to select participants for this survey. Responses were analyzed using descriptive statistics. Result: Major reciprocations faced by students during online classes like lack of in-person interaction, improper internet connection, improper environment, and socio-economic factors cause psychological and physical impacts on college students. Conclusion: Due to the above-mentioned impediments, students are often unable to attend online classes. The absence of these interactions and restrictions imposed on students due to the pandemic left students demotivated, which turned them less active in online classes. Also, the sudden transition from offline to online mode of classes results in various physical problems as well as increased eyesight, frequent headaches, low interaction levels, etc. are some of the consequences students have to suffer.

Keywords: Online class, Psychological impact, Physical impact, College students.

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Introduction:

Online learning and classes are increasingly becoming part of the education system worldwide. The online channel has made education convenient and easily accessible to one and all. The introduction of the online mode of taking classes in comparison to the traditional face-to-face classroom approach in universities and colleges has been considered only in the last few years in India. When it comes to the Indian educational system, face to face classroom approach has been the most prominently used. Familiarity and ease of using offline methods and lack of requirement for online channels of teaching have been the major barriers to the adoption of online channels of education. However, in the wake of the current COVID-19 pandemic situation conduction of online classes at the college and university level has been made mandatory by the educational boards.

Psychological impact refers to any factor impacting or arising in the mind related to the mental and emotional state of a person. Although studies show positive working-from-home experiences (Dubey and Tripathi, 2020), students experience is generally described as disrupted and leading to feelings of

insecurity, anxiety, and hopelessness (Hajduk et al., 2020; Wang and Zhao, 2020). Students express concerns about economic implications for society, health implications for their families and society, and their own educational and career plans (Cohen et al., 2020). Students present the pandemic as a disruptive event causing stress that negatively affects students learning performance and psychological well-being. For example, studies show such adverse effects of lockdown as increased levels of students Social avoidance (Al-Rabiaah et al., 2020), anxiety (Kaparounaki et al., 2020; Kapasiaa et al., 2020), and a decreased quality of general life (Kaparounaki et al., 2020). Moreover, self-isolating college students suffer from physical and mental health problems (e.g., insomnia, and depression) more than those who do not self-isolate (Tang et al., 2020; Zhao et al., 2020; Zhou et al., 2020).

Physical impact refers to involving the body as distinguished from the mind. Previous findings have shown that prolonged sitting periods or sedentary lifestyles are strongly associated with increased risks for non-communicable diseases, such as obesity or diabetes, in adults (Biddle, S.J., 2017). These diseases may commonly coexist with or lead to mental health problems.

Psychological impact on students in online classes:

Since March 18, 2020, at Mulawarman University, all face-to-face lectures have turned into online learning. These changes have implications for various kinds in the academic community, which could have an impact on psychological conditions.

Apathy Due to Online Classes:

When students attend online classes, initially, individuals feel happy but over time, according to Wilson, individuals feel bored because they cannot leave the house and do anything. This research shows that something that is done statically, will cause

boredom. Some research shows that boredom displays low self-control (Mugon, Struk, & Danckert, 2018). So, an individual who is quickly bored while studying at home has self-control.

According to the study, anxiety in middle and lower-economic families is more significant than fear in middle and upper-economic families. Students who belong to economically capable families, show fewer complaints when compared to families who are financially unable. Access to online learning is ultimately dominated by students whose parents are economically capable. In contrast, Students who belong to below-average family economic conditions feel anxious because they cannot afford to buy internet quota.

So when parents' income decreases, it will cause students anxiety because they have to buy a quota, as a logical consequence to follow the lecture process and get the best value. Because of the pandemic, some families will lose their source income, and students feel anxious about paying their fees (Gonzalez, Karpman, Kenney, & Zuckerman, 2020)

Online learning that limits physical interaction causes no social interaction, so verbal and non verbal communication is not used correctly. In the learning conditions, Students complain about situations that burden them in learning. Lack of social support makes students experience emotional disturbances. In the end, learning was felt to be less effective, primarily two weeks after education was carried out. To reduce emotional disturbances, some students try to build communication with lectures to tolerate tasks that they think are heavy.

Physical Consequences of Online Classes:

In the online classroom, immediate feedback to faculty members and students about the quality of lessons, delivery, and experiences was not provided as it was possible in offline mode. Teachers can observe the student's body language and these non-

verbal cues help the teacher immediately adjust their teaching approach to best suit the student's needs.

Students reported a lot of physical issues due to online classes. The continuous use of mobile phones and earphones caused issues like eye strain and pain, ear pain, back pain, and headache. They felt stressed and strained both physically. The constant pressure of completion of assignments was reported by students which induced a lot of stress in them. They felt that no learning or transfer of knowledge was taking place.

Methodology:

Data Collection:

This survey was conducted to recognize the psychological and physical impact on college students. There is a total of 100 responses were collected using an online portal, Google Forms. Participants were selected using purposive and snowball sampling methods.

Tools and Techniques:

Participants were selected through an online portal, Google Forms. They were provided with a questionnaire and a total of 34 questions were given. First, students were asked to give their consent in which they were informed about the duration and procedure of the survey. They were also informed about the right to withdraw from the survey at any point in time without citing any reasons. The demographic information questions provided context for the selected data enabling researchers to describe their participants' backgrounds and better analyze responses.

Data Analysis:

Data analysis is an important component of research. It's a method of putting facts and figures to solve the research problem. First, Descriptive statistics were compiled to describe participants' demographics and their responses to each survey item. Each item was analyzed in terms of frequency and percentage

by using graphs. Participants' responses to all items were analyzed to understand the psychological and physical impact of online classes on college students.

Results:

A hundred students from various colleges were sampled for the study using an online survey technique. The survey was done to get an understanding of the psychological and physical impact of online classes on college students about the online mode of teaching. Findings from the analysis of data follow:

Demographic Details of Respondents:

The demographic of the populations on which the study was conducted and variables included are shown as gender, education, college/university, Total duration dedicated to online classes, Average data consumption for online classes, designated exclusive space for online classes, etc. Out of 100%, of respondents, 77% were female, and 23% were male category. From students' educational background, 48% of respondents belonged to the Science stream, 29% belonged to the Arts/Humanities and 23% belonged to the vocational courses. 58% of the respondents belonged to a government college/University while 42% of respondents belonged to a Private/government college. 72% of the respondents said that they dedicated 3-5hrs /day to online classes while 28% of respondents said that they dedicated 6-10hrs/day to online classes.

