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**DEPARTMENT OF HISTORY
UTKAL UNIVERSITY, VANI VIHAR
BHUBANESWAR-751004, (ODISHA) INDIA**

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A STUDY ON ADVERTISING REGULATIONS IN INDIA & REDRESSAL OF CONSUMER COMPLAINTS IN REGARDS TO ADVERTISEMENTS

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Abstract: Is Advertising different from propaganda? Yes, there is a clear difference between advertising & propaganda. Propaganda is usually done by government authorities or social workers to promote their policies or measures of public welfare. Advertising, since human civilization is seen in various forms and in all types of media namely, Television, Radio, Newspapers, Magazines & all other forms of print & digital media. Thus, it is of utmost importance that Advertising needs to be regulated in order to hold accountability & responsibility for the claims made by the advertiser. Advertising calls for public attention towards a product, service or need. Hence, consideration needs to be given to the fact that rights of consumers are not misled, harmed nor offended.

Within the last few years, Advertising has seen a huge transformation in India. From Door darshan to Prasar Bharati to Television & now with internet ads, it has come a long way. Advertising expenditure has seen the greatest growth in the world of about 2.84 billion US \$ during the period of 2015 to 2018. India's digital advertisement market is expected to grow at a compound annual growth rate (CAGR) of 33.5 per cent to cross the Rs 25,500 crore (US\$ 3.8 billion) mark by 2020. FMCG, automobiles & E-commerce are the most advertised industries in India. In managing brands and targeting consumers, advertising must reflect the social and cultural diversity of India. Thus, if advertising is to reflect Indian society, the question is, Which India will it portray? And what impact will it make on its people mainly the youth, who form the largest part of the population & form the future of an ever-growing economy.

India has the largest number of youth in the world & they account for 1/5th of the total population. The youth market is the one that is highly sought after by most marketing companies & advertising firms. It therefore becomes imperative to know & understand the impact of advertising on youth and also the level of awareness among youngsters about regulating bodies that govern advertising protocol in India. This will help them know their rights and will keep them conscious about the ill-effects of advertising gimmicks.

It is imperative for advertisers to ensure that advertisements are in compliance with national laws. At present there is no central statutory agency or uniform legislation to control advertising in India.

Keywords: Advertising, propaganda, youth, target consumers, diversity, statutory

Introduction:

Consumers are more vulnerable today than they ever have been. Traditional issues of advertising such as misleading prices, deceptive representations, and labelling issue etc. have now joined hand with modern day troubles of 'sponsored' movie shots or even paid social media posts. Alongside, the increasing stakes associated with advertisements have made it crucial that they have requisite clarity as to what they can or cannot do. Further, with growing competition, most businesses entities themselves need protection from their contemporaries disparaging their products or otherwise indulging in unfair trade practices. Most companies have self-regulation guidelines, standards & policies to which they must adhere & make sure that reasonable claims are made rather than to deceive consumers under any given circumstance. As it is said, that the most important element in advertising is the Truth.

Review of Literature:

- 1) A study done by Barve G, Sood A, Nithya S & Virmani T, Journal of Mass Communication & Journalism stated, Advertising is a part of life & hence adolescents must get used to it. A debatable argument was conveyed which states that it is the responsibility of the government to protect the interest of the viewers while others feel that it is the responsibility of the parents to do so. Advertising plays an important role in educating the child, the information should be circulated in a careful manner & precision. It is established that particular advertising has an extremely lasting impact on teenager's psychological development. Hence, it is extremely important to limit the negative impact like body shaming, violence, unhealthy eating habits. There is a need for parents to discuss the pros & cons of advertising through effective open communication. Advertising laws & ethics should be complied & should uphold the morals of the society instead of distorting them for commercial purposes.
- 2) Another study reveals, the youth today are far more sophisticated than 20 years ago. They are well aware of their needs & wants and make utmost careful & informed buying decisions. They clearly are aware of the false allegations made by the advertisers and therefore make selective purchases. It is proven that family communication is positively associated with peer communication & age is negatively associated with advertisements on Television. There is an increased participation of youth opinion in family buying decisions due to the knowledge gained by the youngsters from viewing advertisements.
- 3) Economic times, Brand equity studied 25000+ youngsters in 400 cities between the age group of 15-25 years, those of whom are more action-oriented than their predecessors. They realise that if they want to see a change, they need to be a part of it too. Deep consumer insights & continuous engagements with the audience is the heart of meaningful consumer bonding & rapport given their sensitive age group. There needs to be clear distinction between consumer needs & their desire to spend for the same. Advertising bridges the gap between awareness & actual spending habits.
- 4) Dr. Niharika Maharishi in Rajasthan, India on the popularity & perception of youth regarding social marketing implied that social marketing campaign that depicts stories are far impactful, action oriented & attractive. Government initiatives of the Swatch Bharat Abhiyaan, Digital India or Make in India campaigns have left far reaching impact on the youth thereby leaving an interest that aspires them with a desire to explore & inculcate actions in the right direction.
- 5) An article in Brand Equity, "How media attract & affect Youth", states, today's plugged in generation is most certainly worth the effort. A detailed study of how & which media influences the youth & how they are reacting to similar environmental factors will make the whole exercise a fruitful one. The youth today, is far more aware & cautious while dealing with his rights & the subsequent consequences in case of default. Deceptive & misleading marketing practices done by advertisements need to be opposed by the future of the country (youth) in the larger interest of all community stakeholders.

Objectives of the Study:

- 1) To study the provisions of regulating bodies of Advertising in India
- 2) To identify various enactments & provision of Indian lawmakers towards advertisements.
- 3) To understand the redressal mechanism related to advertising grievances of consumers.

Scope & Significance:

Regulation in advertising helps to filter out false claims & controls spread of misleading information to consumers. The primary reason to regulate advertising is to prevent possible well-being in the larger interests of the consumers. The representation of a product's features may reasonably affect the consumers' action in an advertisement, thus may not be lengthy but it should include all significant information regarding the uses of the product. As a mirror of society, advertising reflects & magnifies developments in ideologies & lifestyles through new habits that are cultivated by

the consumers. Consumer's right of choice is the utmost important one among his rights & therefore different legal systems & organisations of advertising endorse the "code" & do's & don'ts of ethical & safe practices of Advertising. True advertisements are in conformity with realities which make the consumers evaluate selected options for purchasing products & deciding upon the money & time spend in that regard.

The closest that this sector has in terms of a regulatory body is the "**Code of Ethics**" issued by the **ASCI , Advertising Standards Council of India**, a voluntary self- regulatory council established in 1985 to regulate practices relating to advertising in India.

It is vital to note that the ASCI Code specifically states that:

"The code is not in competition with law. Its rules, and the machinery through which they are enforced, are designed to complement legal controls, not to usurp or replace them."

ASCI has drawn up a code of self-regulation in the advertising industry with a view to achieve the acceptance of fair advertising practices in the best interest of the ultimate consumer. These codes are self-imposed discipline to be followed by the members of the industry & in no case is mandatory. ASCI operateon 4 principles namely:

- 1) Honesty
- 2) Decency
- 3) Responsibility
- 4) Fairness

REDRESSAL OF GREIVANCE:

ASCI consider the following parameters while receiving complaints:

- 1) Misleading advertisements
- 2) False advertisements
- 3) Indecent advertisements
- 4) Illegal advertisements
- 5) Ads unfair to competition
- 6) Ads leading to unsafe practices

The processfollowed by ASCI to process a complaint is as follows:

- 1) The complainant can approach the ASCI in case of finding any misleading ads or ads that do not adhere to the specified codes
- 2) After a valid complaint is received, the ASCI forward's the complaint to the advertiser for his response on the issue
- 3) The formal complaint of the ad and the advertiser's response has been placed before a formal committee called the CCC (Consumer Complaint Council, a self-regulatory JURY representing members of the civil society & the industry.
- 4) After deliberation & discussions by the jury, considering all aspects, a balanced decision is taken as to modify, rectify or withdrawal of the said advertisement.
- 5) ASCI also offer's free advice to all its registered members that help them review their advertising content before its released & thereby consider changes.
- 6) They lastly believe, that "If you don't regulate yourself, someone else will"

The ASCI is not in competition with any law, its rules or the machinery through which it is enforced upon. Thus, ASCI Codes are designed only to complement legal controls under such laws & not to replace them.

THE DEPARTMENT OF CONSUMER AFFAIRS

In case of any Misleading advertisement witnessed by the consumer, a complaint can be registered along with the audio or video or copy of the advertisement through the web portal of the GOI at <http://gama.gov.in> which is a portal and central registry for lodging complaints, called the Grievances against Misleading advertisements by the Ministry of Consumer Affairs. The mandate of

this department is consumer advocacy with an endeavour to address consumer grievances in case of advertisements.

The following are the 6 key focus sectors:

- i) Food & Agriculture
- ii) Health
- iii) Education
- iv) Transport
- v) Financial services
- vi) Real Estate

For lodging a complaint, a one-time registration should be done on the above portal & fill all appropriate & necessary details. All evidence should be attached alongwith the same. Login-id & can be used to track the status of the complaint. The complaint will be forwarded to the concerned authority consisting of governing councils, Ombudsmen & self-regulating authorities.

Apart from ASCI & The Ministry of Consumer Affairs, there are a host of agencies which are working on the regulatory role in their sphere of influence. Some of these are,

1. Indian Broadcasting Foundation, New Delhi
2. The Advertising Standards Council of India, Mumbai
3. Electronic Media Monitoring Centre (EMMC), Ministry of Information and Broadcasting, Government of India, NEW Delhi
4. Telecom Regulatory Authority of India (TRAI), New Delhi
5. Press Council of India, New Delhi
6. News Broadcasting Standards Authority, C/o News Broadcasters Association, Delhi
7. Director General, All India Radio, Parliament Street, New Delhi, India
8. Director General, Prasar Bharti, Doordarshan Bhawan, New Delhi
9. National Consumer Dispute Redressal Commission, New Delhi
10. Food Safety and Standards Authority of India, New Delhi

Some of the Advertising regulation that are notable in India presently include the following:

- 1) **Consumer Protection Act, 1986:** It seeks to provide for better protection of the interest of the consumers & thereby help consumers to settle disputes at the judiciary level. It enforces the following rights on consumers & protects the same
 - i) **Right to be heard** (that consumer complaints will be addressed)
 - ii) **Right to be protected** (against marketing of hazardous goods & services)
 - iii) **Right to be informed** (about all details of goods so as to be protected against unfair trade practices)
 - iv) **Right to be assured** (of goods at competitive prices, wherever possible)
 - v) **Right to seek redressal** (against unfair trading practices & exploitation of Consumers)
 - vi) **Right to consumer education**

Redressal mechanism are handled at the District, State & National levels respectively.

The Consumer Protection Bill, 1986 was passed by both the Houses of Parliament and it received the assent of the President on 24th December, 1986. It came on the Statutes Book as THE CONSUMER PROTECTION ACT, 1986 (68 of 1986).

However, the **Consumer Protection Bill** was passed in the Lok Sabha by the Ministry of Consumer Affairs, Food & Public Distribution. The Consumer Protection Bill 2019 replaced the Consumer Protection Act 1986.

The Central Government set up a **Central Consumer Protection Authority** to protect, promote & enforce Consumer rights. In case of Advertising, CCPA prohibits an endorser of misleading advertisement for product endorsement up to one year or 3 years as the case may be. Alongside, a penalty on the manufacturer or endorser for misleading advertisements up to an amount of Rs 10 lacs or Two years imprisonment & can be extended in case of serious offences up to Rs 50 lacs & 5 years in prison.

- 2) **Cigarettes& other Tobacco Products Act, 2003:** COTPA, 2003 is an Act of Parliament of India enacted in 2003 to prohibit advertisement of, and to provide for the regulation of trade and commerce in, and production, supply and distribution of cigarettes and other tobacco products in India. Advertisement of tobacco products including cigarettes is prohibited. No person shall participate in advertisement of tobacco product, or allow a medium of publication to be used for advertisement of tobacco products. No person shall sell video-film of such advertisement, distribute leaflets, documents, or give space for erection of advertisement of tobacco products. However, restricted advertisement is allowed on packages of tobacco products, entrances of places where tobacco products are sold. Surrogate advertisement is prohibited as well under the Act.
- 3) **Drug & Magic Remedies Act, 1954:** It is an act of the Parliament of India which controls advertisements of drugs in India. It prohibits advertisements of drugs & related substances that claim to have magical properties & doing so is a cognizable offence. It prohibits drugs & related remedies advertisements including miscarriages, preventing conception in women, correction of menstrual disorders, maintaining sexual capacity for pleasure & prevention of any diseases mentioned thereof.
- 4) **Indecent Representation of Women Act, 1986:** This Act prohibits indecent representation of women in advertisements in publications, writings, paintings, figures or in any manner connected thereof. Punishment or prohibition of women in any indecent manner in any form.
- 5) **The Cable Television Network Act, 1995& the Cable Television Amendment Act, 2006:** It provides that no person shall send or transmit any advertisement through a cable service unless such advertisement is in conformity with the prescribed code. It lays down the "Advertising Code" for cable services which conforms to the laws of the country and ensures that advertisements do not offend morality, decency and religious susceptibilities of its subscribers.
- 6) **Advertising restrictions under Prenatal Diagnostic Techniques Act, 1994 & Young Persons Act, 1956:** This act disregards the facilities of pre-natal determination of sex available at any clinics, laboratories or any place prohibited under the act.
- 7) **Food Safety and Standards Act, 2006:** No advertisements can promote substances that can be misleading or deluding. The body denies any sort of false dietary advertisements to be broadcasted on television. Offences shall attract a fine up to Rs10lacs depending on the nature of the product.
- 8) **The Transplantation of Human Organs Act, 1994:** This law disallows any publicizing or advertisements of human organs for transplantation or business dealings. It also provides regulations for the removal or storage for therapeutic purposes.

Needless to note, that the foregoing laws are in addition to the applicable IPR laws & other laws in general which are industry and sector specific

Research Methodology: A descriptive study was done to review the regulation present in the jurisdiction in India for advertising & related laws. The researcher has solely relied on secondary data collection for information processing.

Limitations of the study: A preliminary investigation could have been conducted on masses to know the level of awareness in regards to the provisions of the law & study the measures that need to be taken to safeguard consumer rights. Time & resource limitations were the prime reason for the conducting of the research in the said manner.

Measures to create Awareness among masses with emphasis on Youth:

Mindshare India reported that around 9 million people in the age group of 12-25 years of age set trends & raise aspirational value for masses. Youth form the largest part of the population & their buying decisions plays an important role in the economy. Their increasing buying power and

contributions in family purchase decision is incredible. The younger generation is the wealthiest generation India has ever had in record time. This age group is more open to risk & willing to try anything new in the market. The Government can try various ways to keep consumers informed about regulation that's helps consumers protecting their rights. It is of utmost importance that the government use media blitz to create awareness about the regulating boundaries of the jurisdiction. They may resort to full page advertisements in popular newspapers, commercials on television & radio can also help people to distinguish between authentic & false information. Social media is also a powerful tool to reach out to the youth precisely as they are the early adapters of modern media channels on the internet.

With an increased usage of Smart phones by the youth, another effective method to create awareness would be through Mobile advertising. It may help to transport the concerned messages to the ultimate target group as youth are no willing to pay a premium to avoid advertising on their phones. This will leave a minimum level of caution in regards to the suggested portals in case of complaints.

Comparisons between ASCI & Consumer Forum in Redressal Procedures

In comparisons to the measures taken by both bodies for redressal mechanisms, a relative faster approach in terms of queries resolved has been observed by the ASCI. The statistics shows that the ASCI has resolved about 257 cases in the period of June-July 2020, 533 objectionable ads in March-April period & about 363 cases in the period of June & July, 2020. ASCI is oriented toward the companies that advertising & violating accepted norms while the Consumer Forum focuses on resolving complaints registered by the actual end users or audience in case of misleading & fraudulent activities. While the Consumer Forum has also resolved numerous number of consumer grievances and also compensated the consumer for financial losses. The forum helps the consumer resolve issues with the help of websites, mobile applications, 24X7 helpline, toll free nos etc, present in the public domain.

Conclusion:

Zenith Media predicts that by 2020 India will be the 4th largest contributor of advertising expenses in the world. Advertisements are currently being governed by fragmented and often conflicting sector-specific regulations leaving both the businesses and the consumers exposed to several potential risks.

As evident by the current statutory framework governing advertising in India, there is no central statutory agency or uniform legislation regulating the advertising industry at present. As a result, the advertising sector is left to borrow through sector specific legislations to identify relevant provisions that require compliance by them, while the consumers are either left exposed or are mostly unaware of their rights due to the inefficiency of the current system.

With the growing influence of internet & digital upliftment in all sectors, the traditional modes of marketing & thus advertising is rapidly changing. There is therefore a serious urge to accommodate the needs of the changing & dynamic communication channels.

Indian lawmakers should consider the provisions from the FTC (Federal Trade Commission, U.S) to address newly found issues of subtle advertising where celebrities innocently promote the usage of several products through their social media accounts. A welcome move would also be when the legislators put the onus of due diligence on the endorsers before they endorse a product, so as to safeguard public interest. The absence of a single statutory, regulatory body further aggravates the problem. A comprehensive law/ regulation on advertising in all forms of media which shall provide clarity in the matter and act as a one-stop window for all matters relating to advertising is highly desirable.

Suggestions & Recommendations:

The country's advertising regulation should be in sync with the ever-growing marketing practices & innovative ways of the industry. It is thus, indisputable that advertising sector is afield which merits a comprehensive & well-defined regulatory system that safeguards the interest of all its stakeholders. Every effort should be channelized in a manner that it evokes a sense of awareness & caution

among the fraternity of buyers. They should be aware of their rights & corresponding duties that surround the need of an effective advertisement strategy meant to merely inform the consumers. It is an undeniable fact that Advertisers should protect consumers in a manner that it disproves of the famous quote “Advertising is a legalised way of lying”.

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Appendix:

- 1) ASCI HELPLINE:



2) Ministry of Consumer Affairs

<http://gama.gov.in> : For registration & then complaint & provide necessary details of evidence against the complaint. It shall be addressed by the Government departments/ self-regulating authorities & Ombudsmen.

A STUDY ON ENVIRONMENTAL REPORTING BY SELECTED NIFTY 50 COMPANIES IN INDIA

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ABSTRACT

Environmental Accounting means disclosing standard information about dealing with different environmental issues by a company in their financial reporting, so that all the stake holders including general public can have access to the same. Though Environmental Accounting practices and reporting is not compulsory for Indian Companies, few of them follow the same. Nifty 50 Companies being the top most companies in India have more responsibility towards protection of Environment and its reporting. Whereas certain companies are most significant in case of harming environment. Thus, the study is undertaken to analyse Environmental accounting reporting and practices followed by such selected Nifty 50 Companies.

1. Introduction:

Environmental accounting being a “Language of Societal Concerns” attempts to identify, measure and converse the resources consumed and expenses levied on the environment by the business firms especially for environmental protection. It usually involves specifying financial values to valuable environmental properties, which are not dealt in markets (**Das, 2017**)

2. Objectives of the study:

- a. To Understand the concept and process of Environment Accounting
- b. To find out the percentage of selected Nifty 50 Companies in India reporting environmental initiatives taken.
- c. To analyse the various ways of environment accounting disclosure and reporting by selected Nifty 50 Companies in India.

3. Review of Literature:

Many countries of the world and their accounting professional and standard setting bodies like in USA (AICPA), Canada (CICA), UK (ACCA, ICAEW, ICAS), the Netherlands (NIVRA), Australia (ICAA), etc. and international bodies such as IFAC, IASB and, especially, FEE in Europe are seen to be active in environmental accounting issue. Few countries like Denmark, Netherlands, Norway, and Sweden have made environmental disclosures mandatory in business reporting. However, accounting standard setting bodies are still (generally) reluctant to address environmental matters as a separate, stand-alone issue, their pronouncements of such matters as provisions, liabilities, impairment of fixed assets and so on increasingly reflect recognition of and concern about the impact of environmental matters. (**Goswami, 2014**)

Indian Companies Act, 1956 require to include in Director's Report all environmental related issues and policies. In 1996 ISO: 14000 and in 1999 ISO: 14001 series were introduced. These two standards design the environmental regulations to be followed by the industrial units. (**Prakash, 2016**)

Corporate sustainability reporting can be a part of annual reports, independent reports, company websites, etc., but recently many large companies publish independent (separate, stand-alone) reports focused on environmental and social issues. It should be noticed that preparation of stand-alone reports is often an expensive and complex process considering the problems in using different narrative and numerical (financial and nonfinancial) measures of performance. (**Sekerez, 2017**)

4. Research methodology

Nifty 50 is the index replicating the Indian equity market in general. Total 50 companies listed on National Stock Exchange from 12 various sectors, captures the overall sentiment of the Indian stock markets. Out of 50 companies, Companies dealing with hazardous chemicals, gases, petroleum products etc... are most significant in case of harming environment. Such companies included in Nifty 50 index have more responsibility towards protection of Environment and its reporting being the topmost companies in India.

Therefore, the study is undertaken to analyse Environmental accounting reporting and practices followed by such selected Nifty 50 Companies. The Annexure 1 shows the list of Nifty 50 companies and the industry in which it falls under.

This study is based on secondary data. Such data is compiled from annual reports of 14 top most nifty 50 companies, important from the point of Environment protection selected for the financial year 2019-20. Statistical tools like tables and graphs are used for analysis of the data.

5. Data Analysis and Findings:

5.1 Environmental Reporting with place and type of Reporting by selected Nifty 50 Companies in India:

5.1.a Table 1 indicates whether environmental reporting/disclosure is done by the selected companies or not. It also shows the various places in the annual report where such companies are disclosing environmental issues handled by them. It also represents the type of presentation of such information.

Particulars	Whether Environmental Reporting done?		Place Of Reporting			Type Of Reporting		
	Yes	NO	Director's Report	Financial Statements	Letter to Equity Shareholder's	Descriptive	Numerical	Diagrammatic
Total no. of wewp companies	14	0	14	10	6	13	11	7
% of no. of companies	100	0	100	71	43	93	79	50

Table 1

Source: Annual Reports of Companies (Annexure 2)

All 100% selected companies are reporting and disclosing about environmental initiatives taken by them in their annual reports. These companies are disclosing such information in different modes i.e. descriptive, numerical or diagrammatic presentation. The place of reporting about environmental projects undertaken by companies is also varying in nature.

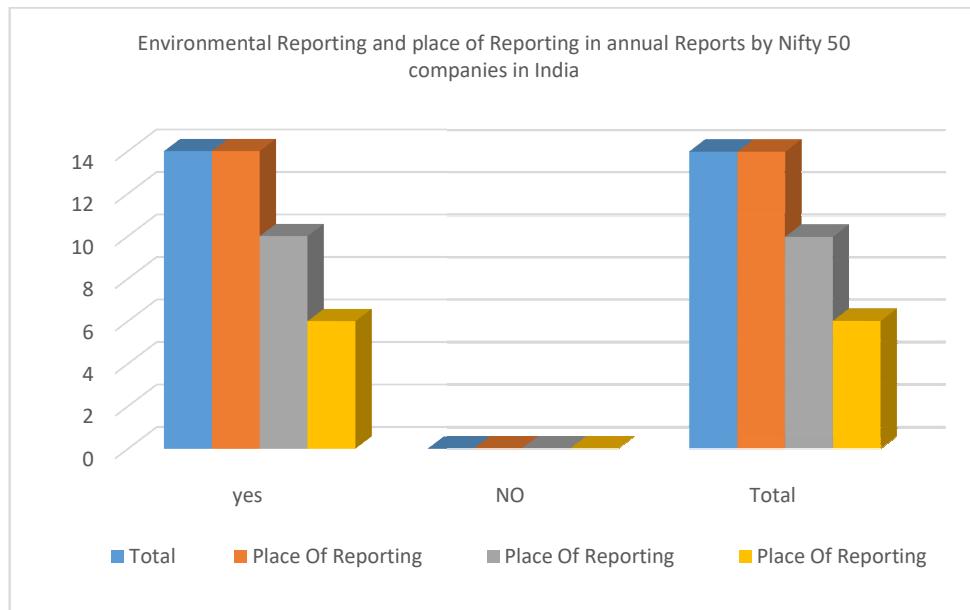


Diagram 1 (Source: Table 1)

5.1.b. Above diagram 1 shows 100% of the selected companies are disclosing environmental reporting in Director's Report whereas almost 70% reports in Financial Statements followed by 45% and above in Letter to Equity Shareholders.

5.1.c. As shown in Diagram 2, 93% of companies reporting are making environmental disclosure in a descriptive nature. Around 80% of such companies follow numerical methods and 50% companies follow Diagrammatic presentation for environmental disclosure.

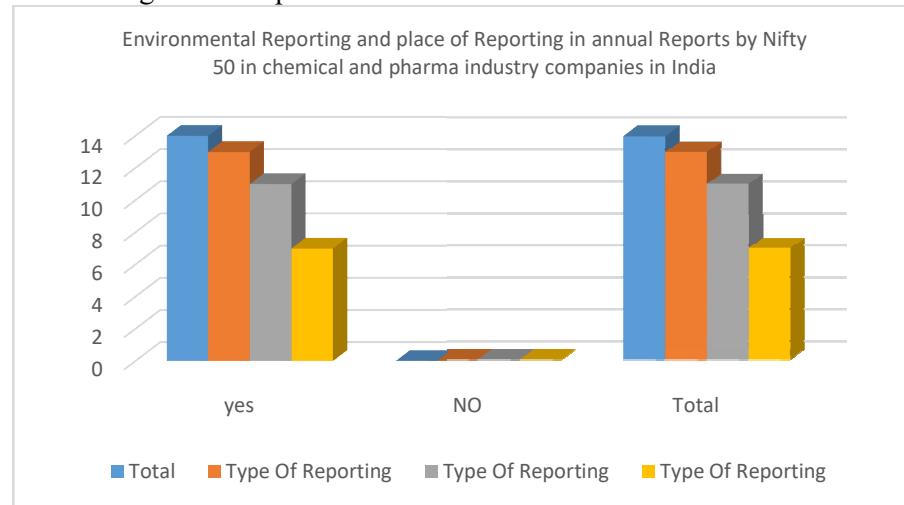


Diagram 2 (Source: Table 1)

5.2 Corporate policy and Environmental Protection:

Companies giving utmost importance to environmental issues mention the statements about their views regarding such issues in their corporate policy, objectives or Vision and Mission.

Company Name	Corporate Objective	Environmental Policy and Statement	Vision	Mission
Total No. of Companies	2	4	2	1
% of no. of companies	14	21	14	7

Table 2 - Source: Annual Reports of Companies (Annexure 3)

Table 2 and diagram 3 indicate how many selected companies are giving importance to environmental protection and sustainability in their policy statements.

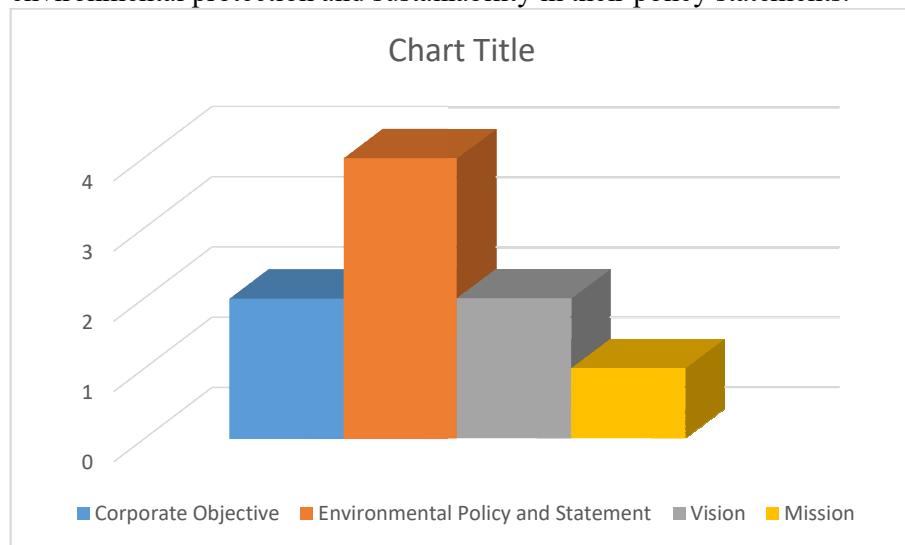


Diagram 3 (Source: Table 2)

It is found that only around 20% companies are incorporating separate environmental policy and statements whereas 14% companies are included such statements in their corporate objectives. Companies have also stated environmental initiatives in their vision and mission statements, which comes to 14 % and 7% respectively.

5.3 It is also observed that 9 out of 14 means 65% companies are showing financial details about the cost incurred for environmental initiatives or projects undertaken. Very few Companies are showing it exclusively whereas others are disclosing it under Miscellaneous or non-operating expenses. (Annexure 4)

5.4 35% Companies i.e. 5 out of 14 companies had been awarded with various awards for their contribution towards protection of environment and sustainability development. (Annexure 5)

5.5 Most of the companies have been undertaking energy conservation and water conservation projects to contribute towards environmental protection and sustainability development. Every company is contributing through at least one activity regarding environmental protection. Activities like Tree plantation, Waste to Fuel project, solarenergy plant, Rainwater harvesting structures etc. are initiated by all companies. (Annexure 6)

6. Conclusion:

As a new branch of Accounting, Environmental Accounting is becoming significant to provide the data related to environmental issues and initiatives taken to overcome it by business organisations to the stakeholders. It is playing an important role in Protection of Environment with economic development. Most of the companies which may create environmental crisis due to their operations and dealing with hazardous materials such as chemicals, gases etc. have started with disclosing environmental transactions either in descriptive or numerical mode. There are many companies started to report about cost involved in environmental projects undertaken. Slowly the awareness is being spread among businesses and their stakeholders. Though it is not compulsory in India, companies are reporting environmental disclosure voluntarily. At the same time, they all are not following full disclosure related to environmental reporting. There are various laws which are related to environmental issues in India but no separate law or standards issued regarding environmental accounting. Thus there is no control on environmental accounting and reporting practices.

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- Annual Report of selected companies for the Financial Year 2019-20.

8. Annexures: (Source: Data Analysis from Annual Reports of selected Companies.)

Annexure 1.List of Selected nifty 50 Companies, place, and type of reporting by them.

Sr. No	Name of Company	Whether Environmental Reporting done?		Place Of Reporting			Type Of Reporting		
		Director's Report	Financial Statements	Equity Shareholder's Letter	Descriptive	Numerical	Diagrammatic		
1	Asian Paints	Yes		Yes	Yes	Yes	Yes	Yes	Yes
2	Coal India Ltd.	Yes		Yes	Yes		Yes	Yes	Yes
3	Cipla	Yes		Yes	Yes	Yes	Yes	Yes	
4	Dr. Reddy Labs Ltd.	Yes		Yes	Yes		Yes	Yes	
5	Gas Authority of India Ltd.	Yes		Yes	Yes		Yes	Yes	Yes
6	Hindustan Petroleum	Yes		Yes	Yes			Yes	
7	Indian Oil	Yes		Yes	Yes		Yes	Yes	Yes
8	NTPC	Yes		Yes	Yes	Yes	Yes	Yes	Yes
9	ONGC	Yes		Yes	Yes	Yes	Yes	Yes	Yes
10	Sun Pharma	Yes		Yes			Yes		Yes
11	Torrent Pharma	Yes		Yes		Yes	Yes		
12	Unichem Labs Ltd.	Yes		Yes			Yes		
13	UPL	Yes		Yes			Yes		
14	Vedanta	Yes		Yes	Yes	Yes	Yes	Yes	Yes
15	Total no.	14	0	14	10	6	13	11	7

	of companies (out of 14)								
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Annexure 3

Company Name	Corporate Objective	Environmental Policy and Statement	Vision	Mission
Asian Paints				
Coal India Ltd.				YES
Cipla		YES		
Dr. Reddy Labs Ltd.		YES		
Gas Authority of India Ltd.			YES	
Hindustan Petroleum				
Indian Oil	YES		YES	
NTPC		YES		
ONGC				
Sun Pharma				
Torrent Pharma				
Unichem Labs Ltd.		yes		
UPL		Yes		
Vedanta	YES			
Total no. of companies (out of 14)	2	5	2	1

Annexure 4

Company Name	Financial	Numerical
Asian Paints		
Coal India Ltd.	Y	
Cipla	y	
Dr. Reddy Labs Ltd.	Y	
Gas Authority of India Ltd.	Y	
Hindustan Petroleum	Y	y
Indian Oil	Y	
NTPC	Y	y
ONGC	Y	
Sun Pharma		
Torrent Pharma		
Lupin	Y	
UPL		Y
Vedanta		
Total	9	3

Annexure 5 Awards Received by selected companies

Company Name	No. Of Awards	Name of Award
Asian Paints	2	Sword of Honour by British Safety Council, FICCI Sustainability 2017 Award
Coal India Ltd.	Nil	
Cipla	1	Energy Management System (ISO 50001)
Dr. Reddy Labs Ltd.	Nil	
Gas Authority of India Ltd.	Nil	
Hindustan Petroleum	3	“FICCI Chemical and Petrochemical Award” 2016 to VVSPL for ‘Most Environment-Friendly Company in Petrochemicals Sector’
Indian Oil	Nil	
NTPC	2	Maharatna
ONGC	Nil	
Sun Pharma	Nil	
Torrent Pharma	Nil	
Unichem Labs	Nil	
UPL	1	Maharatna
Vedanta	Nil	

Annexure 6 Various Environmental Projects / initiatives undertaken by selected companies

Company Name	Environmental Projects / initiatives undertaken
Asian Paints	Rainwater harvesting structures, Energy Conservation
Coal India Ltd.	Renewable Energy Conservation
Cipla	Environmental Sustainability, ecological balance and conservational of natural resources
Dr. Reddy Labs Ltd.	Renewable Energy Conservation
Gas Authority of India Ltd.	Installation of roof-top solar plant at Pata, Energy Conservation
Hindustan Petroleum	Pradhan Mantri Ujjwala Yojana (LPG Connections to BPL families), emission reduction, energy efficiency
Indian Oil	MoP&NG LPG Scheme for BPL Families (Cleaner fuel / cleaner environment in kitchens) Swachh Iconic Place project, Waste to Fuel project, Energy Conservation
NTPC	Energy Conservation, Tree plantation, Waste to Fuel project, Solar energy plant, Water Conservation
ONGC	Waste Management, Beautification of parks
Sun Pharma	tree plantation

Torrent Pharma	Waste Management
Unichem Labs	Energy Conservation
UPL	Water Conservation, Tree plantation
Vedanta	GHG reduction, Energy Conservation

NATIONAL EDUCATION POLICY 2020: AN ANALYSIS OF THE CHALLENGES AHEAD

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Abstract

Education plays a vital role in shaping the future of a society. The level and standard of education determine the economic progress and substantial development of a country. Different countries around the world adopt different education systems on the basis of traditions and culture; and thus adopt different stages during their life cycle at school and college education levels to make it effective. The Indian education system has since long suffered various inadequacies due to a variety of reasons. The Government of India recently announced a new set of policies for the education system namely the National Education Policy 2020 replacing the existing National Education Policy of 1986 in order to revolutionise the entire system.

The act is considered to a landmark change by the Indian Government, as they have replaced the 34-year-old National Policy on Education with the New Education Policy of 2020. The NEP, which has been approved by the union cabinet, has made revolutionary reforms in the Indian education archetype. Some of the key highlights of the policy include a formalized pre-schooling to be started at the age of three, school education for children in their respective mother tongue/regional language, state school standard monitoring authority to be set up, gross enrolment rate in secondary schools to be increased to 100 percent by 2030, proportion of GDP to be spent on the education sector to increase to 6 percent (current being 3.8 percent), 4 years multidisciplinary undergraduate and affiliation system to be removed over a period of fifteen years.

This paper attempts to analyse the above mentioned reform measures proposed in the National Education Policy 2020 and compare them with the currently adopted system. Further, the paper analyses the changes required in the current education system and attempts to find out if the new policy meets the need of the hour. At the same time the study focuses on some of the challenges in the way of implementation of the new education policy.

Keywords: *Higher education, National education policy 2020, NEP-2020, Overview & analysis, Implementation strategies, Predicted implications, Predicted impediments& merits.*

I. INTRODUCTION

2020 has been the year marked with immense uncertainties. History shall remember this year as a turning point which brought the world to a standstill. One after the other unprecedented events became a regular phenomenon for this year. However, a change which was not just anticipated but also needed since long is reforms in the education sector of our country. The Union Cabinet of India approved and announced National Education Policy 2020 (NEP 2020) on July 29th 2020 as a step towards revamping the education system in the country. The new policy replaces the previous National Education Policy of 1986.

While the NEP 2020 is viewed by scholars as a transformation of India to *Bharat*, it can at the same time rightly be said that the goals of substantial development are borrowed from the United States of America. The National Education Policy 2020 emphasises on promotion of creativity and innovation and strives to avoid the regimental learning system. Some of the key takeaways of the policy include - instating a single regulator for higher education institutions, the scheme of multiple entry and exit options in degree courses, the low stakes board exams, and common entrance exams for universities. Each of these reforms reflects on the fact that how India has evolved as an economy, and how we are prepared to be recognized as a force to reckon with. The Education system of a country is

a true indicator of its economic strength, and the reforms in the education system will certainly help India new heights towards its economic success.

However, the important question to ponder over is that whether the NEP 2020 caters to actual need of the country's education system? Is the policy well equipped and free from loopholes to bring about the required changes in the system? To get an answer to these one needs to analyse as to what are the requirements of the Indian education system.