Out of the 100%, for 43% of respondents average data consumption for online classes is more than 1GB, for 36% less than 1GB while for 21% of respondents, they require approx. 1GB data. 65% of respondents said that they got designated space for online classes while 35% of respondents said 'NO'

Psychological and Physical Impacts:

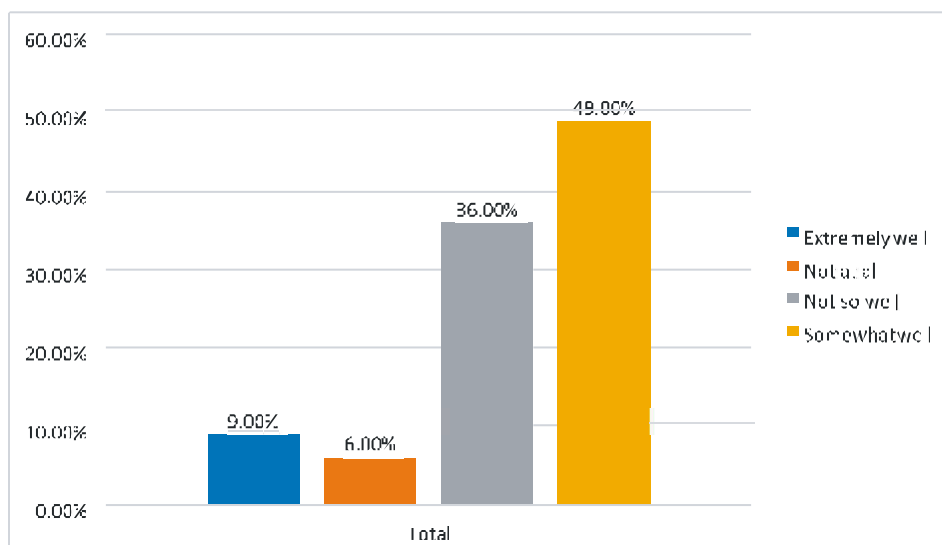
The following tables show the various questions which are the challenges students face during online classes:

Tables

QUESTIONS	RESPONSES			
To what extent, do online classes influence your study and learning pattern?	Extremely well 9%	Not at all 6%	Not so well 36%	Somewhat well 49%
Do you feel habituated or addicted to technological gadgets and mobile screens?	Strongly Agree 21%	Agree 51%	Disagree 11%	Strongly disagree 02%
Do you think technical issues during online classes might cause stress among students?	Yes 93%		No 07%	
Do you think, you have experienced psychological and emotional discomfort during online classes?	Yes 55%		No 45%	
Did you feel overuse of mobile phones/laptops has caused digital fatigue?	Yes 94%		No 06%	
Do you experience disturbances in your surroundings during online classes?	Always 21%	Very often 22%	Sometimes 53%	Never 04%
Do you think increased screen timing and use of earphones may cause long-term problems for you?	Strongly Agree 40%	Agree 44%	Disagree 03%	Neither agree nor disagree 13%
Do you think that many students have been affected in online classes due to the digital divide?	Affected 46%	Not so affected 14%		Strongly Affected 40%
Do you feel personally, a longer duration of online study influences your sleep pattern?	Yes 79%		No 21%	
How often do you interact with your teacher in online classes??	Always 18%	Sometime 59%	Very often 18%	Never 05%

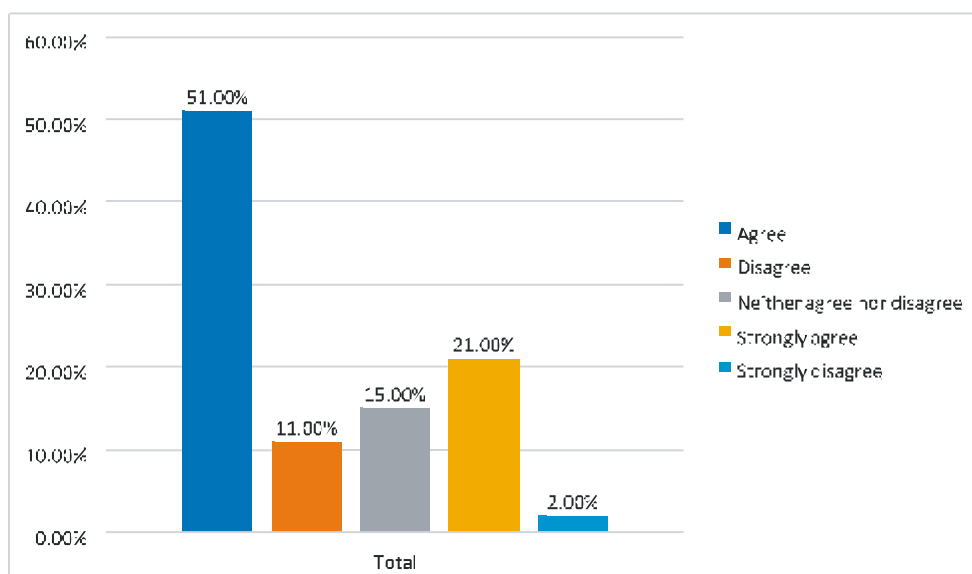
Some important data of survey findings:

1. To what extent, do online classes influence your study and learning pattern?



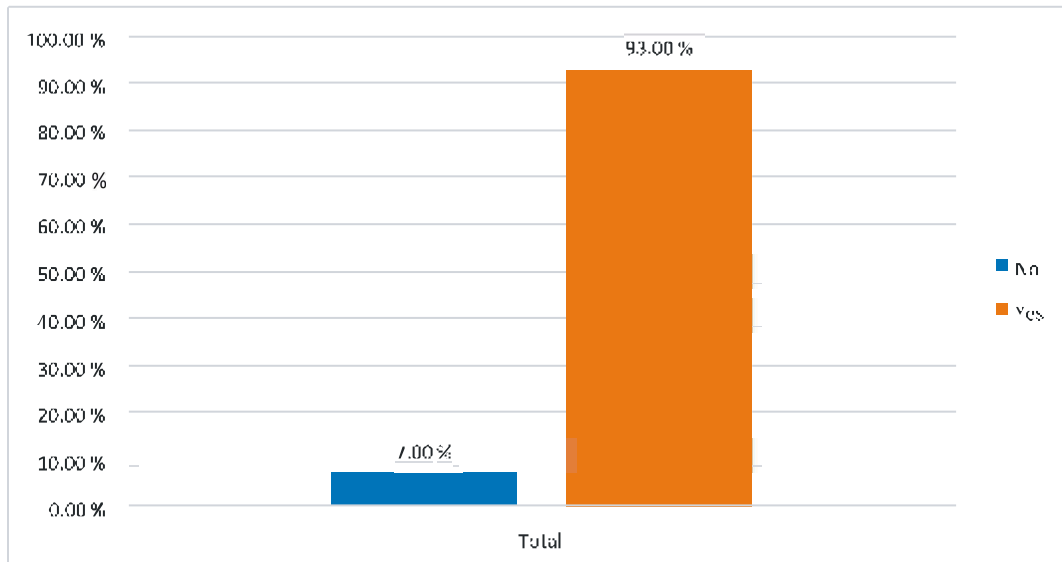
When participants were asked about whether online classes influence their study and learning patterns. Out of the 100%, 49% of the participants said “somewhat well”, 36% of the participants said “Not so well”, 6% of the participants said “Not at all” and 9% of the participants said, “Extremely well”.