II. IMMEDIATE CHANGES NEEDED IN THE INDIAN EDUCATION SYSTEM

There is no iota of doubt to the fact that Government of India has aims to reform the existing education model. There are still several concerns to be taken care of. Education is the most crucial factor in shaping an individual's life; still the Indian education is faced with some serious issues. Some of the immediate changes needed in the system can be enlisted as follows:

1. Give up the concept of rote learning

With advancement in technology and new techniques of teaching and learning, education sector in India has travelled a long way. However, the society has still not been able to move away from the concept of rote learning. Some of the experts may argue that the IB schools are changing the education system at their level, still the fact cannot be denied that the population that goes to IB schools is very limited in nature. Not everyone can afford the education system that they offer. Hence, the government needs to take the lead in their hands and eradicate rote learning from the schools at all the levels. The schools must be encouraged to introduce conceptual learning which avoids students to mug up what they are being taught. While this will help students to understand the concepts better, they will also be able to retain and apply them better.

2. Reforms in the evaluation system

Marks still continue to play the most important card in deciding the future of children and this often comes down upon students as a burdening factor. The pressure of marks often makes students underperform. Instead of focusing the evaluation on a three-hour exam, the focus of evaluation should be classroom participation by a student, projects, communication and leadership skills and extra-curricular activities so that the students are able to give their best in the practical sense.

3. Equal respect to all the subjects

Indian education system continues to be hierarchical in nature wherein the science stream tops the stream hierarchy. Students are pushed to become a machine which only goes for high-profile subjects and streams like languages, literature, communication and arts are looked down upon being considered as low-profile. Students should rather be pushed to pursue the subject of their interest in accordance with their capabilities and aptitudes rather than creating a differentiation between subjects.

4. Better training of educators

Teachers play the most vital role in schools education. Therefore, they should have the best training themselves first. Nevertheless, teachers are ones who shape the nation's future generation and thus build the nation further. Proper teaching skills are as important as good parenting skills are. Thus, they should be imparted their training in a way that they can act as parents to the children away from their homes. While teaching, they should create a congenial and home-like atmosphere where students can feel the empathy and love in the classroom and which can then be reflected in their behaviors.

5. Introduction of technology

The society now is moving towards the era of fourth industrial revolution. It's rather a state of renaissance in technology, hence, technology and education system cannot be kept apart. Students must be taught about technology right from the early years of their education so that it does not come like an alien thing in their later times. Indian schools must embrace technology and education with an open heart and propagate the same to the students as it is there, where their future lies.

6. Personalize education

Indian education needs to realize that the absorption power of every student cannot be the same. Hence, the teaching method also cannot remain the same for every student. Some students have

faster learning pace while some are slow. Teachers must have a keen eye on observing each of their students. While it is not humanly possible for a single teacher to pay attention to every student, schools must start looking at the use of technologies like artificial intelligence and chat bots that can become the helping hand to the teachers as well as students.

7. Teach them the purpose of education

The Indian education system still carries the ghost of colonial legacy. The new generation should be educated with emphasis on not just becoming big or rich person rather the focus should be on humanism. Students must also be taught in-depth about the morals of life and inculcated with humanistic values. They should be taught that life is much beyond money and success is not measured merely in terms of money. Labour worship and now work being considered as low of menial should be the key stress of the system so that the economy as a whole flourishes. It is high time that the country starts taking education above the mediocre level which has been engrained with and perceive education from the holistic approach.

III. HIGHLIGHTS OF INDIAN NATIONAL EDUCATION POLICY 2020

The National Education Policy 2020 claims to overcome all the shortcomings in the current education system. Some of its key features can be seen as follows:

1. Schooling to begin from the age of 3 years:

The revised policy expands the age group of mandatory schooling from 6-14 years to 3-18 years. This new system will include 12 years of schooling with three years of Anganwadi/ pre-schooling. The existing 10+2 structure of school curriculum will be replaced by a 5+3+3+4 curricular structure corresponding to ages 3-8, 8-11, 11-14, and 14-18 years respectively.

2. Mother tongue to be instated as medium of instruction:

The National education policy 2020 has directed focus on students' mother tongue as the medium of instruction even as it sticks to the 'three language formula' but also mandates that no language would be imposed on anyone. The policy indicates that wherever it is possible, the medium of instruction till at least Grade 5, but preferably up till Grade 8 and beyond, will be the mother tongue/local language/ regional language, both public and private schools are to follow this norm.

3. A Single Overarching Body of Higher Education:

The Higher Education Commission of India (HECI) will now set up a single overarching umbrella body for entire higher education, excluding medical and legal education. The same set of norms for regulation, accreditation, and academic standards, to be applied to both public and private higher education institutions. The Government aims to phase out the affiliation of colleges in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges.

4. Separation between subject streams to be blurred:

As per NEP 2020, the rigid separations between subjects' stream will be done away with. Students will have the liberty to choose subjects they would like to study across streams. Vocational education to be introduced in schools from Class 6 and will include internships as well.

5. The Return of the FYUP Programme and No More Dropouts:

The duration of the undergraduate degree will be either 3 or 4 years. Students will also be given multiple exit options within this period. Colleges will have to grant a certificate to a student if they would like to leave after completing 1 year in a discipline or field including vocational and professional areas, a diploma after 2 years of study, or a Bachelor's degree after completing a three-year programme. An Academic Bank of Credit will be established by the Government for digitally storing academic credits earned from different Higher Educational Institutions so that these can be transferred and counted towards the final degree earned.

The National Education Policy 2020 envisages an India centered education system by considering its tradition, culture, values and ethos to contribute directly to transform the country into an equitable, sustainable, and vibrant knowledge society. By drawing inputs from its vast and long historical heritage and considering the contributions from many scholars to the world in diverse fields

such as mathematics, astronomy, metallurgy, medical science and surgery, civil engineering and architecture, shipbuilding and navigation, yoga, fine arts, chess, etc., the entire Indian education system is founded and built. The objective of the currently announced NEP 2020 is to provide a multidisciplinary and interdisciplinary liberal education to every aspirant to raise the current gross enrolment ratio (GER) to 50% by 2035. The various educational lifecycle stages announced in the policy are listed in table 1 along with their special features.

Table 1: Various educational stages to be implemented as per NEP 2020

Sl. No.	Educational life- cycle Stage	Features
1	Foundation Stage	Five years Foundational Stage provides basic education which is flexible, multilevel, play-based, activity-based, and discovery-based learning. Using time tested Indian traditions and cultures; this stage is continuously improved by research and innovation for the cognitive and emotional stimulation of children.
2	Preparatory Stage	Three years Preparatory stage consists of building on the play-, discovery-, and activity-based learning. In addition to it, this stage gradually introduces formal classroom learning with textbooks. The focus is to expose different subjects to the students and prepare them to delve deeper into insights.
3	Middle school education Stage	Three years of Middle school education focus on more abstract concepts in each subject like sciences, mathematics, arts, social sciences, and humanities. Experiential learning is the method to be adopted in specialised subjects with subject teachers. Students are exposed to the semester system and yearly two class level examinations will be conducted.
4	Secondary education Stage	Four years of Secondary school education is designed to provide multidisciplinary subjects including Liberal Arts education. This stage will be built on the subject-oriented pedagogical and curricular style with greater depth, greater flexibility, greater critical thinking, and attention to life aspirations, Students are exposed to the semester system and will study 5 to 6 subjects in each semester. There will be Board exams at the end of 10th and 12th standards.
5	Under-graduation Education Stage	The Undergraduate degrees in every subject will be of either three- or four-year duration with multiple exit options including a certificate after passing first year, a diploma after passing second year, or a Bachelor's degree after passing third year. The four years undergraduate degree programme is preferred with major, minors and research projects.
6	Post-graduation Education Stage	The Master's degree – a one-year for four years bachelor degree students, a two-year degree for three years bachelor degree students, and an integrated five-year degree with a focus on high quality research in the final year. The Masters' degree will consist of a strong research component to strengthen competence in the professional area and to prepare students for a research degree.
7	Research	Research stage consists of pursuing high quality research leading

Stage	to a Ph.D. in any core subject, multidisciplinary subject, or interdisciplinary subject for a minimum period of three to four years for full-time and part-time study respectively. During Ph.D. they should undergo 8-credit coursework in teaching/ education/ pedagogy related to their chosen Ph.D. subject. The earlier one-year MPhil programme is discontinued.
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IV. COMPARISON OF NEW NEP 2020 WITH EXISTING NEP

The 1986 National Education policy focused on the modernization of the education sector using information technology. More attention was given to restructuring teacher education, early childhood care, women's empowerment, and adult literacy. It also proposed that the autonomy of universities and colleges will improve the quality of education services. But NEP 1986 failed to improve the quality of education in terms of creating graduates with employability skills and failed to generate research output in terms of patents and scholarly publications. To compensate for the failure of previous NEPs, NEP 2020 has proposals of a liberal education to support multidisciplinary and cross-disciplinary education and research in under-graduation and post graduation levels. Table 2 compares the improvements of some of the features of National Education policy 2020 with its previous National Education policy 1986.

Table 2: Comparison of National Education policy 1986 & National Education policy 2020

Sl. No.	NEP 1986	NEP 2020
1	The role of education is the all-round development of students.	Objective is to provide Multidisciplinary & interdisciplinary liberal education.
2	Common education structure of 10 (5+3+2)+2+3+2 is followed.	Common education structure of 5+3+3+4+4+1 is suggested.
3	The first preliminary education starts at 6 th year of a child as Primary school level.	The first preliminary education starts at 3rd year of a child as a Foundation stage.
4	Two years higher secondary level and two years pre-university levels were separately considered and both had board exams.	Four years Secondary education stage is designated by clubbing Two years higher secondary level and two years pre-university levels. Exams are suggested at the school level except for Board level exams at 10th and 12th.
5	Two years of higher secondary level, students choose specialization areas and subjects like Science subjects or Commerce subjects or Arts subjects	Four years Secondary education stage contains common subjects and elective subjects. Choice is based on liberal education policy.
6	All undergraduate and postgraduate admissions are based on the entrance exam conducted at the college level or state level except NITs & Medical Colleges.	All undergraduate and postgraduate admissions of public HEIs are based on National Testing Agency (NTA) scores conducted by the national level.
7	Undergraduate programmes	Undergraduate programmes are of four years with

	are for three to four years.	a provision to exit after one year with a diploma, after two years with an advanced diploma, after three years with a pass degree, and after four years with project based degree.
8	Postgraduate education is of two years with specialization focus.	Postgraduate education is of one to two years with more specialization & research focus.
9	Most of the Colleges in HEIs are affiliated to state universities and had no autonomy in curriculum and evaluation.	All HEIs including colleges are autonomous and there will be no affiliated colleges to state universities and autonomy in deciding curriculum and evaluation.
10	Examination is independent of teaching. All examination and evaluation is affiliating university controlled. There is a little role of teaching faculty members in evaluating the students directly.	Examination is a part of a continuous evaluation system. Faculty members who are teaching a subject are responsible for evaluation and examinations are departmental affairs.
11	Teaching-learning method mainly focuses on classroom training and fieldwork.	Teaching-learning method mainly focuses on classroom training, fieldwork, and research projects.
12	In the higher education system, the expected student-faculty ratio is 20:1.	In higher education system, the expected student-faculty ratio is 30:1.
13	In HEIs faculty members are considered as facilitators of educating students to make them competent.	In HEIs faculty members are considered as collaborators and guide of educating students to make them as innovators & creative thinkers.
14	Students have the freedom to choose subjects across their area of study.	Students have the freedom to choose subjects outside and across their area of study.
15	A one year research degree leading to M.Phil. in any subject is offered to provide preliminary experience to do research.	A one year research degree leading to M.Phil. in any subject is discontinued due to the reason that students are exposed to preliminary research in their undergraduate and post-graduate courses.
16	Pass in NET/SLET along with respective Masters degrees as an essential qualification to become an Assistant professor in any	Ph.D. degree is compulsory along with pass in NET/SLET as an essential qualification to become an Assistant professor in any three types of HEIs.

	three types of HEIs.	
17	The support of research funds through UGC or any other agencies is mainly for Universities than Colleges.	The support of research funds through the National Research Foundation and any other agencies will be equally distributed to all three types of HEIs based on a fair evaluation of the research proposal.
18	HEIs accreditation is compulsory for availing funds and government facilities only.	HEIs accreditation is compulsory for functioning and offering the degree. Compulsory accreditation is required once for every five years for continuous operation.
19	The graded accreditation model is followed.	Binary accreditation model will be followed which is yes or no system instead of various grades for institution.
20	Faculty performance & accountability is linked to promotion but not linked to compensation.	Faculty performance & accountability is linked to promotion and compensation.
21	Choice based credit system.	Liberal education based on STEAM & Competency based credit system.
22	Only accredited & permitted Universities are allowed to offer Online Distance Learning (ODL) education.	All 3 types of HEIs which are accredited to offer ODL are permitted to offer ODL.
23	Social engagement for every student as a part of the programme curriculum is optional.	Social engagement for each student is compulsory and should be equal to at least one full semester across the entire duration of the programme.
24	Four years of Bachelor degree holders are not eligible for direct admission to Ph.D. programme unless they acquire Masters degree.	Four years of Bachelor degree holders with proven research performance during the fourth year can directly admit to Ph.D. programme without Masters degree in both types of HEIs.
25	Lateral entry is offered in some programmes. But no Multiple entries and Multiple exit facilities are available in under graduation including medical and paramedical courses.	Multiple entries and Multiple exit facilities are available in under graduation including medical and paramedical courses.
26	Undergraduate programmes	All undergraduate programmes are of 4 years with,

	of 3 years to 4 years depending on the type of the programme.	in some cases, exit at 3 years is possible with a degree certificate.
27	Currently, teacher's education comprises of two years B.Ed. programme after graduation. So secondary school teachers have to spend 5 years after their higher secondary education to teach at higher the secondary level.	The proposed teacher's education comprises of four years integrated B.Ed. This degree is a compulsory requirement to become faculty in School education Stages.
28	Suggestion for improving physical library.	Suggestion for improving online library facility including books & journals memberships including online books &online journals.
29	Both single discipline and multidiscipline colleges are promoted.	Only multidisciplinary colleges and universities are promoted. All single discipline colleges have to convert themselves autonomous multidisciplinary colleges or will be closed and converted into monuments or public libraries.
30	No foreign universities are allowed to function directly in India.	About 100 top ranked foreign universities will be allowed to function in India to compete with Indian universities.
31	The coursework of Ph.D. programme comprises of research methodology and core subject related study.	The coursework of Ph.D. programme comprises of research methodology, Teaching & curriculum development aspects along with core subject related study.
32	No systematic and authentic funding agencies for University and College research.	National Research Foundation (NRF) will be formed to fund for competitive and innovative research proposals of all types and across all disciplines.

V. MAJOR CHALLENGES IN THE IMPLANTATION OF NEP 2020

1. Opening universities every week is a herculean task

India today has around 1,000 universities across the country. Doubling the Gross Enrolment Ratio in higher education by 2035 which is one of the stated goals of the policy will mean that at least one new university must be opened every week, for the next 15 years. Opening one University every week on an ongoing basis is an undoubtedly massive challenge.

2. The numbers are no less daunting in reforms to our school system

The National Education Policy 2020 intends to bring 2 crore children who are currently not in schools, back into the school system. Accomplishing this over 15 years requires the setting up of around 50 schools every week. This certainly requires a substantial amount of investment in classrooms and campuses. But it also means appointing at least 50 headmasters every single week,

and at least 200-300 teachers every single week on an ongoing basis. Given that many teaching positions are going unfilled even in existing schools, this becomes a particularly interesting challenge.

3. Funding is a big challenge in the Covid era

From a funding standpoint, this is not a challenge for the faint-hearted. The National Education Policy 2020 envisages an increase in education spending from 4.6% to 6% of GDP, which amounts to around INR 2.5 lakh crores per year. This money will be well-spent building schools and colleges across the country, appointing teachers and professors, and for operational expenses such as providing free breakfast to school children. What makes things tricky is that this policy comes into being at a time when the economy has been battered by Covid-19 related lockdowns, government tax collections are abysmally low, and the fiscal deficit was high even pre-Covid.

4. Current focus on healthcare and economic recovery to lower the execution speed

Economists have been calling for large stimulus packages amounting to double-digit percentages of GDP, despite the strain on the exchequer. While the National Education Policy is a 20-year journey, a concern is that it may lead the economy to a stumbling start over the next 2-3 years, when government and budgetary priorities are claimed by the more urgent but equally important needs of healthcare and economic recovery.

5. Need to create a large pool of trained teachers

In school education, the policy envisages a sweeping structural re-design of the curriculum a very welcome step. But in order to deliver this curriculum effectively, well trained teachers are required who understand the pedagogical needs. Many of the curricular changes require substantial mindset shifts on the part of teachers, as well as parents.

6. Inter-disciplinary higher education demands for a cultural shift

In higher education, the National Education Policy 2020's focus on inter-disciplinary learning is a very welcome step. Universities, especially in India, have for decades been very siloed and departmentalized. This culture of disciplinary mooring runs very deep among scholars and professors alike, with few exceptions. For the entire higher education system to be composed of "exceptions" professors who are curious about, respect and lean in to other disciplines while being experts in their own is no easy task. This requires a cultural shift in the entire higher education ecosystem, over the next 15-20 years.

VI. CONCLUSION

Higher education is an important aspect in deciding the economy, social status, technology adoption, and healthy human behaviour in every country. Improving gross enrolment ratio (GER) to include every citizen of the country in higher education offerings is the responsibility of the education department of the country government. National Education Policy of India 2020 is marching towards achieving such objective by making innovative policies to improve the quality, attractiveness, affordability, and increasing the supply by opening up the higher education for the private sector and at the same time with strict controls to maintain quality in every higher education institution. By encouraging merit-based admissions with free-ships& scholarships, merit & research based continuous performers as faculty members, and merit based proven leaders in regulating bodies, and strict monitoring of quality through biennial accreditation based on self-declaration of progress through technology-based monitoring, NEP-2020 is expected to fulfill its objectives by 2030. All higher education institutions with current nomenclature of affiliated colleges will expand as multi-disciplinary autonomous colleges with degree giving power in their name or becomes constituent colleges of their affiliated universities. An impartial agency National Research Foundation will fund for innovative projects in priority research areas of basic sciences, applied sciences, and social sciences & humanities. HE system will transform itself as student centric with the freedom to choose core and allied subjects within a discipline and across disciplines. Faculty members also get autonomy to choose curriculum, methodology, pedagogy and evaluation models

within the given policy framework. These transformations will start from the academic year 2021-22 and will continue until the year 2030 where the first level of transformation is expected to visible. Hence, the Indian higher education system is moving from teacher centric to student centric, information centric to knowledge centric, marks centric to skills centric, examination centric to experimental centric, learning centric to research centric, and choice centric to competency centric.

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COMPARATIVE USAGE OF PAYMENTS METHODS AMONG THE YOUTH IN MUMBAI POST DEMONETIZATION

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Abstract

Demonetisation is an act of cancelling the legal tender status of a currency unit in circulation. On 8th November 2016 Prime Minister Narendra Modi announced the demonetization of existing notes of Rs 500 and Rs 1000 during a televised address. PM announced that the notes of Rs 500 and Rs 1000 "will not be legal tender from midnight tonight" and these will be "just worthless pieces of paper". The severe cash crunch in the economy after demonetisation has forced people to use the available digital payment options. The cashless transactions in the country surged to high level after demonetisation. Now the business environment is totally changed because of the information technology advancement, it also adopted IT techniques and its application for doing their business. Now online purchasing and sales through internet are very common. "Business activities conducted using E-commerce is an activity and process by which online sales, purchase, information collection and make and collect payment for business purpose are done. The purpose of this paper is to theoretically as well as empirically assess the impact and effect of demonetisation on youth in Mumbai post demonetisation. With more and more tech-savvy youth opting to start their own business, digital payments/cashless transactions are becoming even more common in the country. This study has focussed on examining the impact of the demonetization on the youth and their acceptance of cashless economy.

Key words: Demonetisation, cashless transaction, digital payments, tech -savvy youth.

Introduction

A cashless economy is one in which all the transactions are done using cards or digital means. The circulation of physical currency is minimal. A Cashless Society is an economic state where financial transactions are conducted not with money in the form of physical banknotes or coins, but rather through the transfer of digital information (usually an electronic representation of money) between the transacting parties.

The electronic channels such as debit/credit cards, Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement (RTGS), is used for transactions. The circulation of physical currency is minimum. The Indian economy is mostly driven by the use of cash. Electronic based transaction is trying to speed up the development and modernization of India's payment system.

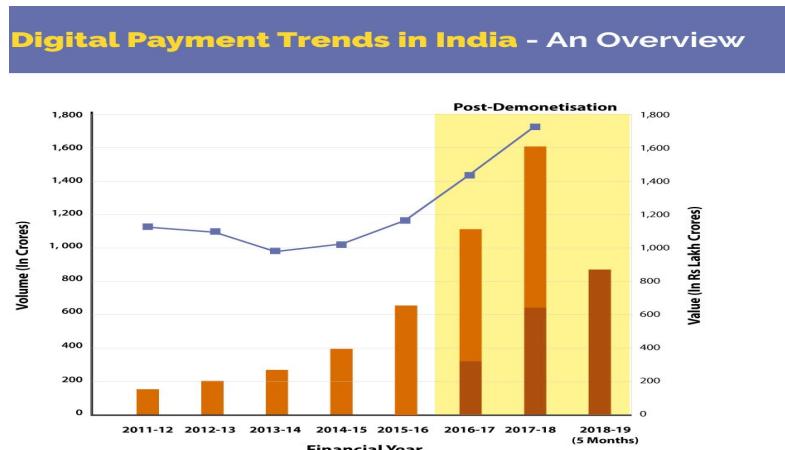
Best cashless payment options in India

There are various cashless payment options available in India. The most used methods of payment are:

- 1) E Wallets – After demonetisation, use of e-wallets has been executed at a very large-scale. These e-wallets allow users to make payments using their mobile number or by scanning a QR code which takes place very fast. A wallet like Paytm is downloaded for transaction. E-wallet can be used for purchase of merchandise ranging from grocery to airline tickets. The foremost common example of E-wallet is PayPal. Apart from PayPal, Payoneer, Transferwise, Skrill, and PayZa is also used. It is a simple cashless method. A study by Boston Consulting Group and Google in July noted that wallet users have already surpassed the number of mobile banking users and are three times the number of credit card users.
- 2) Mobile Wallets are simple to use as one has to load the cash in his wallet via IMPS and use it on the move. A few samples of the mobile wallets area are Paytm, PayUmoney, Oxigen, Lime, MobiKwik etc.

- 3) UPI –UPI also known as Unified Payments Interface is another convenient way to go cashless. Using UPI , people can transact using their smartphone. A Smartphone and a Bank Account are the two necessary things for UPI.
- 4) Plastic Money – Plastic Money means debit cards and credit cards that are used at ATMs for cash withdrawal and POS machines while shopping. A debit or credit cards makes a person less dependent on cash.
- 5) Net Banking – Net Banking is another convenient way to get cashless transactions done. A bank account with e- banking facility enabled on it is essential. Funds can be transferred to others account from home so there is no need of going to the bank to get transfers done. This is a very appropriate way to go cashless in India as well.
- 6) Aadhaar Card – Aadhaar Card enabled payment system allows a person to pay using his Aadhaar card if it is linked to his bank account. Once Aadhaar card is linked to a bank, one can make payments using finger prints. Aadhaar Enabled Payment System (AEPS) is one of the best cashless payment methods. AEPS can be used in order to perform transaction like Aadhar-to-Aadhar fund transfer, Cash withdrawal, Cash deposit etc.
- 7) Unstructured Supplementary Service Data is a mobile banking service. From any mobile phone, one can dial *99# and use this service. Almost all banks including SBI, ICICI, BOB, Axis Bank and PNB supports the USSD payment option.

Demonetisation has given a significant boost to digital payments as seen in the graph below.



The following points are to be noted:

- It was the financial year 2016-17 in which the decision of demonetisation was announced and the same year noted the growth of around 70% in the number of digital payments (volume) as compared to the previous year.
- If the growth is seen from the perspective of a year before and after the demonetisation, then, there is a growth of 147% in the number of digital payments (volume) due to the demonetisation, taking the total digital payments by value to the whopping Rs. 1684 lakh crores in the year 2017-18.
- Importantly, the momentum of increase in the digital payments generated due to demonetisation has sustained even after a year. In the 5 months period of 2018-19, the total volume of digital payments has already surpassed more than half of the total volume of digital payments in the entire year of 2017-18. This completely falsifies the criticism that ‘the surge in the digital payments was temporary which mainly occurred due to the sudden jolt caused by demonetisation and people are or will move back to the cash system’.

Literature Review

Preeti Garg and Manvi Panchal (2016), Study on Introduction of Cashless Economy in India 2016: Benefits & Challenges. It studied the views of people on introduction of cashless economy in India. The study was conducted in Delhi region & data was collected with the help of structured questionnaire and analyzed using simple percentage method. Responses from respondents shows that cashless economy will help in curbing black money, counterfeits/ fake currency, fighting against terrorism, reduce cash related robbery, helps in improving economic growth of our country. Manpreet Kaur(2017) 'Demonetization: impact on cashless payment system' asserts that its impact is felt by every Indian citizen. Demonetization affects the economy through the liquidity side. Demonetizing is a progressive shift to a cashless economy hence there is a greater focus on electronic transactions. Rising use of credit/ debit cards, net banking and other online payment mechanisms will be another positive effect of demonetization, as these would not only lower transaction costs but some of these could help earn some fee income as well.

R. Darshan, M. N. (2018) in their paper "A Study on E-Banking in India before and after demonetization" studied the effect of demonetization on E-Banking in India. They examined the knowledge of rural and urban area citizens about electronic modes of transaction usage before and after Demonetization. Chi-square test was used to find out how the urban people differ from rural people, in their awareness level and the usage level of e-banking services. Their study was based on both Primary and Secondary data collected from various websites. They also said that, by 2020 the whole system of money transaction would change into digitalisation. And at the end of their findings and research, they mentioned that, after Demonetization there has been increase in the ownership in number of bank accounts and gradually even rural area is interested in storing their savings in digital payment modes. Radha Gupta (2017) posits in her research that Demonetization leads to technology progression. The author discusses that by following cashless payment people are benefitted by not visiting bank often for the exchange of cash. Cashless transactions are done using internet and mobile phone. Cashless payments are made by using E-wallets, Debit or Credit card, RTGS, AEPS and many more available services. She concluded that to be successful in adopting the new technology government should take necessary steps in educating people to use technology and get benefitted.

Based on the above review the gap of the research is there is a lack of research on customer trust towards cashless transactions among youth. Hence based on the above gap following objectives are framed.

Objectives:

- 1)To study the position of cash transactions and cashless payments among youth.
- 2) To examine the payment habits among youth after demonetisation.
- 2) To assess the customer trust and confidence in cashless transactions.

Hypothesis

H0: There is no significant difference between level of trust and confidence of youth in their cashless transactions.

H1: There is significant difference between level of trust and confidence of youth in their cashless transactions.

Research Methodology

This study is of descriptive nature. The study has been conducted to understand the level of cashless transactions and also to highlight the use of different payment systems among the youth in Mumbai. This article examines impact of demonetisation among the youth and payment methods which are popular amongst them. Primary data are collected by using convenience and Judgement sampling under non-random sampling technique. The population of study is youth in Mumbai. The sample consists of one hundred and sixty- five respondents. Questionnaire is used

to collect primary data from the respondents. The period of the study is from September 2020 to January 2021. Secondary data, which is collected from different secondary resources like newspaper, news websites, RBI report, magazines, research papers, Journals, other publications and some other literature review. Books have also been referred for theoretical information on the topic as required. Simple pie charts and percentage has been used for analysis and Chi - square is used to test hypothesis.

Data Analysis& Interpretation:

The use of simple percentage and descriptive statistics were employed for purpose of data analysis and presentation. Data instrument was the questionnaire. The chi-square (X²) test which is a two-tailed test that helps to indicate whether or not a set of observed frequencies differ significantly from the corresponding set of expected frequencies and not possibly the direction in which they differ is employed to test the hypotheses.

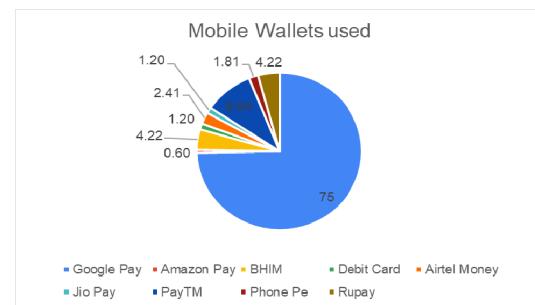
➤ **Gender of respondents**

51.3% of the population are male students and 48.7% are female. Majority of the respondents use internet banking.

- **Use of Internet:** Majority of the students have are comfortable using internet banking. As they are from Mumbai so they are tech savvy.

➤ **Mobile Wallet used**

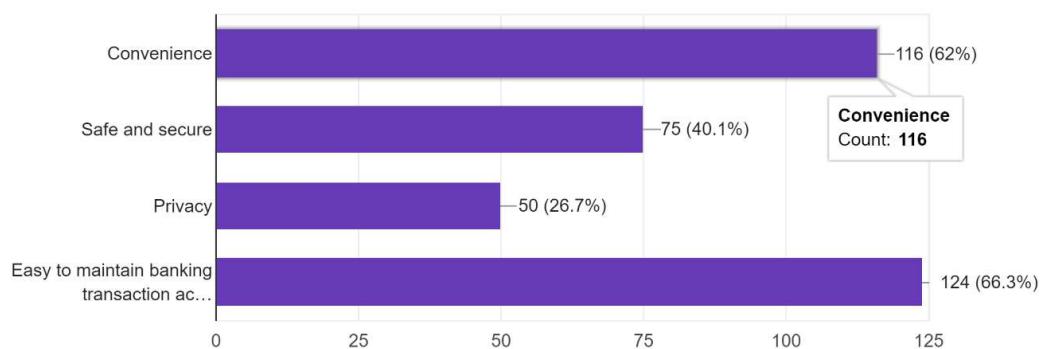
Majority of respondents that is 75 % are using Google Pay for transactions. The next popular wallet is PayTm which is being used for payments followed by RuPay and Bhim. So these mobile wallets are mostly used by the youth for cashless transaction.



(Source: Primary Data)

➤ **Reasons for choosing Online Banking**

Majority of students find cashless transaction as convenient and easy to maintain banking transactions. They feel Internet banking makes life easier. Respondents also feel online banking is safe and secure. Privacy is also an issue for preference of online banking.



(Source: Primary data)

Majority of students find cashless transaction as convenient and easy to maintain banking transactions. They feel Internet banking makes life easier. Respondents also feel online banking is safe and secure. Privacy is also an issue for preference of online banking.

➤ **Usage of Different Payment Method**

Method of Payment	Daily	Weekly	Monthly	Never
cash	70.3	18.8	9.7	1.2
Credit/debit	9.1	38.3	46.1	6.1
Mobile	24.8	24.2	29.7	21.2
Cheque	0.6	0.6	51.5	47.3
Internet Banking	10.3	29.1	48.5	2.1

As per the above data respondents use cash on daily basis. Credit/debit card is used weekly. Mobile wallet is regularly used for transaction. Cheque is used rarely that is monthly and internet banking is used monthly as well.

Descriptive Statistics :how concerned are you about the following?

	N	Minimum	Maximum	Mean	Std. Deviation
1) concerned about Security	165	1	5	3.01	1.230
2) Conducting personal financial transactions online	165	1	5	2.87	1.207
3) trust in the security of online banking services	165	1	5	3.04	1.093
Valid N (listwise)	165				

Hypothesis Testing:

Chi-square has been used to test the hypothesis and the Level of Significance: 0.05. The trust and confidence of youth in their cashless transactions are tested with reference to three views such as Security Issues, Conducting personal financial transactions and Terms of security.

Chi-Square Tests- Security Issues

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.829	4	.003
Likelihood Ratio	16.224	4	.003
Linear-by-Linear Association	3.135	1	.077
N of Valid Cases	165		

The p-value of the Chi-square test is less than 0.05. So the null hypothesis is rejected and alternative is accepted. Hence, there is a difference among youth regarding trust and confidence in terms of security

Chi-Square Tests - Conducting personal financial transactions

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.757	4	.218
Likelihood Ratio	5.834	4	.212
Linear-by-Linear Association	.450	1	.502
N of Valid Cases	165		

The p-value of the Chi-square test is more than 0.05. So the null hypothesis is accepted. Hence, there is no difference among youth regarding Conducting personal financial transactions.

Chi-Square Tests-Terms of security

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.938 ^a	4	.414
Likelihood Ratio	3.987	4	.408
Linear-by-Linear Association	3.404	1	.065
N of Valid Cases	165		

The p-value of the Chi-square test is more than 0.05. So the null hypothesis is accepted. Hence,

there is a difference among youth regarding trust and confidence in terms of security of online banking services.

The P value under Pearson Chi-Square for the factor security is 0.03, conducting online personal finance transaction is 0.218 and 0.414 for security of online banking services. Hence the null hypothesis is partially accepted and partially rejected. Students are comfortable with cash but they are also ready to accept cashless transactions.

Findings:

- Majority of the respondents are male students.
- Most of the respondents are using internet banking.
- Google Pay is the most used mobile wallet followed by PayTm and RuPay.
- Debit cards and cash is the most favored payment method and students are comfortable with net banking also. Cheques are used rarely.
- Majority of students find cashless transaction as convenient and easy to maintain banking transactions.
- Respondents feel Internet banking makes life easier.
- Reasons for choosing online banking are convenience and ease of maintaining banking transaction activity
- Majority of the students are slightly worried about security issues, conducting personal financial transactions online and they do not trust online banking too much.
- Majority of the respondents have not been victims of email scams. Some faced Phishing scam that is Fraudulent e-mail pretending to be from a bank (or other legitimate business) and asking to log in or give bank account details or security questions.
- Majority of the students have anti -virus software and firewall application installed.
- The youth feel self-awareness in security and increasing/ updating level of online banking security will help protect youth from scams and frauds.
- The youth feel that e-Payment systems saves time and money and are neutral towards e-Payment systems being better than cash.
- They agree that a digital customer has to be alert to security issues when using e-Paymentsystems and e-Payment systems can be easily understood and readily adopted.
- Majority of the respondents have a positive response towards cash and card being in equal ratio.

Recommendation:

The following recommendations are hereby stated:

Government need to invest more on reducing the security concerns related to internet banking.

Education and awareness regarding safety and security of cashless transactions should be highlighted.

Reserve Bank of India can create campaigns alongwith other banks to give confidence to the youth as they are tech-savvy and the future for cashless India will be successful.

The banks and other financial intermediaries can also introduce incentive schemes to promote cashless transactions. Inter-operability among various online platforms needs to be enhanced by RBI so that the ease of financial transactions is improved.

Wherever there are service charges for making online transactions, they should be reduced so that people are encouraged to use cashless modes of payment.

Conclusion

Demonetization has opened many inroads in the digital payment system in India. Youth are now becoming less apprehensive of technology, and are becoming comfortable with the digital world with every passing day. It may be a move towards the cashless economy. The demonetisation has introduced a new method or style of the cashless payments in the country. The new age banks are expected to give further improvements in the area of digital currency transactions. The technological advancements and innovative payment systems are going to reduce the cash transaction system in the future. The youth have a positive attitude towards cashless transactions so the Government can enhance security in cashless methods so that in future cashless economy can be a reality.

Limitation and Scope for further Study:

Limitation of the study is number of respondents are less and time for the study is not enough.

There is scope for further research on youth and their acceptance and perception towards cashless transaction and methods of payment.

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ANALYSIS AND ALGORITHMS THE ENGINE BEHIND OTT

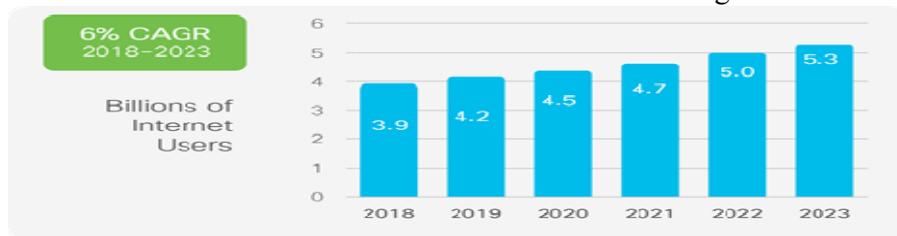
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Abstract: Over the top(OTT) has begun to be an need of a hour for all the generation and classes of the society it has not only exposed us to different cultures but also made us immerse into by creating a need for more content on the same node, this paper here focuses on the technology used by various OTT platform to glued the customer with them for a long time talking from API to backend and which a customer is unaware of and how this algorithms have helped people to sail through the lockdown period smoothly. Further we are going to focus on the various pros and cons used of AI for the OTT platforms and conclude with the prospects this industry holds my making use 3D for video reconstruction, computer vision, augmented reality, and speech-sound technology.

Keywords: OTT, Video on demand, recommendation systems, customer satisfaction, computer vision

Introduction

Television has demonstrated to be quite possibly the most compelling vehicles for brands to construct mindfulness and drive best deals. However, over-the-top applications are better are turning stones to this history. OTT applications, or those that stream content without a link box, consolidate the compass and force of conventional compensation television with the scale and adaptability of the web to make a relentless power for content makers, merchants, and brands all over the place. According to India Brand Equity Foundation, the OTT sector in India witnessed a 30% rise in the number of paid subscribers, from 22.2 million to 29 million, between March and July 2020 alone. Until 2019, paid subscriptions brought in hardly 10% of a video streaming platform's total revenue [4]. Also, that is the place where the application can venture up to fill in the operational and functional requirements of sea full of versatile consumption. With customary compensation television in freefall and the ascent of OTT alternatives, it has never been a superior time for content makers and brands to interface with the crowds and build their kingdom.