2. Do you feel habituated or addicted to technological gadgets and mobile screens?



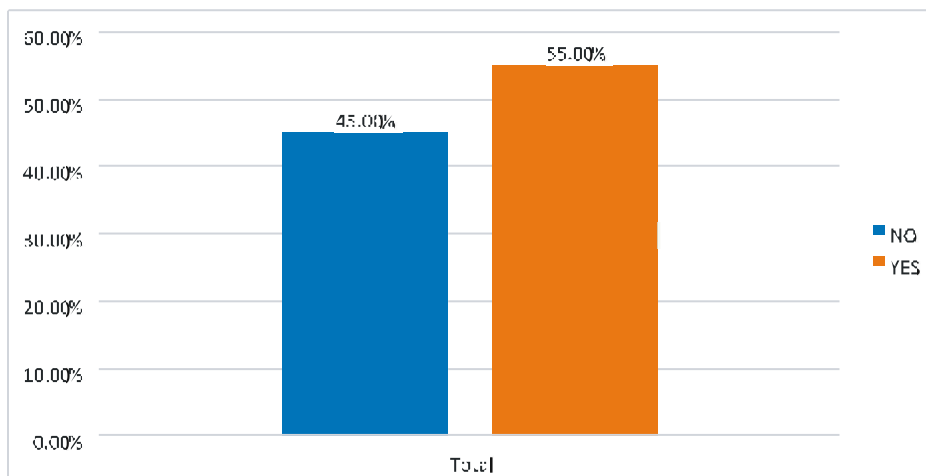
This graph shows that out of 100%, 51% of the participants feels habituated or addicted to technological gadgets and mobile screen and 21% of the participants strongly agree whereas few participants disagree or neither agree nor disagree.

3. Do you think technical issues during online classes might cause stress among students?



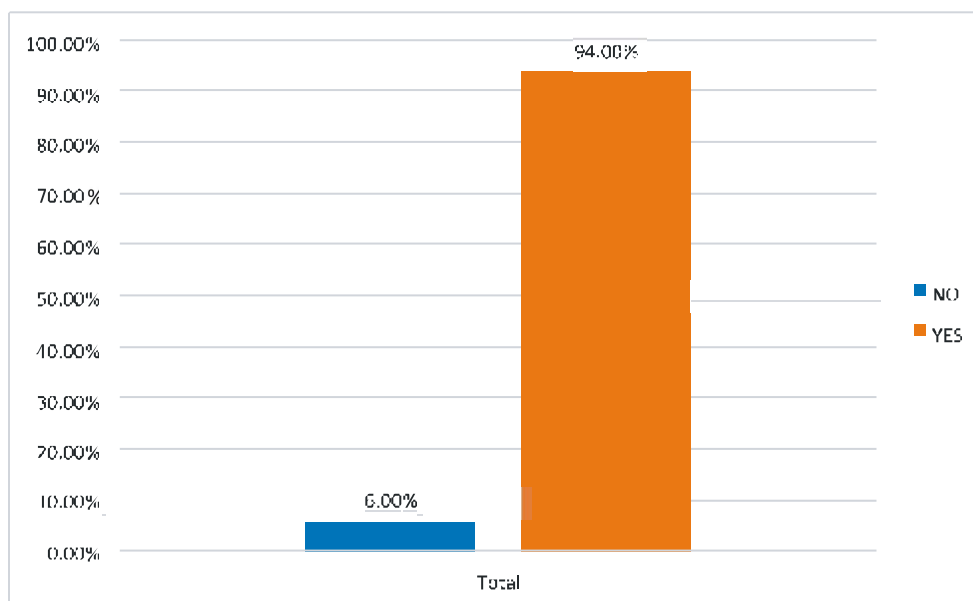
During online classes out of 100%, 97% of the participants mentioned that they have less access to technological facilities due to this they face technical issues that create stress among them.

4. Do you think, you have experienced psychological and emotional discomfort during online classes?



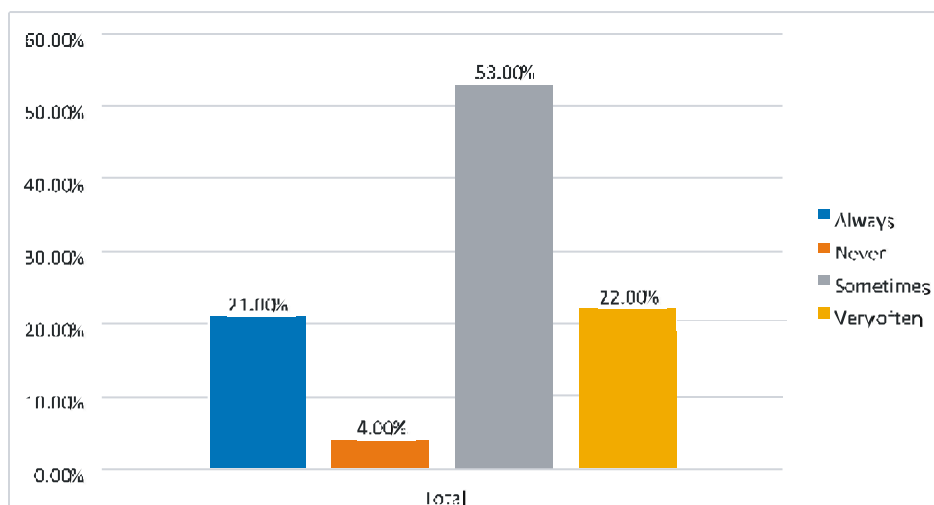
Out of 100 respondents, 55% of the students experienced psychological and emotional discomfort during online classes and 45% of them deny which depicted more than half of the students felt psychological discomfort. In online classes, 59% of the participants interact less during online classes, 18% of the participants 'Always' interact 18% interact 'very often' and 5% of them never interact which probably makes their online classes less interactive leading to demotivation, frustration, etc.