Source: Cisco Annual Internet Report 2018-2023

Indians went through 60,000 million minutes on various OTT applications in April, a 30 percent development month-on-month. MX player saw the most elevated guests at 148.4 million. India's OTT applications expanded to 55 out of 2020, a 4-time development in the last 4 years [2]. These results are energizing as trying OTT (Over-the-Top) media administrations to satisfy developing requests with quality substance. Coordinating the flavor of millions of clients across geographics requires information driven capacities and Man-made brainpower (computer-based intelligence). In the race to sustain, OTT must be in every customer shoe and such kind of a versatility and sustainability is achieved by this platform with the help of technological evolution like Artificial Intelligence, Machine Learning, Computer Vision, Speech Recognition frameworks that drives commitment from both the ends.

Literature Review.

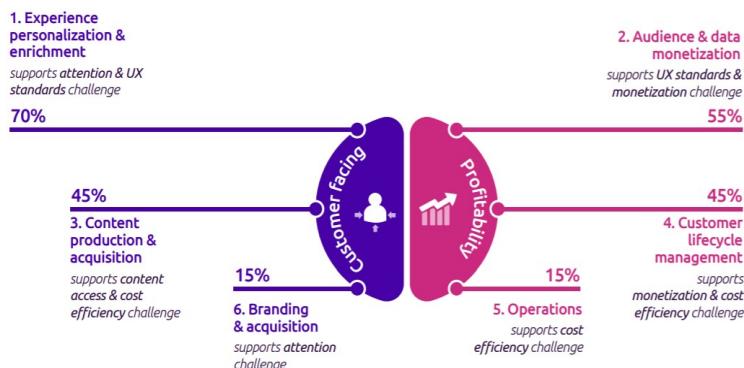
Netflix is a data driven company, and it does not pick shows/movies at random. For instance, it may appear that Netflix chose to showcase its much popular series House of Cards because it had a popular plot, but the reasons for this decision came largely from the most important factor- “data”. Streaming House of Cards culminated from a lot of observations such as the British version of House of Cards was a success, people liked watching David Fincher directed movie The Social Network from beginning to end etc.

The quantitative data which comes because of applying analytics, allows Netflix to make a better, more informed decisions, unlike the traditional television networks. And this data comes from its humongous 93.80 million customers streaming worldwide [5]. Golbeck [13] introduced the concept of trust relationship in a trust network by introducing FilmTrust, a website for movie recommendation. They proposed Tidal Trust algorithm for computing trust between the users who are not directly connected to each other in the trust network. In [5], authors proposed a trust-aware recommender system using collaborative filtering for improving the rating prediction accuracy. Their proposed work is a two-step process first, filtering users based on their reputation score in the trust network using trust propagation, and Second, using trust metrics to improve quality assessment, which is one of the main issues in computing users' similarity.

There has been a tremendous rise in media consumption in digital formats across the world. The consumers today have the liberty to access the media content of his choice anytime anywhere. This has been possible due to increase in the number of devices supporting digital media and enhanced internet speed. The rise of Netflix, Hulu, Amazon, Apple TV etc. have started challenging the supremacy of the traditional television while the Smartphone mobile traffic in 2014 was 1.73 EB and is projected to grow at a compound rate of 60% from 2014 to 2019[11]. The digital media worldwide is projected to increase to \$118bn in 2021 with a compound annual growth rate of 11% between 2016 and 2021[12]. Keeping in line with the global trends, India has also shown an increase in the consumption of all types of content ranging from text, audio, or video on different digital platforms.

Factors to be considered for model implementation on OTT platform.

Customers Support :Customers represent one of the main actors involved in an OTT platform. Their communication with the platform can be measured by looking at the tickets they open, since they represent potential issues and are an important index for customer satisfaction. Of course, it is important to understand the level of enjoyment, and even better if this can be predicted. To this, Zendesk Satisfaction Prediction,[7] a tool that uses numerous metrics (e.g., how long the customer waited for a reply, how long a ticket has been open, ticket content, level of effort needed to solve a ticket) to foretell bad customer satisfaction ratings prior to they happen. It uses complex machine learning algorithms that serves as a forecaster mode which proves Random Forest Classifier outperform the Support Vector Machine.



Source: CapGemini OTT Study Report 2019

Analytics and Monitoring: Conviva Video AI Platform,[8] an added tool that uses AI to detect prospective issues in consumer experience. This tool is used for quickly tracking down exactly what entity in the end-to-end streaming hierarchy might be accountable for problems in service delivery. This programmed evaluation is done based on video-based metrics, like bandwidth or video quality. Conviva Video AI Platform can also be used for making content suggestions, or to understand device usage.

Platform Monitoring: End-user apps have a crucial role. And according to the recent trend in app development, they are probably built using web technologies. Consequently, understanding potential performance problems in web applications is mandatory since it would help in increasing the global customer satisfaction level. Smart Detection [10], a feature of Application Insights (from the Microsoft Azure platform) that automatically warns in case of potential performance problems in web applications. It performs proactive analysis of the telemetry sent by the web app to Application Insights. If there is a sudden rise in failure rates, or abnormal patterns in client or server performance, an alert is sent.

Video Indexing: The OTT platform is mainly focused on multimedia content, and it is important to be able to analyze videos automatically. A video content indexer tool (namely Diva) that exploits Microsoft Video Indexer [10]. This tool extracts spoken words, faces, characters and emotional details from the video automatically. Such metadata is then used to construct immersive interactions with recommendations.

Ads queue detector: The video content is put with advertisements, between which the viewership plays a key role. The advertisements must be strategically positioned as their position which led the viewer to leave at the wrong point at the wrong time. It is important to put advertising in conjunction with the content. Using Computer Vision [9] helped Vootplatform determine where to put advertising, ensure that the experience of video watching is not hindered, replace manual detection, omit human error, handle scale, and allow experimentation paths.

Highlight creation : The highlights or short video content are required because most users want episodes to be able to see important highlights. It is easy to build highlights in sports because it allows voice recognition in crucial moments in form of crowd excitement or a high-pitched commentary. Shrivastava says that it is not only about decibels but requires to look at the defining moments, listen to the video intently, observe facial expressions and more. Many platforms have produced various highlights and attempts to generate and scale computer vision [10]. It has not yet made, but the experiment is still underway.

Conclusion.

In this Media Revolution, where knowledge will reign supreme, it is no longer a question that businesses that have better customer centric interactions will be winners. In this context, to predict and provide driven interactions to meet consumer needs, AI and ML have played a crucial role in big data analytics which has helped multiple platforms to prosper. Leveraging AI and predictive analytics is the key to offering customer experiences that builds advocacy and customers for life. Event-based architectures combined with AI and predictive analytics is the future. There is no end state, but it is a journey all companies must begin as we enter the Media Revolution. Disruptive technologies such as internet of things, big data analytics, blockchain, and artificial intelligence have changed the ways businesses operate.

Of all the disruptive technologies, artificial intelligence (AI) is the latest technological disruptor and holds immense potential for manufacturing, pharmaceuticals, healthcare, agriculture, logistics, and digital marketing. Many practitioners and academicians worldwide are trying to figure out the best fit AI solutions that their organizations can utilize. Therefore, this study aims to aggregate the research studies about various analysis algorithms used by this giant platform.

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ECOMMERCE MARKET BY 2025 WITH SPECIAL REFERENCE TO THE IMPACT OF NEW ECOMMERCE POLICY 2019 ON CONSUMERS BUYING BEHAVIOUR

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ABSTRACT

The present study makes an attempt to uncover the Ecommerce market by 2025 based on some realistic facts of present time. For predicting the Market by 2025 an in-depth study is conducted where the Impact of new ecommerce policy on consumers purchasing behaviour has been studied. [In Feb 2019](#), Indian Govt. instituted new rules to govern e-commerce players and FDI, as per the new rules companies were barred from offering exclusive deals for selling products (in a bid to prevent deep discounts) or having a single vendor supply more than 25 per cent of their inventory, besides restricting them from influencing prices and asking them to maintain a level playing field. The study reveals the consumers' buying behaviour after the implementation of new ecommerce policies in 2019. The study also makes an attempt to review various literature to predict the transformation by 2025 in ecommerce industry.

KEYWORDS

New E-Commerce policy, Business transformation by 2025, Consumers Behaviour, Online shopping

1. INTRODUCTION:

Business done in India has been transformed by ecommerce. By 2026 the Indian ecommerce market is estimated to grow from US \$ 38.5 Bn in 2017 to US \$ 200 Bn. The penetration of smartphones and internet has triggered the growth of ecommerce in India. Driven by the Digital India program India witnessed a significant growth in no of internet connections which touched 760 million as on Aug 2020.

On 23 February 2019, the Department for Promotion of Industry and Internal Trade posted the Draft National e-Commerce Policy – India's Data for India's Development. In February 2019, India instituted new rules governing e-commerce players and FDI, barring them from offering exclusive deals for selling products (in a bid to prevent deep discounts) or having a single vendor supply more than 25 per cent of their inventory, besides restricting them from influencing prices and asking them to maintain a level playing field. The policy influenced the consumers shopping pattern.

Since decades, Globally consumers are in the middle of the largest and fastest shift in buying behavior. How consumers buy their stuffs and pay for it is changing due to the prolonged impact of COVID-19. The priority of consumers decision has been taken by safety, value, convenience and availability.

1. LITERATURE REVIEW:

(Rajagopalan, 2021) Shopping habits have been largely affected during the pandemic, with safety now taking priority over price, range, variety and convenience.

(SHARMA, Dec2020) Information technology has played an important role in business development in an emerging economy like India.

(Dr. Sanatanu Borah and David Black, 2020) The opportunities associated with e-commerce are phenomenal and India should move at full speed on its path to developing a robust e-commerce sector.

(Iqbal Thonse Hawaldar, 2019) A common but unsustainable practice in India is to increase the retail price and then offer a discount on the product. Increasing sales due to incorrect discount pricing strategy is a primary goal of business development in India.

(Nagendra, 2018) E-commerce has seen tremendous growth over the past five years, and technology has contributed to its growth. Consumer behavior changed as consumers started buying from e-commerce websites instead of visiting traditional retail stores, largely due to the convenience brought by home delivery service.

(Dr. Gaikwad Manojkumar Jyotiram, 2017) The widespread use of mobile internet services is becoming the backbone of the e-commerce industry. The e-commerce market will account for 2.5% of GDP by 2030.

(Himanshi Agarwal, 2017) E-commerce is the future of shopping in India. Online shopping has great potential in India. We need to update to take advantage of ecommerce and reap the rewards.

OBJECTIVES :

- To know the impact of new e-commerce policy on consumer buying behaviour.
- To analyze consumers behavior while shopping online.
- To predict the growth in Indian ecommerce industry by 2025

4. METHODOLOGY

The primary data has been collected by using structured questionnaire by snowball sampling. A total of 110 people from rural and urban areas of Ahmedabad and Gandhinagar who have tendency to purchase stuffs from E-commerce sites participated in the present study. Out of 110 respondents this 74 were males and 36 were females. Sample was divided in 3 age groups (11 in the age group of below 20, 84 in age group of 21-30 years, 6 in age group of 31-40 and 9 in age group of Above 40) to know the perception of different age groups and genders about online shopping w.r.t new ecommerce policy..

For the descriptive analysis, pie charts, frequency tables and bar charts are used in the present study. The data was analysed by using various statistical tools. For analysing the data, Chi square test of association and Two way ANOVA was computed using Stata 13 software. Chi square test is used to find the association between age groups, gender ; and the online shopping behaviour of the people.

Varibales for Two way Anova :

Independent variables : Gender Difference and age groups

Dependent variables: Future insecurity of the discount, people's perception towards current discounting schemes; and continuity of online shopping in future.

5. RESEARCH QUESTIONS AND HYPOTHESIS :

Research Q.1 : Is there any association b/w Gender and Preferred mode of shopping ?

H_0 : There is no Association between Gender and Preferred mode of shopping .

H_1 : There is an Association between Gender and Preferred mode of shopping .

Research Q.2 Is there any association between Age and perception of change in regular sale and policy special sale offer

H_0 : There is no association between age and perception of change in regular sale and policy special sale offer

H₁: There is no association between age and perception of change in regular sale and policy special sale offer

Research Q.3 : Is there any difference in consumers perception about future insecurity discounts among different age groups and gender ?

H₀ : There is no difference in perception about future insecurity of discounts across age groups

H₁ : There is a difference in future insecurity of getting of discounts across different age groups

H₀ : There is no difference in future insecurity of discounts across different Gender

H₁ : There is a difference in future insecurity of discounts across different Gender

H₀ : There is no difference in perception about future insecurity of discounts across age groups and gender combined

H₁ There is a difference in perception about future insecurity of discounts across age groups and gender combined

Research Q.4 : Is there any difference in consumers perception about discount offered during regular sale and this policy special sale ?

Hypothesis

H₀ : There is no difference in perception about discount offered during regular sale and this policy special sale across age groups

H₁ : There is a difference in perception about discount offered during regular sale and this policy special sale across different age groups

H₀ : There is no difference in perception about discount offered during regular sale and this policy special sale across different Gender

H₁ : There is a difference in perception about discount offered during regular sale and this policy special sale across different Gender

H₀ : There is no significant difference in perception about discount offered during regular sale and this policy special sale across age groups and gender combined

H₁ There is a significant difference in perception about discount offered during regular sale and this policy special sale across age groups and gender combined

Research Q.5 : Is there any difference in consumers interest in shopping online in future among different age groups and gender ?

Hypothesis

H₀ : There is no difference in consumers interest in shopping online in future across age groups

H₁ : There is a difference in consumers interest in shopping online in future across different age groups

H₀ : There is no difference in consumers interest in shopping online in future across different Gender

H₁ : There is a difference in consumers interest in shopping online in future across different Gender

H₀ : There is no significant difference in perception about future insecurity of discounts across age groups and gender combined

H₁ There is a significant difference in perception about future insecurity of discounts across age groups and gender combined

6. RESULTS

6.1 Gender Ratio of Respondents :

Gender	Responses
Male	74
Female	36

Statistical Interpretation: The male to female ratio of the respondents was 3:1.

6.2 Age distribution of Respondents:

Age	Responses
Below 20	11
21-30	84
31-40	6
Above 40	9

Statistical Interpretation: among different age groups, approximately 85 % of respondents were in the age group of 21-30.

6.3 Online and Offline Purchasers:

	Responses
Yes	102
No	8

Statistical Interpretation: 93% of the respondents are purchasing products from various E-Commerce sites.

6.4 Association BetweenGender And Preferred Mode Of Shopping

	Association BetweenGender And Preferred Mode Of Shopping		
	Female	Male	
Ecommerce Sites	21 0.5	34 0.2	55 0.7
Malls	7 1.0	24 0.5	31 1.4
Small Retailers	2 1.7	13 0.8	15 2.6
Super market	6 3.2	3 1.5	9 4.7
Total	36 6.4	74 3.1	110 9.5

Pearson chi2(3) = 9.4641 Pr = 0.024

6.5 Association between Age and perception of change in regular discount offer and new ecommerce 2019 policy special offer

Age and perception of change in regular discount offer and new ecommerce 2019 pollicyspecialoffer					
	0-20	21-30	31-40	41 and above	Total
No	2 1.0	30 0.0	5 0.1	5 3.3	40 4.4
Yes	9 0.6	54 0.0	7 0.1	0 1.9	70 2.5
Total	11 1.6	84 0.0	12 0.1	3 5.3	110 7.0

Pearson chi2(3) = 6.9826 Pr = 0.072

Interpretation:

The p-value is 0.072. The result is significant as $p < .10$ at 0.10 level of significance. Hence we fail to accept the Null Hypothesis, therefore we conclude that there is an association between Age and perception of change in regular discount offer and new ecommerce 2019 pollicyspecialoffer

6.6 Summary of Analysis of Variance of Age Group and Gender on future insecurity of getting discounts

Source of Variance	Partial Sum of Square	df	Mean Squares	F	P-value
Model	7.011	5	1.4	1.18	0.334
Age	.340	2	.170	0.14	0.866
Gender	4.957	1	4.957	4.18	0.047
Gender #Age	1.95	2	.976	0.82	0.446

$p > 0.05$, $p > 0.10$

Interpretation:

As the P (0.33) > .05, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we accept the Null Hypothesis and conclude that there is no difference in perception about future insecurity of discounts across age groups.

As the P (0.047) <= .05, the result is significant. At 0.05 level of significance the p value is less than 0.05. Hence we fail to accept the Null Hypothesis and conclude that there is a difference in perception about future insecurity of discounts across genders.

As the $P (0.44) > .05$, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we conclude There is no significant difference in perception about future insecurity of discounts across age groups and gender combined.

6.7 Summary of Analysis of Variance of Age Group and Gender on perception about discounts offered after new ecommerce policy implementation Difference in Perception about Discounts offered after ecommerce policy implementation across different gender group

Source of Variance	Partial Sum of Square	df	Mean Squares	F	P-value
Model	5.468	7	.781	0.69	0.677
Age	.0359	3	.0119	0.01	0.998
Gender	3.948	1	3.948	3.51	0.064
Gender #Age	3.544	3	1.181	1.05	0.374

Statistical Interpretation As the $P (0.99) > .05$, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we accept the Null Hypothesis and conclude that there is no difference in perception about discounts offered after new ecommerce policy implementation across age groups

Statistical Interpretation : As the $P (0.064) < .10$, the result is significant. At 0.10 level of significance the p value is less than 0.05. Hence we fail to accept the Null Hypothesis and conclude that there is a difference in perception about discounts offered after new ecommerce policy implementation across genders.

Statistical Interpretation : As the $P (0.37) > .05$, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we conclude There is no significant difference in perception about discounts offered after new ecommerce policy implementation across age groups and gender combined.

6.8 Summary of Analysis of Variance of Age Group and Gender on interest in doing online shopping in future

Source of Variance	Partial Sum of Square	df	Mean Squares	F	P-value
Model	12.188	5	2.437	1.57	0.190
Age	0.368	2	0.184	0.01	0.988
Gender	1.385	1	1.385	0.89	0.350
Gender #Age	10.205	2	5.10	3.28	0.047

Statistical Interpretation As the $P (0.98) > .05$, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we accept the Null Hypothesis and conclude that there is no difference on interest in doing online shopping in future across age groups.

Statistical Interpretation As the $P (0.35) > .05$, the result is not significant. At 0.05 level of significance the p value is greater than 0.05. Hence we accept the Null Hypothesis and conclude that there is no difference on interest in doing online shopping in future across genders.

Statistical Interpretation As the $P (0.047) < .05$, the result is significant. At 0.05 level of significance the p value is less than 0.05. Hence we conclude There is a significant difference on interest in doing online shopping in future across age groups and genders combined.

7. FINDINGS :

The new ecommerce directive has taken its toll on customers' minds and they believe that because of that fear, they will no longer get discounts on the ecommerce website. This study was done to understand people's perception of the new e-commerce directive. After doing this study, it shows that before the policy was implemented, people believed that the discount would go away entirely, but after the new policy was implemented their misunderstandings about the new policy are gone because they are still getting the reduction, but not that early due to policy changes.

People are still not aware of a complete change in e-commerce policy so that their thoughts replace rumors and concern another person and stop using e-commerce sites.

The attitude towards online shopping has not changed due to significant changes in policy.

8. CONCLUSION :

The online retail market is expected to continue its strong growth - it recorded a CAGR of over 35%, reaching INR 1.8 trillion (\$ 25.75 billion) in the fiscal year 2020. Over the next five years, the Indian e-retail industry is projected to exceed 300-350 million shoppers propelling the online Gross Merchandise Value (GMV) to US\$ 100-120 billion by 2025. The Indian e-commerce industry is on an upward trajectory and is expected to overtake the US, making it the second largest e-commerce market in the world by 2034. The e-commerce sector in India is set to reach 99 billion by 2024, compared to US 30 billion - dollars in 2019 with CAGR growth of 27%, with food and fashion / apparel likely to be the main drivers of growth. India's e-commerce sector ranks 9th in the world in cross-border growth. India's e-commerce is projected to grow from 4% of total food and grocery, clothing and consumer electronics retail sales in 2020 to 8% by 2025.

As most Indians started shopping online instead of leaving their homes. The Indian e-commerce sector has shown an impressive growth. According to the McKinsey report - 96% of consumers have tried new buying behaviors and 60% of consumers are expected to switch to online shopping during the holiday season and will continue to shop online beyond the covid-19 pandemic.

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TITLE – A STUDY ON FINANCIAL ANALYSIS OF AIR INDIA AFTER JOINING STAR ALLIANCE

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Abstract

This paper is about the financial statement analysis of Air India. In the paper audited Air India Financial Reports are analyzed from 2010 to 2019 has been analyzed year wise. This study provides the information of profit & loss, expenses, revenue, assets and liabilities. The data is explained with the help of spotted line graph so that the trend will be easily understood.

Keywords: *Air India, Financial Analysis, Profit and Loss Statement, Financial Activities of Air India and Star Alliance*

1. INDTRODUCTION

Air India was established as Tata Airlines in 1932 and turned into a public restricted organization in 1946 as Air India. Indian Airlines was set up in 1953 through a consolidation of seven home grown airlines, following the death of enactment, nationalizing autonomous airlines in India. Taking into account that the airline is burdened with gathered misfortunes and obligation, which are to be rebuilt, the common aviation service provoked the organization to experience the current monetary and operational reengineering exercise. This came about into a consolidation between Air India and Indian Airlines which got the bureau freedom on March, 1 2007. Resulting to the over, another organization viz National Aviation Company of India Limited (NACIL) was fused under the Companies Act,1956 on 30th March, 2007. It was concluded that post-consolidation, the new substance will be known as "Air India" while "Maharaja" will be held as its mascot. Henceforth, on 27th February 2011, Air India and Indian airlines converged alongside their auxiliaries to shape Air India Limited. Air India is the banner bearer airline of India. It is the third largest domestic airline in India in terms of passengers carried, after IndiGo and Jet Airways with a market share of 13.1% as of March 2018. Air India Limited, a Government of India enterprise, and works a fleet of Airbus and Boeing aircraft. Air India has 176 Aircraft. It has headquartered in New Delhi. Air India has its main hub at Indira Gandhi International Airport, New Delhi and a secondary hub at ChhatrapatiShivajiMaharaj International Airport, Mumbai. Air India became the 27th member of Star Alliance on 11 July 2014.

2. REVIEW OF LITERATURE

2.1 Dr. A. Muthusamy and M. Muthumeena (2015) made an analysis on "**Financial Performance of Selected Private Airlines in India**". The overall aviation industry has been flawed by cost inefficiencies and aggressive value cuts, rising expense, costly fly fuel, dearth of experienced pilots, inflexible labor laws, greater expense of capital with a weight of interest payments, rising misfortunes and working capital extended balance sheet and tight liquidity profile of the most airlines. The financial performance has been analyzed with the assistance of some key measures relating to the performance in ratios on the overall financial performance of the selected private Airline companies in India.

2.2. Dr. R. Angayarkanni and Anand Shankar Raja. M (2015), made an analysis on "**Profitability Analysis of Select Indian Aviation Firms an Empirical Analysis**". The fluctuating profitability must be better understood by the firm to make a better strategy. In this paper an attempt has made to measure the profitability performance and to analyze the impact of selected profitability ratios on ROCE of the company, for fulfillment of the destinations. The gathered information is analyzed and computed to fit for drawing inferences.

2.3. Dr. Vivek Singla (2013), under took a study "**A Comparative Study of Financial Performance of SIAL and Tata Steel Ltd**". While analyzing the financial performance of the chose units, the analysis of working capital, analysis of fixed assets and analysis of profitability was incorporated. SAIL and Tata Steel Ltd. both the companies are major players in steel manufacturing area in India. After making the comparative analysis of both the organizations we find that performance of Tata Steel Ltd. is superior to the SAIL. It is so because the Net profit of Tata Steel Ltd. is greater than the SAIL similarly the stock management of the Tata Steel Ltd. is superior to the SAIL.

2.4. CFS AVIATION INDUSTRY CUSTOMER SATISFACTION SURVEY – (2010) In this report the assessment was coordinated in Nigeria. It is found that they slant toward advance ticket booking organizations and they have awful insight. So to satisfy the customer the Airlines Company should manage this issue. Customers moreover think about prosperity and security in flight. So the sponsors need to improve the security structure. The expert associations need to make a smooth technique of ticket reservation and ticket crossing out. Shopper dedication dominantly depends upon these above issues.

2.5. Smash Acharya in his examination named, "**Common Aviation and Tourism Administration in India**" (1969) ,has introduced an exact recorded survey of the headway of Aviation Administration in India. The maker has moreover examined in detail the various leveled casing of the Union Ministry of Tourism and Civil aviation, International Airports Authority of India Ltd., the affiliation and working of Air India and Indian Airlines Corporations. The maker has similarly endeavored to make indepth investigation of the impacts of common air transport on Indian economy and the movement industry.

2.6. A.W. Nawab, in his book named, "**Monetary Development of Indian Air transport**" (1967) , has basically separated the inexorably critical imagined by India's air-transport on both national and worldwide scene. The creator has contributed his earnest energy and dedicated his regard for investigate each second detail of the significant statistical data focuses associated with normal trip in India. Notwithstanding covering a wide extent of topics related to air transport, the creator has considered the whole history of the unmistakable business airlines that existed before the two ventures in particular Indian Airlines Corporation and Air India Corporation were established. The book further digs into the nuances of the recommendations of the Committees named regarding the setting up of the partnership similarly as to manage its working.

3. RESEARCH METHODOLOGY:

3.1. PURPOSE OF THE RESEARCH:

Air India is incurring loss from past many years. Air India had joined Star Alliance with the view of increasing business in domestic and international but the financial condition of Air India has not improved. Government is planning to privatized Air India as the financial condition of Air India is not improving.

3.2. OBJECTIVES OF THE RESEARCH:

- To analyze the profit & loss statement of Air India from the year 2010 to 2019
- To analyze the Revenue and Expenses of Air India from the year 2010 to 2019
- To analyze the Assets and Liabilities of Air India from the year 2010 to 2019
- To know the impact of Air India financial condition after joining Star Alliance

3.3. METHODS OF DATA COLLECTION:

- The study is based on secondary data collected from the audited Profit & Loss A/c and Balance Sheet associated with schedules, annexure available in the published annual reports of Air India.

3.4. RESEARCH DESIGN:

The research design deployed was analytical research design. It is descriptive in nature.

3.5. DELIMITATIONS OF THE RESEARCH:

The research is conducted only from year 2010 to 2019.

3.6. LIMITATIONS OF THE RESEARCH:

The research has physical and economical constraint.

3.7. DATA ANALYSIS METHODS:

Data is collected from published Air India reports to generalize the findings and draw conclusions of the research study.

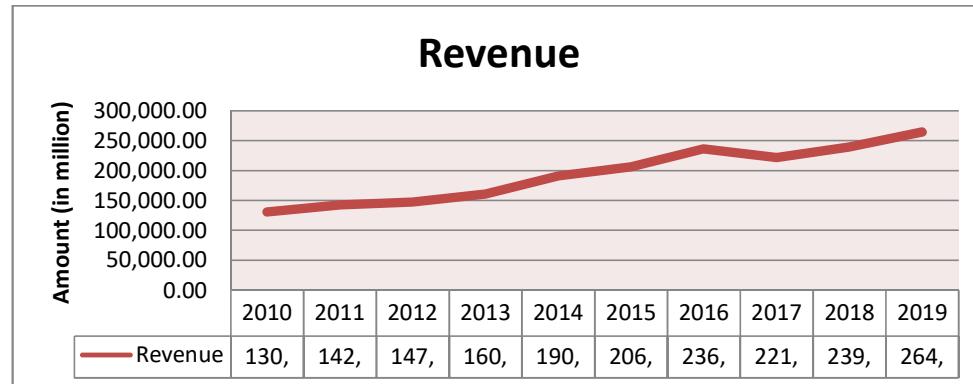
4. FINDINGS AND ANALYSIS :

4.1 PROFIT AND LOSS :



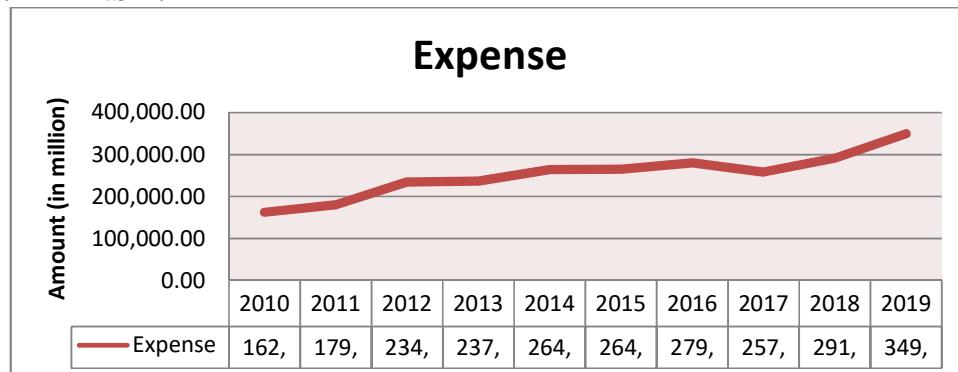
The above chart provides a summary of Air India's profit and losses between the year 2010 to 2019. We can see that Air India posted a profit of ₹55,524.40 in the year 2010, a profit of ₹123,542.60. However, since then the graph has fallen down. In 2012 Air India suffered a loss of ₹ 75,597.40 and the loss kept continuing and the company showed a loss of ₹85,563.60.

4.2.REVENUE :



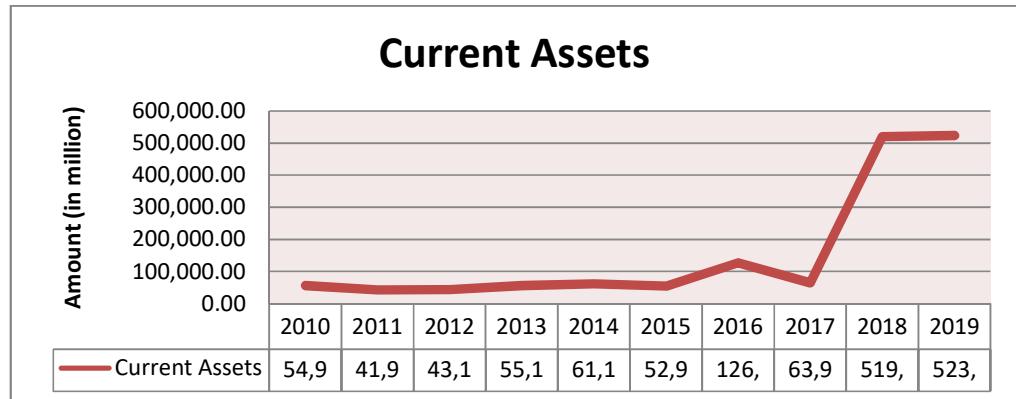
The above chart of Revenue explains the trend of Revenue by Air India from the year 2010 to 2019. Revenue for the year 2010 was around 130 million. The chart shows an increase in revenue over the years.

4.3.EXPENSE :



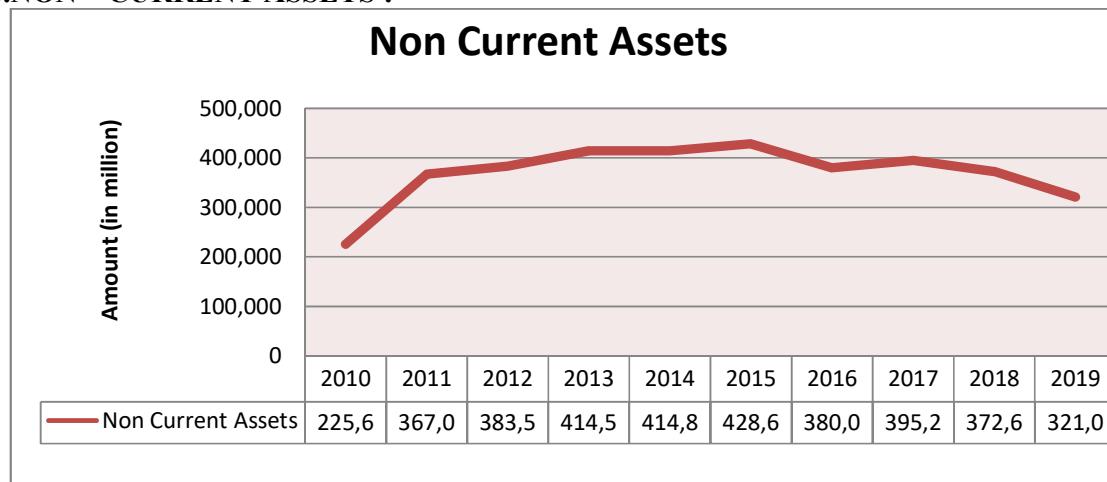
Apart from the chart which displayed how the revenue of Air India kept increasing over the years, the next chart of expenses shows us how eventually over the years it's expenses too kept increasing. With an expense of around 162 million in 2010, Air India showed an expense of around 349 million during the year 2019.

4.4.CURRENT ASSETS :



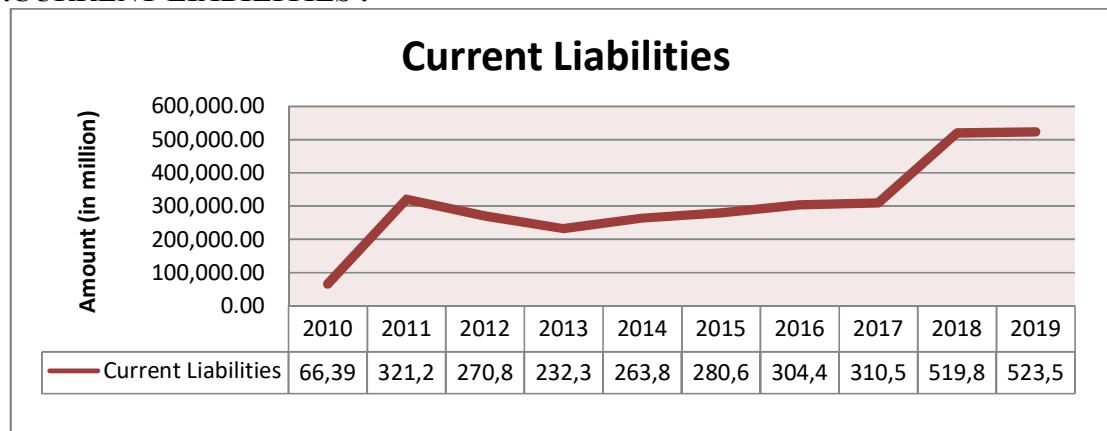
Through this chart we get to know that the current assets of Air India gradually started off at a slow pace in 2010 of around 54 million but increased a bit in the year 2016, after which it decreased for a year but eventually increased immensely during the year 2018 to 519 million.

4.5.NON – CURRENT ASSETS :



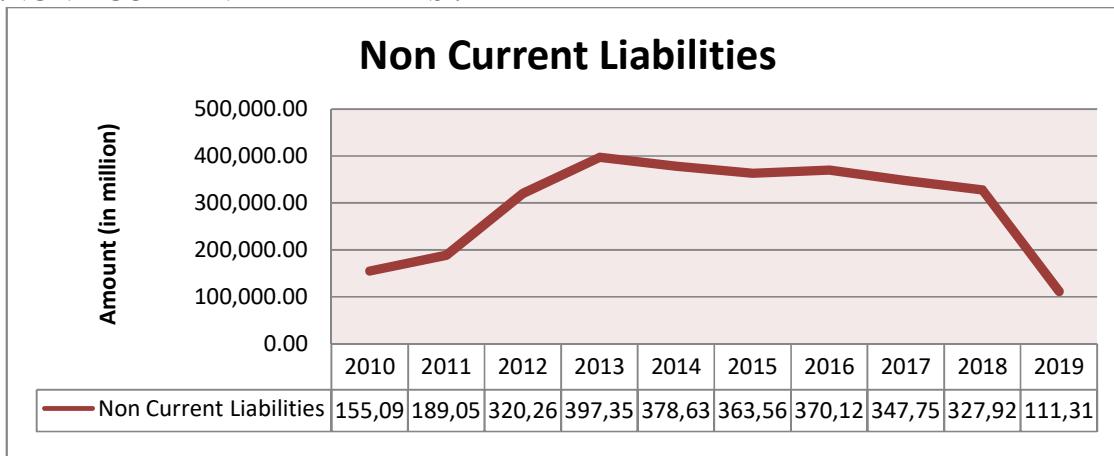
The non – current assets kept increasing since the year 2010 and went steady since then. Low-ups in the chart of non- current assets kept continuing.

4.6.CURRENT LIABILITIES :



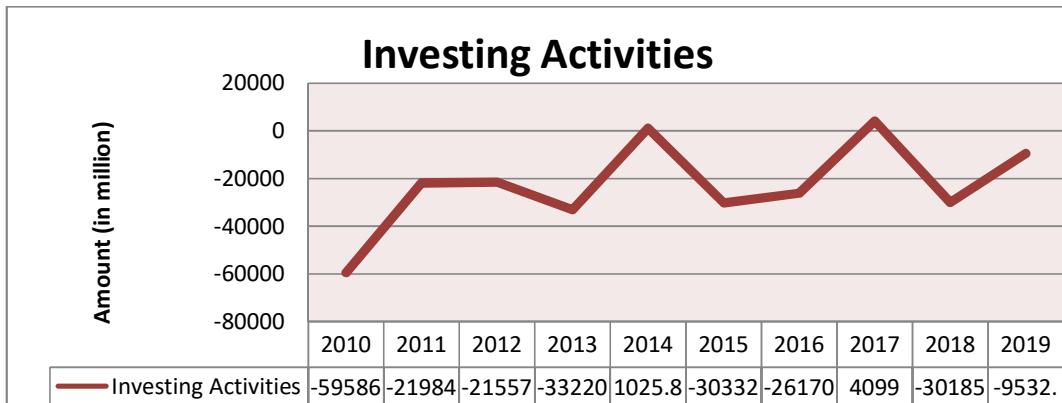
The chart of current liabilities shows how current liabilities kept increasing rapidly over the years since 2010. In the year 2010, the current liabilities of Air India was around 66 million and by the year 2019 the current liabilities was almost 523 million.