5. Did you feel the overuse of mobile phones/laptops has caused digital fatigue?



As mentioned in the demographic details most of the students have to do their online classes for a longer hour. So, participants were asked whether they felt that overuse of mobile/laptops has caused digital fatigue. 94% of the students said 'Yes' to the question as they felt digital fatigue due to overuse of mobile/laptop which probably depicted lack of energy, burnout, etc.

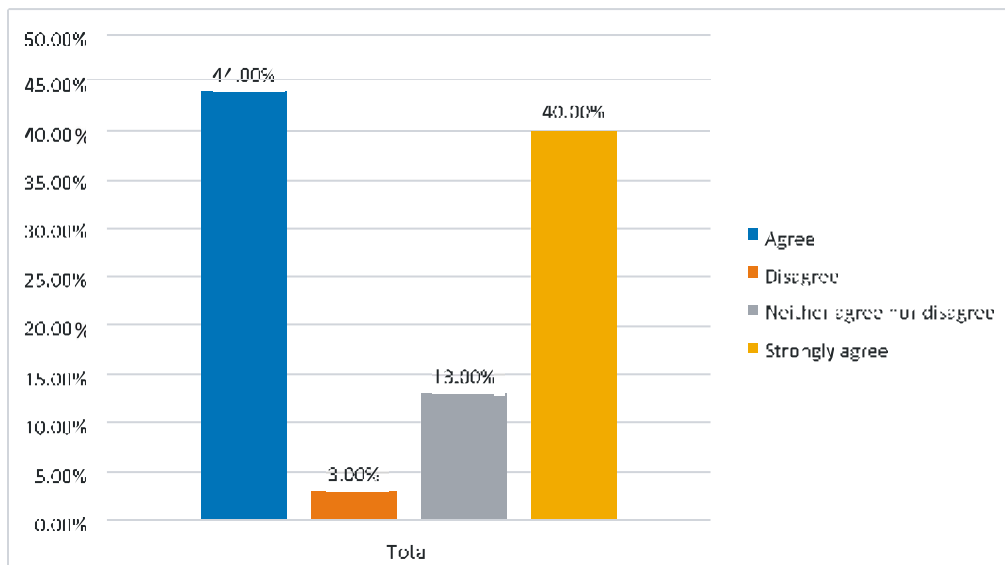
6. Do you experience disturbances in your surroundings during online classes?



When participants were asked about their surroundings during an online class. Out of 100%, 53% of the students said that sometimes they experience disturbances in their surroundings, 21% said 'Always', 22% said very often and only 4% said 'Never' which most probably could be the reason for irregularity, irritation, lack

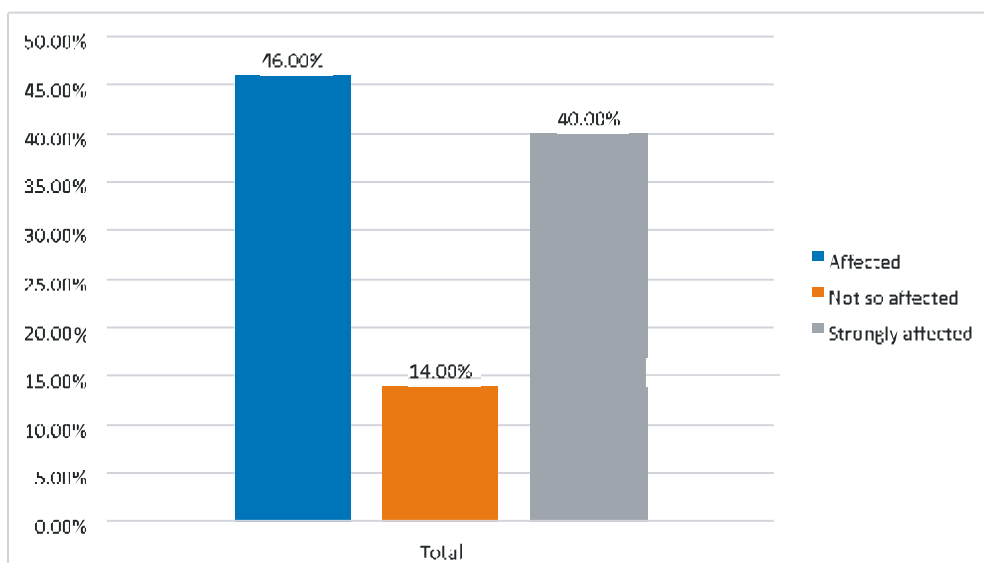
of concentration, etc.

7. Do you think increased screen timing and use of earphones may cause long-term problems for you?



When participants were asked if they think prolonged screen timing and use of earphones cause problems for them. Out of the 100% of respondents, 44% of them agree and 40% of participants strongly agree which probably could be the reason behind increasing eyesight problems with frequent headaches, etc.