4.7.NON – CURRENT LIABILITIES :



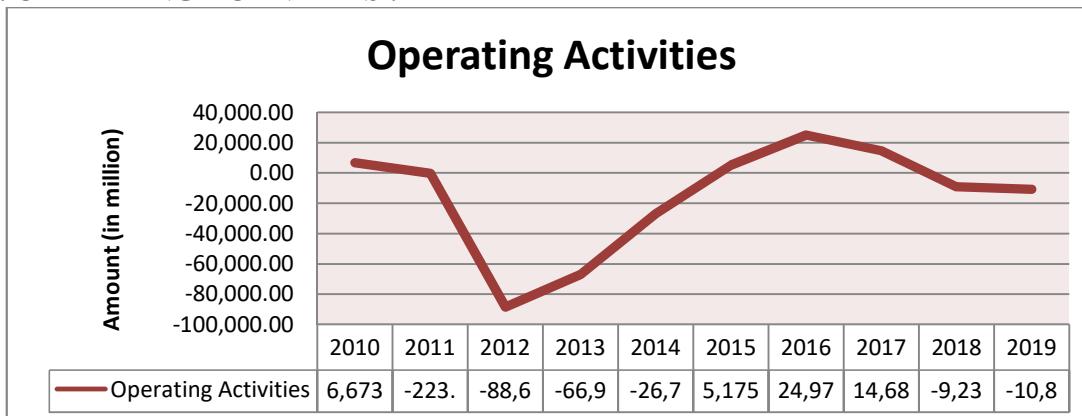
Non – current liabilities chart shows that the non-current liabilities was equal during the year 2010-2011, however since 2011 it kept increasing and reached its peak in the year 2013 and since then kept slowly downwards.

4.8.INVESTING ACTIVITIES :



Performance of Air India in 2014 and 2017 was better as the passenger load factor increased and the On time performance was better as compared to the other years.

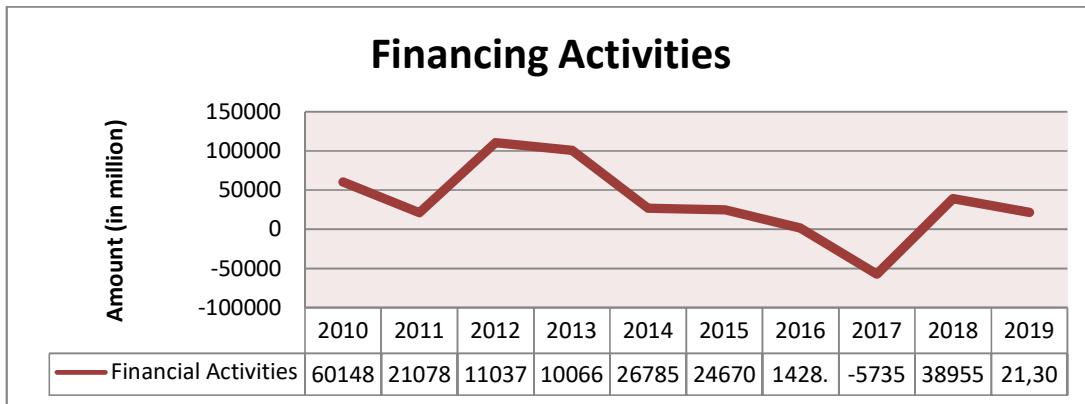
4.9. OPERATING ACTIVITIES :



The operating activities of Air India was better in 2010 after which it witnessed poor performance until the company allied with star alliance in the year 2014, hence showed good

performance in the following three years. However, it was not able to sustain in the market because of competitors like Indigo, Jet Airways and Spicejet.

4.10. FINANCING ACTIVITIES :



The above chart of financing activities of Air India shows that in the year 2017, Air India has shown a negative financing activity as compared to the other years. This could be because of the strategic disinvestment of Air India and its five subsidiaries proposed by the Government of India.

5. CONCLUSION :

Air India is a crucial part of Indian economy as well as one of the fastest growing aviation industries in the world. There is a large scope of growth in this sector which will definitely affect the growth of Indian Economy Positively. It is analysed from the study that the national carrier i.e. Air India could not earn profits throughout the study period. The result conducted on the ratios depicts that there is no positive impact of joining Star Alliance as well as profitability of Air India has been poor during the study period.

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TITLE - A STUDY ON PROBLEMS FACED BY FIRE AND SAFETY GARMENT WORKERS

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Mangal Singh Rawat, Assistant Professor, Vidyalankar School of Information Technology

ABSTRACT :

This study talks about the problems faced by fire and safety garment workers, about their health issues and its preventions. This study talks more on how exactly Asbestos is still used in India and how manufacturers are making cash by investing with the lives of workers and the laborers. The demand for inexpensive piping and roofing material is the driving power behind the business. Despite research from around the world that supports the dangers of asbestos, the Asbestos Cement Products Manufacturer's Association, the leading industry organization, fails to perceive the issue. Thus, the study is being summarized here in the expectation of getting a total ban on asbestos in India and taking the necessary precautions and giving compensations to the workers who are suffering from cancer.

Keywords :Fire Garment Workers, Safety Garment Workers, Asbestos, Cancer Disease, Lung Cancer and Mesothelioma

1. INTRODUCTION :

Fire and safety garment workers their health issues and how precisely we can forestall them. Before that, it is critical to understand the essential human morals which each individual should pass on, considering the fact that it is accepted that "What we pass on in us is the thing that we pass on in work". The absolute size of health labor power assessed from the National Sample Survey (NSS) information is 3.8 million as of January 2016, which is about 1.2 million not exactly the total number of health experts selected with various boards and affiliations. The thickness of specialists and medical caretakers and birthing assistants per 10 000 populaces is 20.6 as indicated by the NSS and 26.7 subject to the vault information. Health labor power thickness in provincial India and states in eastern India is lower than the WHO least constraint of 22.8 per 10 000 populaces. More than 80% of specialists and 70% of medical attendants and birthing assistants are used in the private area. Generally 25% of the correct presently working health experts don't have the necessary capabilities as set somewhere near proficient committees, while 20% of satisfactorily qualified specialists are not in the current labor power. Circulation and capability of health experts are not kidding issues in India when contrasted and the general size of the health workers. Strategy should focus in on upgrading the nature of health workers and mainstreaming expertly qualified individuals into the health labor power. In numerous nations, the greater part of workers are used in the casual area with no social insurance for looking for health care and absence of administrative implementation of word related health and safety standards. Consistently 12.2 million individuals, generally in agricultural nations, kick the can from no transferable sicknesses while still of dynamic working age. Business related health issues bring about a financial inadequacy of 4–6% of GDP for most nations. The essential health administrations to forestall word related and business related sicknesses cost on normal between US\$ 18 and US\$ 60 (buying power equality) per specialist. About 70% of workers don't have any security to repay them if there should arise an event of word related infections and wounds. The health of workers is a fundamental essential for family unit pay, profitability and monetary unforeseen development. Subsequently, reestablishing and keeping up working breaking point is a significant capacity of the health administrations. Health chances at the working climate, for example, heat, upheaval, dust, dangerous synthetic compounds, risky machines and mental pressure, cause word related illnesses and can disturb other health issues.

Health and safety issues of Fire and Safety garment workers it likewise comprises of the surface and the mineral used by the makers as their items, which leaves the incredible impact on the existences of the workers. India utilizes a normal 350,000 tons of asbestos consistently, limping along China as the world's most monstrous shopper of the normally happening cancer-causing agent. Just a small part of the asbestos used in India starts in the country. The larger part is imported from Russia and Brazil, the world's two greatest exporters of the thing. In India, asbestos is used in assembling of pressing factor and non-pressure pipes used for water supply, sewage, water system and waste framework in metropolitan and rustic regions, asbestos materials, overlaid items, tape, gland pressing, pressing ropes, brake coating and 13 jointing used in focus area businesses, for example, auto, substantial gear, Petro-synthetic compounds, thermal energy stations, manures, nuclear energy stations, transportation, assurance.

2. REVIEW OF LITERATURE :

A. Ahamed, Akkas and Rahman, Md. Sayedur and Chowdhury, Mohammad. (2019) in their paper named "The State of Female workers in Garment Industries of Bangladesh: A Comparative Study." Describe how Without ladies' commitments in the nation's economy and acknowledgment of the value of their labor, improvement is not any more conceivable in the general public. The ladies society is on the critical need of being given more facilities to guarantee their participation in academic activities, improvement activities including business and proprietorship facilities in the garment areas. The ladies should also be encouraged to push ahead by winning the social, familial, strict and surrounding hindrances. We trust that Bangladesh would have the alternative to build up a country on the basis of equal rights and value among individuals. According to many scholars, if the endeavors of ladies improvement and politico-financial strengthening of ladies continue to prevail, Bangladesh will actually want to certainly vanquish all of the obstructions and continue. The Bangladesh government, relevant organs, normal society and NGOs including all other organizations and institutions should see ladies' honorability and status and give them their due rights. With regards to globalization and international relations, Bangladesh would be more reformist and sustainable if ladies are appropriately paid their wages and other obligation. We have carried out this study based on observation, focus gathering conversations, and exchanges of perspectives on the states of female workers in the garment industries of Bangladesh. Additionally, secondary data have been used in this study. After analyzing the ladies' condition in the garment industries, we have given a couple of strategies in improving the ladies' privileges and poise with due salary.

B. J, HEMAMALINI. (2017) in their paper "Health Safety issues and Harassment at workplace in select Garment Industries of Bengaluru City." Describes The garment industries in Karnataka are concentrated in Bangalore where probably the biggest fare places of the Country are existing. About 80% of garment laborers in Bengaluru have consistently been from provincial zones, however at this point there are more interstate migrations. In the previous five years, the design industry's prerequisites for less expensive and speedier work have incited garment organizations to focus in on rustic India – by recruiting transient laborers from far off towns in eastern and focal India, and relocating Bengaluru manufacturing plants to towns in South India. The current investigation is an attempt to evaluate the health and safety issues and mental harassment of laborers in Garment Industry of Bangalore City. Not many industries were picked for the examination wherein ladies laborers were more in number contrasted with male specialists. The analyst drove a preliminary example concentrate via conversations and interviews with the selected specialists, the board staff, and working advisory gathering individuals. This exact investigation was driven on a random example study of the laborers base of the garments at Bangalore city. The scientist selected 6 Garment Industries for the investigation subject to barely any inclusion models with 480 laborers as sampling size. They were evaluated on a couple of

health and safety issues on one hand, and harassment in various angles then again. Both the issues were surveyed through semi organized survey created and validated by the analyst. The outcomes were breaking down through both clear and inferential statistics. Results revealed that all the offices related to health and safety was kept an eye on 100% including no limitation to use bathroom offices. The greater part of crèche and flask offices were maintained aside from limitations to laborers to leave the child in crèche (79.1%). Majority of the laborers (94.6) referred to that they were not satisfied with the sterile states of the container. Just 1/8 (12.5%) of the respondents indicated physical, mental, normal and verbal harassment..

C. Polat, Olcay and Kalayci, Can (2016) in their paper named "Ergonomic Risk Assessment of Workers in Garment Industry." The business related musculoskeletal problems is a critical medical issue in labor-intensive industries. Regardless of the advancements in workshop practices and innovation, garment industry is among the most work intensive industries. The motivation behind this examination is ergonomic risk assessment of workers in garment industry. Consequently, working climate and actual outstanding burdens of workers are investigated in a creation line that makes infant towels, shower robes and sleeping sacks. Fast Entire Body Assessment (REBA) method is used to figure actual outstanding burdens of workers for thirteen novel activities. The assessment of the outcomes show that inadequately ergonomic working conditions set off genuine actual problems in garment industry.

D. Sobuj, K. M. Mostafizur. (2011) in their paper "Safety problems of garments specialist and anticipation." examines to sum things up the problems of health and safety issues of laborer in garment in Bangladesh subject to the business climate, their working climate, working condition, age, issue of health, reasons for sicknesses, reasons for fire mishap and their medical offices. Most of the information of this undertaking paper has gathered by talking workers of a couple of garments industry in Gajipur, and Nariongong Bangladesh and from the articles of paper.

E. Joseph, Bobby and Minj, Christie and Fernandes, Glenn and Marandi, Milan (2011) in their paper "A longitudinal study of the dismalness and nutritional status of workers utilized in a garment industry" portray the health hazards associated with the garment manufacturing industry, it is important to periodically evaluate the health status of these workers. Our goals in this study were to initially assess the change in bleakness profile by comparing the recorded ailments of workers in a garment factory in a three year time span and furthermore to assess the change in their nutritional status (Body Mass Index) throughout a period of three years. Audit accomplice study configuration was used. Data from the intermittent health check up for these representatives in 2005 and 2002 was compared. Data was analyzed for 187 representatives (males 19; female 168) who were available for the health check up of both 2005 and 2002. The chi-square test and comparison of change in percentages were used to determine significance of change in BMI. Results: Musculoskeletal ailments were the most notable health issues in the garment factory. There was an increase in the quantity of workers with complaints of dental caries, refractive mistakes and respiratory ailments. There was an increase in the extents of pre-large, stout (class 1) and weighty (class 2) workers and a decrease in the degree of those underweight and normal. Analysis indicated a significant increase in the Body Mass Index (BMI) of workers who were already underweight ($p=0.00$), normal ($p<0.001$) or pre-stout ($p=0.03$). Ends: These findings, which are probably related to sedentary occupation, call for regular monitoring of BMI as well as dietary and way of life interventions for these workers. The findings also answer the call for factory-based interventions to improve workers' health.

F. Calvin, Sam and Joseph, Bobby. (2006) In their exploration paper "Occupation Related Accidents in Selected Garment Industries in Bangalore City" portray The injuries in the garment industry are overall not genuine in nature and get little consideration in the plant. This

investigation expects to perceive the normal accidents that happened in this industry and to distinguish any elements that were related in request to suggest preventive advances.

3. RESEARCH METHODOLOGY :

3.1.PURPOSE OF THE RESEARCH :

Mesothelioma is caused by asbestos which is dangerous. 40% of mesothelioma patients survive at least one year after diagnosis. The survival rate for pleural mesothelioma is approximately 73% for one year and 12% for five years. The peritoneal mesothelioma survival rate averages 92% for one year and 52% for five years.

3.2.OBJECTIVES :

- To understand the fundamental safety issue of fire and safety garments workers.
- To discover the basic issues in fire and safety garments enterprises.
- To know the basic sicknesses of fire and safety garments workers on account of Asbestos.
- To understand the effect of Asbestos on the fire and safety garment workers.
- To suggest rules for building appropriate Health and Safety plan for fire and safety garments produces.

3.2. METHODS OF DATA COLLECTION:

Primary data – Primary data is collected through Questionnaire and Interviews of 100 workers
Secondary data – Secondary data is collected through Internet, Articles, Reports, and Research papers.

3.3.RESEARCH DESIGN :

The research design deployed was exploratory research.

3.4.LIMITATIONS OF THE RESEARCH :

Due to face-to-face interview at working place, workers were not comfortable to response. The research has physical and economical constraint.

3.5.DELIMITATIONS OF THE RESEARCH:

Research is conducted in Mumbai area with the help of 100 workers.

3.6.DATA ANALYSIS METHOD :

Data is collected from workers to generalize the findings and draw conclusions of the research study.

4. FINDINGS :

- Out of 100 workers 18% workers are aware of the labour laws and 82% are unaware of labour laws.
- 28% are aware of the fabric called asbestos and 72% are the workers who are unaware of the fabric called asbestos.
- Only 18% are the known of the cancer caused by the asbestos and 82% are unaware about the same.
- 30% are the one who're aware of the diseases faced by fire and safety garment workers and 70% people are unaware.
- Only some are aware about it like there should be a campaign like BANI (Ban Asbestos Network India) which should be started in every state of India.
- As 78% of the workers says there should be compulsory ban on the use of Asbestos products and Asbestos containing products after knowing the problem which can be caused
- Other alternatives which can be used but just because the asbestos is cheap factory owners tend to use the same more.

5. CONCLUSION :

Existing proof indicates that exposure quantum in Asian nation is perhaps planning to be high for every kind of exposures, and also the incidence of respiratory disorder is perhaps

planning to be high. pneumoconiosis patients suffer from progressive respiratory organ parenchymal pathology induced by the safe system, that slowly destroys the snap and force of the alveoli, hampering traditional blood activity. This ends up in progressive respiratory organ incapacity, and once it sets in, it can't be stopped or reversed. The patient cannot get ample gas, becomes terribly breathless, weak, and native insusceptibility of the respiratory organ deteriorates. This unwellness represents a bigger threat to future palliative care as a result of 2 main reasons. aside from very high incidence rates, these patients rely on palliative look after long as a result of longer survival period close to the terminal sickness, compared to carcinoma and alternative cancers. no matter whether or not we have a tendency to contemplate minimal elaborate incidence at two hundredth, there'll be unnumberable people with pneumoconiosis over a time of the subsequent 3 decades. the requirements of intensive palliative care square measure huge, particularly close to the end of life. it's been established that there's no safe thanks to use amphibole. These diseases have long incubation periods, and also the demand for palliative care shall stay for 3 to four decades even once the overall ban of its use. Since amphibole is already gift in varied product and is a component of the made climate, exposures can still happen even once complete ban, albeit at a lower level. There square measure several reasons but primarily is lack of awareness. whereas the govt of Asian nation has rules in situ for its safe usage, similar to; The Indian industrial plant Act and Bureau of Indian customary have already got rules and rules for safe usage of amphibole Contaminated product. it is the privilege of every working person to urge Associate in Nursing earlier data from the organization. And it's on their can to figure with the item or not. staff square measure the organizations wealth at the day's finish staff and also the organization is really interconnected. On the off probability that there'll be no specialist willing to figure with the organization, the organization will not fill in the society. day its organizations obligation to advise the labors and staff and to follow the essential ethics as somebody's towards the opposite human.

6. SUGGESTIONS :

To lessen the long run adult respiratory distress syndrome (Asbestos-related Diseases) in Asian nation to a minimum, arrangement changes leading to a complete ban of amphibole use and import is crucial. Asian nation ought to walk the trail of these sixty five countries World Health Organization have done this already, a minimum of in time-bound and stepwise manner if not now. Such a briefing amendment can guarantee not simply the massive Asian nation population however additionally people across the countries to that India exports amphibole merchandise. though adult respiratory distress syndrome area unit in progress and incurable, the standard of life (QOL) is also improved if patients area unit diagnosed early. On the off probability that the screening is completed among exposed people, it's potential to diagnose several at the sooner stage of the ARD, and that they is placed on the interventions supported palliative care to enhance QOL but not curative treatment. a lot of thrust ought to lean to developing interventions to enhance QOL and retard the progress of adult respiratory distress syndrome. As most of the highest level wage bunch countries have prohibited amphibole long back, investment within the connected analysis will not be the agenda for such countries. It ought to be the necessity for Asian nation

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A COMPARATIVE STUDY ON SPEECH BASED SMART VIRTUAL ASSISTANTS - GOOGLE ASSISTANT, CORTANA, SIRI AND BIXBY

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ABSTRACT

Smart Virtual Assistants have become very popular these days and has now become an inbuilt feature provided by various operating systems both on mobile phones and desktop personal computers. It has made our life easier by automating the very basic day to day routines as well as being able to effectively perform multistep operations by issuing commands either verbally or through textual mode. This paper aims to present a comparative study on four of the most popular virtual assistants - Google Assistant, Cortana, Siri and Bixby with respect to the accuracy, performance and quality of the responses.