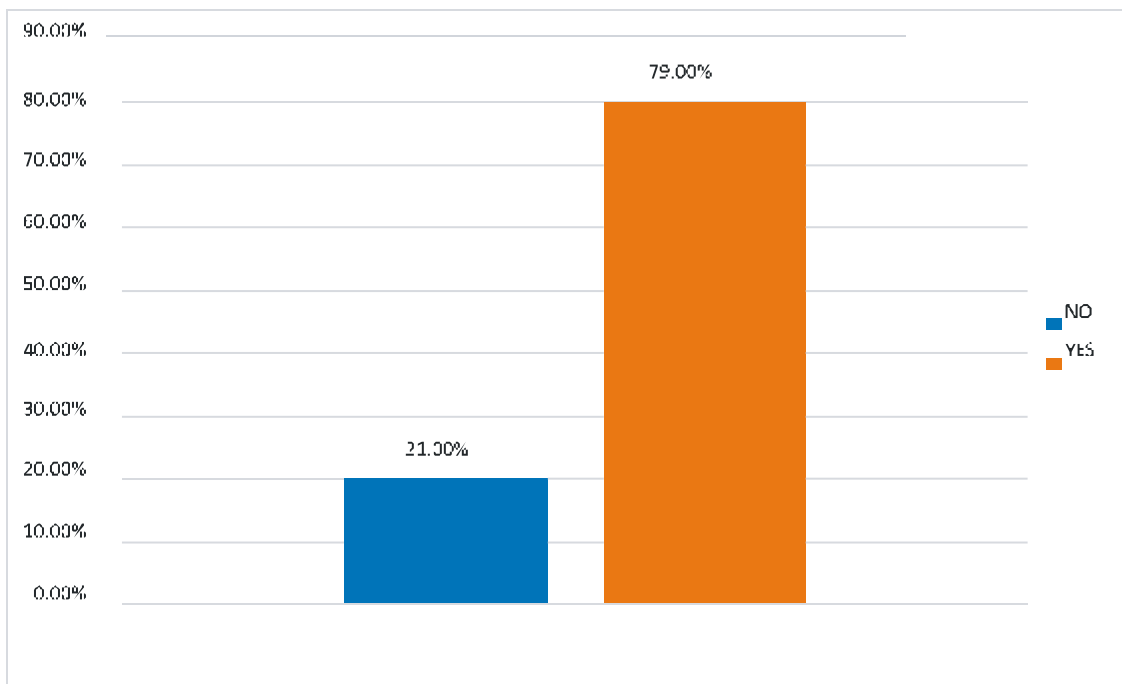
8. Do you think that many students have been affected in online classes due to the digital divide?



To find out whether every student can meet the requirements of the online classes or not. Participants were asked do they think that their online classes have been affected by the digital divide. Out of 100%, 46% of the participants were affected and 40% of the participants were strongly affected due to the non-availability of computers or the internet which hinders them in smooth interaction with teachers and classmates during online

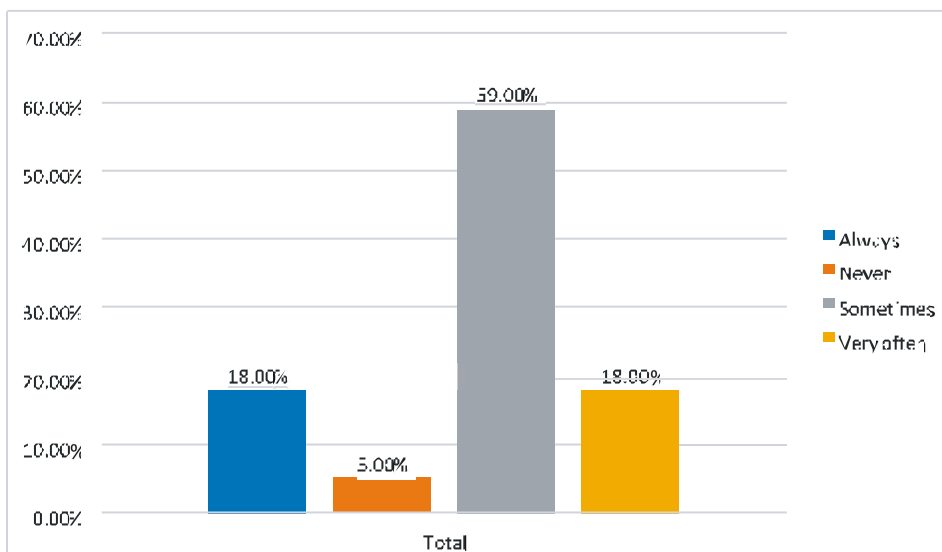
classes. Only 14% of the students said that they weren't affected.

9. Do you feel personally, a longer duration of online study influences your sleep pattern?



From the above graph, we can say that 79% of students said that a longer duration of online study influences their sleep pattern whereas only 21% of students said that the longer duration of online classes does not influence their sleep pattern.

10. How often do you interact with your teacher in online classes?



According to the above graph, 59% of students said that sometimes they interact with their teacher during online classes, 18% of students interact with their teacher very often or always during online classes, and only 5% of students never interact with their teacher.

Discussion:

Students were asked some of the questions related to psychological and physical well-being to trace out the impact of online classes on students. So, among the surveyed students most of them responded that due to online classes, they had to experience psychological and physical problems. As major issues of online classes mentioned by most of the students are,

- In-person interaction-Students were unable to interact with teachers or friends and found it difficult to understand the topics of the class, etc. Due to COVID-19, all academic work transitioned to online mode and students do online classes or communicate through gadgets from one individual to another individual which eliminated the meaning of non-verbal communication like facial expression, body language, eyecontact, etc. Also, online classrooms do not operate as smoothly as expected because of several barriers to stimulation. Students may feel reluctant to raise questions or provide feedback to instructors in online classroom settings, which may alter the effectiveness of learning outcomes, they may also feel embarrassed to showcase their “social presence” and identity on online platforms (Gunawardena and Zittle 1997).

- Psychological issues -Students often find themselves unable to attend online classes. This inability renders students vulnerable to stress, anxiety, frustration, lack of concentration, hopelessness, lack of proper sleep, and Digital fatigue as it can lead to a lack of energy, mental clarity, and burnout and can cause negative psychological and physical effects on our overall well-being, etc. The adaptation to online classes may further increase university students' anxiety and decrease their motivation and confidence toward personalized learning due to technological barriers during the online learning period (Chu, Y.H. et al., 2022).

- Physical health issues- The sudden transition from offline to online mode classes resulted in various

physical problems such as increasing eyesight or digital eye strain with frequent headaches attributed to prolonged screen timing. Most of the students said that they feel habituated or addicted to technological gadgets and mobile screens which causes obesity in students due to lack of outdoor physical activities. In general, students have to for long periods which causes back and neck pain.

- Socio-economic factor - Many students reported that in this COVID-19 time, their families are suffering from economic problems so they are unable to manage the monthly data package, and necessary gadgets required for online classes. Students when at home, they are expected to perform household chores. Thus, making it difficult for them to regularly attend online classes. These experiences of students are generally described as disrupted and lead to feelings of insecurity, anxiety, and hopelessness (Hajduk et al., 2020; Wang and Zhao, 2020).

Conclusion:

With the help of a literature review, we came to know that higher studies in India are currently restricted by a lack of technological support when it comes to the regulation of online classes. Improving the quality of online classes with the help of various service providers, along with support from different colleges and universities can help in making the online mode of education more effective and easily acceptable all over India. As reported by a recent study, Students also experience psychological and physical discomfort like stress, anxiety, frustration, lack of concentration, demotivation for online classes, eye pain, frequent headaches, etc. due to lack of in-person interaction, improper internet connection, improper environment, and socio economic factors.

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गैर सरकारी स्कूलों में वर्ग के आधार पर असमानता : एक समाजशास्त्रीय अध्ययन

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सारांश :

बिहार तथा भारतवर्ष अपने शिक्षा के इतिहास के लिए संपूर्ण विश्व में जाना जाता था। यहाँ नालंदा, विक्रमशिला, तक्षशिला जैसे ज्ञान के केन्द्र थे परंतु आज जो शिक्षा की स्थिति हो गई है वह भी भेदभाव नामक दीमक के कारण दयनीय है। सरकार द्वारा कितनी ही कोशिशों के बावजूद भी आज शिक्षा की स्थिति दयनीय बनी हुई है, स्कूलों में 25 प्रतिशत आरक्षित सीटें हैं निम्न वर्ग के बच्चों के लिए लेकिन वो सीटें उन्हें न मिलकर अनुदान लेकर उच्च वर्ग के बच्चों को मिला जाता है। शिक्षकों तथा स्कूल प्रशासन शिक्षा की स्थिति को सुधारने के बजाये अपनी आय में वृद्धि करने पर ज्यादा ध्यान देते हैं। फिर

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चाहे वो अनैतिक ही क्यों न हो। इस संदर्भ में विद्यार्थियों तथा अभिभावकों की भागीदारी भी अहम है।

शब्द कुंजी: दयनीय, भेदभाव, अनुदान

परिचय :

शिक्षा मानव को एक अच्छा इंसान बनाती है, साथ ही यह मानव में ज्ञान आचरण, तकनीकी दक्षता का विकास करती है शिक्षा व्यक्ति की अंतर्निहित क्षमता तथा उसके व्यक्तित्व को विकसित करने वाली प्रक्रिया है। यही प्रक्रिया उसे समाज में एक व्यस्क की भूमिका निभाने के लिए समाजीकृत करती है तथा समाज के सदस्य एवं एक जिम्मेदार नागरिक बनने के लिए व्यक्ति को आवश्यक ज्ञान तथा कौशल उपलब्ध कराती है। शिक्षा, समाज की एक पीढ़ी द्वारा अपने से निचली पीढ़ी को अपने ज्ञान के हस्तांतरण का प्रयास है। इस विचार से शिक्षा एक संस्था के रूप में काम करती है, जो व्यक्ति विशेष को समाज से जोड़ने में महत्वपूर्ण भूमिका निभाती है तथा समाज की संस्कृति की निरंतरता को बनाए रखती है बच्चा शिक्षा द्वारा समाज के आधारभूत नियमों, व्यवस्थाओं, समाज के प्रतिमानों एवं मूल्यों को सीखता है। बच्चा समाज से तभी जुड़ पाता है जब वह उस समाज विशेष के इतिहास से अभिमुख होता है।

शिक्षा शब्द संस्कृत भाषा की 'शिक्ष' धातु में 'अ' प्रत्यय लगाने से बना है। 'शिक्ष' का अर्थ है सीखना और सिखाना। 'शिक्षा' शब्द का अर्थ हुआ सीखने-सिखाने की क्रिया। 'शिक्षा' का उद्देश्य ज्ञान रूपी प्रकाश को प्राप्त कर अज्ञान रूपी

अंधकार को दूर करना है।” शिक्षा का अर्थ है अंदर से बाहर निकालना सामान्यतः शिक्षा बच्चों के आंतरिक गुण, खूबियों को खींचकर बाहर लाता है तथा उसे और भी ज्यादा निखारता है, जैसे कोयले के खान से जब हीरे को निकाला जाता है वो अपनी चमक से सबकी आँखों को चकाचौंध कर देता है, ठीक उसी तरह जब शिक्षा बच्चों के अंदर छुपे हुए खूबियों को निकालता है तब भी पूरी दुनिया उसको जान जाती है। शिक्षा प्राचीन काल से ही मनुष्यों को पूरी तरह से परिवर्तित करती आई है। प्राचीन काल में शिक्षा गुणवत्ता बहुत ही ज्यादा अच्छी थी लेकिन आज शिक्षा का क्षेत्र तो बढ़ गया है पर उसकी गुणवत्ता उतनी ही कम हो गई है। बहुत सारे महापुरुषों विद्वानों ने शिक्षा को अलग-अलग तरीके से समझाया है।

‘रबिन्द्रनाथ टैगोर के अनुसार’

अच्छी शिक्षा वो है जो सिर्फ ज्ञान और सूचनाओं को प्राप्त नहीं करवाती इसके साथ-साथ हमारे और दुनिया के अन्य लोगों के बीच साथ रहने तथा प्यार की भावना का भी विकास करती है। टैगोर का मानना है कि स्थानीय भाषा ही लोगों के निर्देशन का माध्यम होना चाहिए।

‘महात्मा गांधी के अनुसार’

शिक्षा का तात्पर्य होता है एक व्यक्ति का सर्वांगीण विकास है। उनके अनुसार बच्चे की शरीर, उनकी दिमाग, उसके आत्मा सबका विकास होना चाहिए।

‘अल्बर्ट आइंस्टाइन के अनुसार’

शिक्षा का मतलब सिर्फ तथ्यों को सीखना ही नहीं होता बल्कि शिक्षा का वास्तविक मतलब होता है कि बच्चों के दिमाग को प्रशिक्षित करना ताकि वह सही दिशा में सोच सके।

भेदभाव/असमानता क्या है :

भेदभाव का अर्थ होता है फर्क करना, किसी की मजहब, जाति, वर्ग, रंग रूप तथा अन्य तथ्यों के आधार पर। आजकल समाज के हर एक भाग में हम भेदभाव के कई रूप देखते हैं। कई बार तो भेदभाव देखकर सामान्यतः लोग चुप ही रहना पसंद करते हैं भेदभाव न सिर्फ व्यक्ति के मनोबल को गिराता है अपितु यह व्यक्तियों में हीन भावना तथा दूसरे कई तरह के विकार उत्पन्न कर देता है जो न सिर्फ व्यक्ति बल्कि राष्ट्र के भी विकास में बाधक होता है सामान्यतः ऐसा युवाओं में देखा गया है कि भेदभाव के कारण उसका मनोबल टूट जाता है कई बार तो वो इतने निराश हो जाते हैं कि आत्महत्या जैसे घृणित कार्य भी कर बैठते हैं।

वर्ग के आधार पर भेदभाव :

हमारा समाज वर्ग के नाम पर तीन भाग में बँटा है। पहला वर्ग वह है जो संख्या में तो कम है लेकिन इतना संपन्न वर्ग है कि उसका समाज पर प्रभुत्व रहता है और सबसे ज्यादा

भेदभाव इस वर्ग के द्वारा किया जाता है जिसे उच्च वर्ग कहा जाता है। उसके बाद वह वर्ग आता है जो मध्य में रहता है जिनकी स्थिति उच्च वर्ग से निम्न होती है जिसे मध्यम वर्ग कहा जाता है।

और आखिर में आता है वह वर्ग जो अगर चाहे तो पूरे समाज को पलटने की ताकत रखता है चाहे तो किसी भी क्षेत्र में क्यों न हो वह है निम्न वर्ग। वैसे तो समाज में तीन वर्ग हैं पर समाज में दो ही वर्गों की चर्चा होती है। पहला वर्ग है उच्च वर्ग (Upper Class) और दूसरा वर्ग है निम्न वर्ग। आज उच्च वर्ग के लोग हरेक क्षेत्र चाहे वह शिक्षा हो, व्यवसाय हो, राजनीति हो हर एक क्षेत्र में निम्न वर्ग का शोषण कर रहे हैं।

अगर स्कूलों या शैक्षणिक संस्थानों की बात करें तो हमारे संविधान में 25 प्रतिशत सीट आरक्षित है निम्न वर्ग के बच्चों के लिए, लेकिन ये सीट भी उच्च वर्ग या मध्य वर्ग के बच्चों को दे दिया जाता है। भेदभाव शिक्षा के क्षेत्र में भी अपनी पांव मजबूती से जमाए हुए है। भेदभाव का ही असर है कि भारत में शिक्षा प्रणाली का इतना विकास होने के बावजूद भी हमारा भारत शिक्षा के क्षेत्र में 33 वें नम्बर पर खड़ा है।

संविधान में दिये गये अधिकार :

भारतीय संविधान में शिक्षा को मौलिक अधिकार की सूची में शामिल किया गया है वो भी 6-14 वर्ष के बच्चों के लिए निःशुल्क शिक्षा की व्यवस्था करने की बात कही गई है। Article 45 के तहत यह प्रावधान है कि हरेक राज्य छोटे बच्चों की देखरेख तथा उनके 14 वर्ष की आयु तक निःशुल्क शिक्षा की व्यवस्था करेगा। वही संविधान में निहित Article 21। 93 Amendment के तहत शिक्षा को मौलिक अधिकार की श्रेणी में शामिल किया गया है जो कि हर भारतीय का अधिकार है। वहीं Article 15 किसी भी तरह के भेदभाव चाहे वो जाति, वर्ग, संस्कृति, लिंग, धर्म, स्थान के आधार पर भी हो की दंडनीय अपराध मानता है। संविधान में निम्न वर्ग जैसे- SC (अनुसूचित जाति) ST (अनुसूचित जनजाति) या अन्य निम्न वर्गों के शिक्षा के अधिकार को बढ़ावा देने तथा उन्हें सुरक्षित करने की बात अनुच्छेद 46 में कही गई है।

अध्ययन पद्धति :

किसी भी अनुसंधान कार्य में अध्ययन पद्धति का महत्वपूर्ण स्थान है। अनुसंधान कार्य प्रारम्भ करने से पहले समस्या से संबंधित अध्ययन पद्धति का चुनाव करना आवश्यक है। इसके अंतर्गत अवलोकन, परीक्षण, तथ्यों का संकलन, वर्गीकरण तथा सामान्यीकरण पर आधारित एक व्यवस्थित पद्धति को अपनाया जाता है। प्रस्तुत अध्ययन का विषय “गैर सरकारी स्कूलों में वर्ग के आधार पर असमानता एक सामाजशास्त्रीय अध्ययन” है। इस अध्ययन के अंतर्गत इकाइयों का चयन और तथ्यों का संकलन करने के लिए प्राथमिक और द्वितीयक स्रोत का

प्रयोग किया गया है।

इस शोध की अध्ययन प्रणाली पाँच चरणों पर आधारित है—

- अध्ययन की इकाई का चयन
- अध्ययन क्षेत्र का चयन
- अध्ययन के उद्देश्यों का निर्धारण
- तथ्यों का संकलन
- तथ्यों का वर्गीकरण एवं विश्लेषण

अध्ययन की इकाई का चयन:

इस शोध कार्य के दौरान सूचनाओं को प्राप्त करने के लिए शोध के अंतर्गत कुल 50 विद्यार्थियों का चयन गैर सरकारी स्कूल से किया गया है।

अध्ययन क्षेत्र का चयन:

इस शोध में अध्ययन-क्षेत्र के रूप में पटना शहर में गोला रोड स्थित “ज्ञानोदया गुरुकुल” और गांधी मैदान स्थित “संत जोसेफ कॉन्वेंट स्कूल” को शोध कार्य हेतु चयनित किया गया है।

अध्ययन के निम्न उद्देश्य हैं :

- वर्ग के आधार पर असमानता को जानना
- वर्ग के आधार पर शिक्षा में असमानता को जानना
- शिक्षा में असमानता का आर्थिक स्थिति से संबंध है या नहीं इसे जानना
- शिक्षा के मौलिक अधिकार के बारे में लोगों की समझ को जानना

तथ्यों का संकलन: तथ्यों का संकलन प्रमुखतः दो स्रोतों के माध्यम से प्राप्त किया गया है:

1. प्राथमिक स्रोत:

जब अनुसंधानकर्ता स्वयं ही अध्ययन क्षेत्र में जाकर तथ्यों को संग्रह करता है, तो उसे प्राथमिक स्रोत कहा जाता है। इस अध्ययन में प्राथमिक स्रोत के रूप में अवलोकन, साक्षात्कार, अनुसूची और व्यक्तिगत अध्ययन का प्रयोग किया गया है।

2. द्वितीय स्रोत:

द्वितीय स्रोत वे स्रोत हैं जिसे एक शोधकर्ता स्वयं एकत्रित नहीं करता है बल्कि अनेक प्रकाशित अथवा प्रकाशित लेखों, प्रलेखों, प्रतों तथा सरकारी रिपोर्ट आदि से स्वतः प्राप्त हो जाते हैं। जिसके फलस्वरूप एक शोधकर्ता को तैयार तथ्य के रूप में आवश्यक तथा महत्वपूर्ण सूचनाएँ उपलब्ध हो जाती हैं। इसके अन्तर्गत पुस्तकें, समाचार पत्र, मैगजीन, रिपोर्ट आदि आते हैं।

तथ्यों का वर्गीकरण, सारणीयन एवं विश्लेषण:

तथ्यों का वर्गीकरण किसी भी वैज्ञानिक पद्धति का महत्वपूर्ण चरण है। इसके बिना न तो तथ्यों का विश्लेषण किया जा सकता है और न ही इसके द्वारा किसी निश्चित निष्कर्ष पर

पहुँचा जा सकता है। तथ्यों के वर्गीकरण का तात्पर्य उस प्रक्रिया से है जिसके अन्तर्गत तथ्यों को उनकी समानता और भिन्नता के आधार पर कुछ निश्चित वर्ग समूहों में रखते हैं। वर्गीकरण के बाद सारणीयन के द्वारा वर्गीकृत तथ्यों को व्यवस्थित एवं स्पष्ट किया जाता है। जिससे वर्गीकृत तथ्य अधिक अर्थपूर्ण एवं स्पष्ट हो जाते हैं। तथ्यों का विश्लेषण सामाजिक शोध की एक प्रविधि है जिसके द्वारा विभिन्न क्षेत्रों से गुणात्मक तथ्यों को इस प्रकार व्यवस्थित और श्रेणीबद्ध किया जाता है कि उस आधार पर निष्कर्ष प्रस्तुत किये जा सकें।

सारणी संख्या-1

क्या आप वर्ग व्यवस्था के बारे में जानते हैं?

विकल्प	संख्या	प्रतिशत
हाँ	40	80%
नहीं	10	20%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि वर्ग व्यवस्था की जानकारी है या नहीं इसके संदर्भ में 40 बच्चों ने हाँ में जवाब दिया है और 10 ने नहीं में जवाब दिया है।

सारणी संख्या-2

क्या आपने कभी भी तेज विद्यार्थी को इस व्यवस्था के कारण पीछे होते हुए देखा है?

विकल्प	संख्या	प्रतिशत
हाँ	29	58%
नहीं	21	42%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि क्या आपने कभी किसी तेज विद्यार्थी को इस व्यवस्था के कारण पीछे होते हुए देखा है इसके संदर्भ में 29 बच्चों ने हाँ में जवाब दिया है तथा 21 बच्चों ने नहीं में जवाब दिया है।

सारणी संख्या-3

क्या आपको इस बात की जानकारी है कि पैसा शिक्षा में एक महत्वपूर्ण भूमिका निभाता है?

विकल्प	संख्या	प्रतिशत
हाँ	46	92%
नहीं	4	8%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि क्या पैसा शिक्षा में एक महत्वपूर्ण भूमिका निभाता है इसके संदर्भ में 46 बच्चों ने हाँ में जवाब दिया है अथवा 4 बच्चों ने नहीं में जवाब दिया है।

सारणी संख्या-4

क्या आप अपने स्कूल में अनुदान के आधार पर नामांकन होते सुना है।

विकल्प	संख्या	प्रतिशत
हाँ	35	70%
नहीं	15	30%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि स्कूल में अनुदान के आधार पर नामांकन की जानकारी के संदर्भ में 35 बच्चों ने हाँ में जवाब दिया है अथवा 15 बच्चों ने नहीं में जवाब दिया है।

सारणी संख्या-5

क्या आपने कभी भी अपने प्रधानाचार्य या शिक्षक को अपने कक्षा में वर्ग के आधार पर भेदभाव करते हुए देखा है?

विकल्प	संख्या	प्रतिशत
हाँ	35	70%
नहीं	15	30%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि प्रधानाचार्य या शिक्षक द्वारा कक्षा में वर्ग के आधार पर भेदभाव के संदर्भ में 15 बच्चों ने हाँ में जवाब दिया है अथवा 35 बच्चों ने नहीं में जवाब दिया है।

सारणी संख्या-6

क्या आपको इस बात कि जानकारी है कि शिक्षा हमारा मौलिक अधिकार है?

विकल्प	संख्या	प्रतिशत
हाँ	35	70%
नहीं	15	30%
कुल	50	100%

उपर्युक्त सारणी से यह स्पष्ट होता है कि क्या शिक्षा

हमारा मौलिक अधिकार है इसके संदर्भ में 35 बच्चों ने हाँ में जवाब दिया है अथवा 15 बच्चों ने नहीं में जवाब दिया है।

निष्कर्ष :

उपर्युक्त तथ्यों के संकलन के आधार यह स्पष्ट है कि सरकार की तमाम कोशिशों के बावजूद भी शिक्षा में भेदभाव का स्तर दिन प्रतिदिन बढ़ते ही जा रहा है। सरकार द्वारा कितनी ही कोशिशों के बावजूद भी आज शिक्षा की स्थिति दयनीय बनी हुई है स्कूलों में 25: आरक्षित सीटें निम्न वर्ग के बच्चों के लिए है लेकिन वो सीटें उन्हें न मिलकर अनुदानलेकर उच्च वर्ग के बच्चों को दे दी जाती है।

सुझाव :

गैर सरकारी विद्यालय में भेदभाव को खत्म करने के लिए निम्नलिखित कदम उठाया जाना चाहिए।

- स्कूल के प्रधानाध्यापक को किसी भी बच्चे में वर्ग के आधार पर भेदभाव नहीं करना चाहिए।
- बच्चे के साथ कक्षा में शिक्षक के द्वारा भी किसी प्रकार का भेदभाव नहीं किया जाना चाहिए।
- स्कूलों में 25: सीटें आरक्षित बच्चों को ही देनी चाहिए जो आर्थिक स्थिति के कारण महंगी शिक्षा लेने में असमर्थ है।
- स्कूलों में अनुदान लेकर वैसे बच्चे कानामांकन लेना नहीं लेना चाहिए जो उसके काबिल ना हो।
- स्कूल प्रशासन को कुछ कड़े नियम बनाने चाहिए जिससे किसी भी बच्चे के साथ किसी भी प्रकार का भेदभाव ना हो सके।
- बच्चों को ऐसी शिक्षा देनी चाहिए जिससे वो सभी को एक सामान दृष्टि से देखे तथा हो रहे भेदभाव को खुलकर विरोध करें।

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