Keywords: smart personal assistant, commands, user interface ,audio , natural language

1. Introduction

Virtual Assistants also called as AI Assistant or Digital Assistant is an application that understands natural language audio commands from the user and responds either by audio output or by performing various tasks according to them. In technical terms, they are also called as "Speech Based Natural User Interfaces". Recent advancements in the field of natural language processing has led to virtual assistants getting smarter in performing tasks and thereby being widely used by people to perform basic everyday tasks such as setting alarms, checking out the weather, playing music, reading news, playing games, home automation and shopping. The use of smart voice assistant technology from Apple (Siri), Google (Google Assistant), Microsoft (Cortana) and Samsung (Bixby) have become very popular these days. This research paper aims at a performance comparison between these virtual assistants with respect to the accuracy of the output, performance and quality of responses.

2. Overview of Virtual Assistants Evaluated

2.1 Google Assistant

Google Assistant is Google's virtual helper that allows the user to get various tasks done faster by automation. Instead of performing various operations manually by taping on the screen a gazillion times ,it helps the user by performing tasks simply by using voice commands. It was initially released in May 2016 and have improved a lot since then.

It is very well integrated with Android smartphones and Google Home Ecosystems. Google Assistant is compatible with most popular media services, letting users enjoy music, TV shows, podcasts, and audiobooks by asking the Google Assistant.

2.2 Microsoft Cortana

Cortana is a voice-enabled virtual assistant developed by Microsoft to help Windows 10 users initiate requests, complete tasks and anticipate future needs by surfacing relevant data in a personal context. It was initially released with Windows 10 platform in 2015 and advancements to it has increased its usage among Windows 10 users.

2.3 Apple Siri

Siri is a virtual assistant developed by Apple Inc. and is available on most of their flagship products including iPhone, iPad, Mac, Apple Watch, Apple TV, and HomePod. It helps you to stay connected without lifting a finger. It can even read messages and announce it on your Airpods effortlessly. It can answer simple queries about the weather to more complex queries such as the number of calories in the food consumed.

2.4 Samsung Bixby

Bixby is the voice powered digital assistant developed by Samsung Electronics and released in 2017 with Galaxy S8 and Galaxy S8+. The user can interact with Bixby using text, voice or taps. It is designed to work across a range of Samsung products and is incorporated in numerous other devices like Samsung's Family Hub Fridge and TVs. Bixby can learn individual voices, so it will personalize answers depending on who asks.

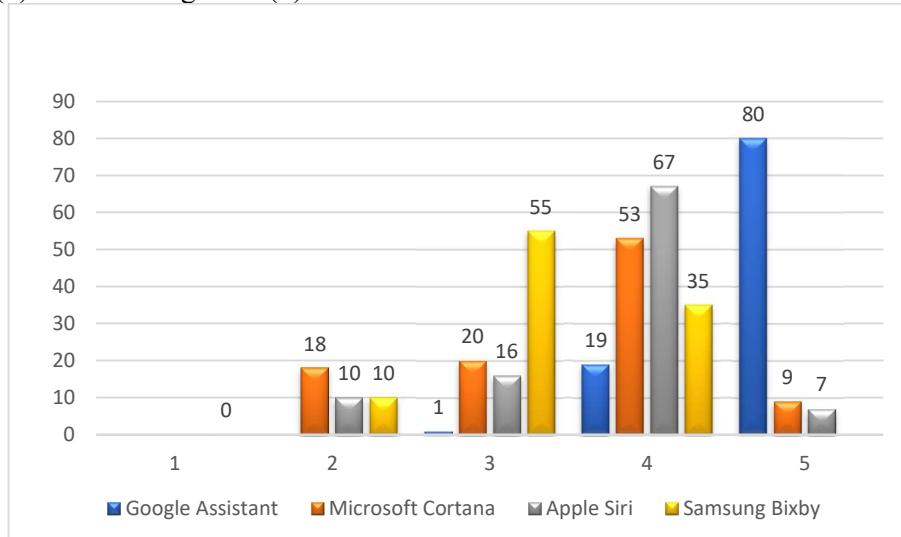
3. Methodology

3.1 Evaluation Criteria - Correctness and Quality

The methodology that was adopted was to evaluate the objective and subjective correctness of the answers provided by the selected four virtual assistants. There were 10 questions selected to assess the virtual assistants which were having 5 objective answers and 5 subjective answers. The correctness and quality of all the responses given by these virtual assistants for all the 10 questions was evaluated. The following 10 questions were chosen:

1. Where is the capital of India?
2. What is the currency of India?
3. Who is the President of United States of America?
4. How much is three plus four?
5. Who won the Battle of Panipat?
6. What is the world in 2021 going to look like?
7. Is coronavirus here to stay?
8. Is online education having a lot of cons than pros?
9. How to stop women harassment?
10. Is social media fake?

The responses provided by the Virtual Assistants were evaluated for correctness and quality by 30 participants who were sent the video recording of the responses. The participants were in the age range of 18 to 35. All were asked to give a rating on the scale of 1 to 5. The scale was: (1) very poor (2) poor (3) average (4) above average and (5) excellent. The results were as follows:



It was found that 80% considered responses provided by Google Assistant excellent with respect to correctness and quality. Cortana followed next with 9% considering responses excellent and 53% considered them above average and 20% considered them average. In the case of Siri, only 7% of the

evaluators considered that the answers were excellent, but 67% considered answers above average and 16% considered average. Bixby was the lowest scorer with none considering the answers excellent, 35% considered them above average and 55% considered them average.

3.2 Evaluation Criteria -Task Performance

In this criteria, there were five tasks decided to be performed by all the virtual assistants. The tasks were performed on all the virtual assistants and video recorded. They were:

- a. Setting the alarm
- b. Reading out the latest news on sports
- c. Checking out the weather
- d. Sending message on whatsapp
- e. Reading Highlighted content from Email.

It was found that Google Assistant gave commendable responses and was able to perform all the above five tasks successfully. Cortana gave second best response but wasn't able to send messages on whatsapp. In the case of Siri, performance was good and it was able to send whatsapp messages on ios version 10.3 but the command structure was very rigid. If the tasks were not commanded properly in the format understood by the virtual assistant, the response received would be incorrect. Bixby was average in performing the daily tasks but concrete command structure had to be provided.

4. Conclusion and Future work

This paper described the results of an evaluation of four intelligent personal assistants, to identify the best assistant based on how good and correct their answers were and the performance of the tasks assigned. The study included the most popular personal assistants in the market: Google Assistant, Siri, Cortana and Bixby. A total of 30 participants conducted the study.

It was found that Google Assistant performed best among them all in the accuracy, quality of the answers as well as giving a good performance. Cortana came second and Siri was considerably close with average performances and Bixby was good in performing daily tasks but still needs improvement in objective and subjective answers and command structure.

Further studies are needed to evaluate the effects of background noise and unstructured commands impacting the performance of the task as well as the accuracy of the answers. In addition, we can also check the responses from a varied population and improve the result.

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CHALLENGES FACED BY AGRO BASED MSMES INDUSTRIES AND ITS EFFECTS ON BUSINESS PERFORMANCE

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Abstract

India is an agrarian nation and Agro-based MSMEs industry is considered as the sun rising sector of the Indian economy. Agro-based MSMEs of India has to face many challenges and utilize the opportunities in the fast changing global markets. The study of main objectives of Challenges based by the agro-based MSMEs. Thus, management needs better awareness of these challenges to overcome it to improve their business performance. The study area was Dindigul city of Tamil Nadu. The sample size consists of 120 respondents taken for this study. Here discuss with Table 2 to 8 provides description of measures of various challenges faced by agro- based MSMEs industry and these measures are grouped into 6 constructs such as Infrastructural, Personnel, Financial, Marketing, Production and Business challenges. .The challenges selected in the study may not cover all the challenges faced by agro-based MSMEs units and there could be other challenges. The collected data was analysed using mathematical and statistical tools like Arithmetic Mean, Standard Deviation and Correlation Analysis. For Low productivity measure, mean value is above 9.0. This indicate that measure, agro- based MSMEs industry will increase, is a very high challenges. For Lack of modern technologies, Scarcity of material and High cost of machinery mean value lies between 6.1 to 9.0. This indicates that agro- based MSMEs industries face high challenges on these measures. It also aims to find the effect of challenges on the business performance of the agro-based MSMEs units.

Keywords: Agro based MSMEs, Infrastructural, Personnel, Financial, Marketing, Production and Business challenges.

Introduction

The Agro-based Micro, Small and Medium Enterprises sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. Agro-based MSMEs not only play significant role in providing employment opportunities at comparatively lower cost of capital than large scale industries but also help in establishment of industrialization of rural and backward areas, which leads to reduce regional imbalances and assure equitable distribution of national income and wealth. Agro-based MSMEs are complementary to large industries as ancillary units and contribute enormously to the socio-economic development of the country. Agro-based MSMEs of India has to face many challenges and utilize the opportunities in the fast changing global markets. Now, Agro-based MSMEs are required to make use of consultancy services to upgrade their competencies in various fields like marketing, finance, business development operations, technology etc.

Review of Literature

a. Neethu Anil & Ajimon George (2018) in their study on Problems faced by Agro based Industries and Its Effect on Business Performance, India is an agrarian nation and Agro-Based industry is considered as the sun rising sector of the Indian economy. The scope of the agro-processing industry encompasses all operations from the stage of harvest till the material reaches the end users in the desired form, packaging, quantity, quality and price. Though many schemes are there to support the agro based industry they still encounter some problems like Infrastructure, Management, Technological, Financial, Environmental, Marketing, Government policy, Raw

material etc. The present study is intended to understand the various problems faced by agro based industry and to examine how these problems affect their business performance.

b. Seemant Yadav & Vikas Tripathi (2018) their research work on challenges and obstacles faced by micro, small and medium sized enterprises (MSMEs) in India. The purpose of this paper is to study various challenges faced by Micro, Small and Medium sized enterprises (MSMEs) in India. As far as Indian economy is concern, the MSME sector plays a very significant role in employment generation and in industrial production. Indian MSMEs contributes around 8% in the GDP and provide employment to approximately 595 lakhs people. Still MSMEs have to follow a long path, which is not free from challenges. Role of MSMEs become very crucial in the light fact that in India public and private firms are not able to provide employment as per the required rate. Thus, the there is strong need to restructure and strengthen MSMEs sector and government should put more effort in this direction.

c. Gaziasayedand Najmussaharsayed (2018) has conducted a study on Challenges and obstacles faced by micro, small and medium sized enterprises (MSMEs) in India. Challenges faced by micro, small and medium enterprises of Mumbai Micro, Small and Medium Enterprises Are Considered as the Growth Engine. Indian MSMEs Are Facing Lots Of Setbacks. These Setbacks Are Not Only Hindering The Growth Of MSMEs Sector But Are Also Obstructing The Growth Of The Economy. Therefore The Main Aim Of This Research Paper Is To Identify These Setbacks Or Challenges Faced By MSMEs In Mumbai. In Order To Understand The Challenges Faced By Mumbai Based MSMEs The Views Of 120 MSMEs Owners Is Captured Through A Structured Questionnaire.

d. Waseem Hamid (2017) Analysed Growth, Challenges and Issues related to Micro, Small and Medium Enterprises (MSMEs) in Jammu and Kashmir Micro, Small and Medium Enterprises (MSMEs) have played an imperative role in the economic activities of advanced industrialized countries like Great Britain Germany, Japan, and the United States of America. In developing countries like India, these industries or Enterprises have an enormous importance due to its high level employment potential with low capital cost. MSMEs are also supporting in industrialization of rural backward areas. This study is regarding Jammu and Kashmir (J&K) of the India, an industrial backward state of India. In J&K large scale industries are present in small numbers; only MSMEs/SSI units are growing after a long gap of disturbance. From last two decades MSMEs/SSI have been growing in a satisfactory pace as per circumstances of the state. However these enterprises are facing different hurdles in overall growth and development like poor infrastructure, shortage of electricity, political instability and financial problems. Government is outlining different policies and schemes for the growth of this sector but unfortunately failing to complete their objectives.

e. Pooja Khatri. (2019) in his research work on A Study of the Challenges of the Indian MSME Sector. This exploratory research paper aims to present the role of MSME sector in the Indian economy. It reveals various aspects related to problems of finance, marketing, technology, human resource, operations and export potential based on secondary data. Lack of consultancy support, complicated documentation, lack of the latest technological skills, lack of motivation and presence of high employee turnover, inefficient logistics, low-quality products, poor bargaining power, informational gap, infrastructural gaps, complicated laws, lack of foreign quality certifications, regularity policy uncertainty, etc. are few of such problems.

Research Gap

The review of literature revealed that the studies which examined the challenges faced by agro- based MSMEs industry are scant in literature. The purpose of the study is to find answers to the following research questions. (a) What are the challenges faced by agro- based MSMEs industries.(b) whether there is any relationship between challenges faced by agro- based MSMEs industries and their business performance? (c)Whether challenges faced by agro-based MSMEs industries have any effect on the business performance of agro based industries? This study thus

aims to fill the gap in the literature and hence the study is quite relevant and timely from the point of view of empirical study face and economic development.

Statement of the problem

Agro industry activity can be made more effective with establishment of agro-based MSMEs units. But the efficiency of the agro-based MSMEs unit depends upon the effective management of the business and environment. Business environment is always changing and based on these changes challenges will arise. Thus, management needs better awareness of these challenges to overcome it to improve their business performance. Even though there are many schemes to help agro-based MSMEs unit the effectiveness of these schemes needs to be rechecked as the agro-based MSMEs units are still facing the various challenges such as production, personnel and marketing.

Objectives of the study

1. To Present the profile of the agro-based MSMEs in Dindugal district
2. Challenges based by the agro-based MSMEs.

Hypotheses

This study proposed the following hypotheses.

- H_01 There is no significant correlation between challenges faced by agro-based MSMEs industries and their business performance.
- H_02 There is no significant effect of challenges faced by agro-based MSMEs industries on their business performance.

Sources and methods of data collection

The study is solely based on primary data collected from 120 agro-based MSMEs unit in Dindigul district of Tamilnadu. The sample of this study includes Agro-based MSMEs entrepreneurs who are running agro-based MSMEs industries like food processing industries, poultry farms, dairy farms, pickle, squash processing industries, oil mills etc. Simple random sampling method was used in the selection of sample. The data was collected using a structured questionnaire, responses on the various measures used in the study were obtained on a five-point scale as strongly agree (5), agree (4), neither agree nor disagree (3), disagree (2) and strongly disagree (1). The collected data was analysed using mathematical and statistical tools like Arithmetic Mean, Standard Deviation and Correlation Analysis. The secondary data were collected from various journals, internet and websites.

The Sample size

The study area was Dindigul city of Tamil Nadu. The sample size consists of 120 respondents taken for the study, 71% of the respondents are male and 49% of the respondents are female. So it reveals that most of the respondents are male. 83 percent of the respondents possess basic education and 37 percent completed Under-graduate programme. Majority of the respondents invested less than 10 Lakhs for starting the enterprise and 37 percent of the industries were established 15 years ago. Majority of the industries are located in rural area utilizing locally available resources for satisfying their needs and market their products within the district.

Profile of Agro-based MSMEs in Dindigul district

Dindigul is primarily an agro-based MSMEs town of Tamil Nadu. About 70% of the total population earns their livelihood directly or indirectly through Agriculture. There are about 165 Rice mills in and around Dindigul. Famous flour mill Naga, Viskalakshi are located there. Anil Semia, Savorit Semia, Nandhini Saamburani industries are located in Dindigul. Dindigul city is an important wholesale market. Dindigul is known for its leather tanning Industry. Tanneries are thickly situated in this District. The finished and semi finished leather and other leather products have a good export market. Major Exportable Items is Fruits, Oleoresin, Lock, garment, medium & small scale industries are list of the Units in Dindigul & nearby area Heavy Engineering Fabrication, essential oil extraction, floriculture, Leather tanneries, Milk based industry, Lock

industry. Totally 5240 owners of Agro-based micro, small and medium enterprises in registered units are located in Dindigul district.

Description of measures of challenges faced by agro-based MSMEs

Table 2 to 8 provides description of measures of various challenges faced by agro- based MSMEs industry and these measures are grouped into 6 constructs such as Infrastructural, Personnel, Financial, Marketing, Production and Business challenges.

Table1 Standards for comparison of mean values

Mean Values	Interpretation of challenges
Below 3.0	Very Low
3.1 to 6.0	Low
6.1 to 9.0	High
Above 9.0	Very High

Source: Authors own

Table 2 Measures of Infrastructural challenges faced by Agro- based MSMEs industry

Measure	Mean	SD
Location disadvantages	4.86	3.1
Distance from Warehouse	5.26	3.3
Natural calamity	5.66	3.36

Source: Primary Data

Infrastructural challenges faced by agro-based MSMEs industry. On an average the agro-based MSMEs unit faces low infrastructural challenges as their mean lies between the ranges of 3.1 to 6.0 respectively. Thus, it is concluded that agro based industries do not have infrastructural challenges.

Table 3 Measures of Personnel challenges faced by Agro-based MSMEs industry

Measures	Mean	SD
Non-availability of skilled labour	8.26	2.38
Unionization	5.14	2.96
Indiscipline	6.8	3
Absenteeism	7.66	2.62
High wages	6.8	3.14

Source: Primary Data

In case of Personnel challenges measures, means between 6.1 to 9.0 which indicate that agro-based MSMEs industries face high challenges on these measures. In case of Unionization mean lies between 3.1 to 6.0 thus agro- based MSMEs industries face low challenges on this measure. This indicate that except the measure Unionization, all other measures are a challenges for agro- based MSMEs industry.

Table 4 Measures of financial challenges faced by Agro-based MSMEs industry

Measures	Mean	SD
Shortage of working capital	8.06	2.14
High rate of interest	7.46	2.46
Lack of subsidies	9.34	1.2

Source: Primary Data

Study of Lack of subsidies measure shows that mean is above 9.0. Therefore, Lack of subsidies measure agro-based MSMEs industry is a very high challenges. In case of Shortage of working capital and High rate of interest measures, mean value is between 6.1 to 9.0 this indicate that measures such as high challenges for agro- based MSMEs industry.

Table 5 Measures of marketing challenges faced by Agro-based MSMEs industry

Measures	Mean	SD
Middleman interference	5.46	3.2
Competition	7.86	3.1
Inadequate promotion	5.86	3.36

Source: Primary Data

In case of Competition measure, mean is above 6.01 and below 9.0 which indicate that is a high challenges for agro-based MSMEs industry. Middleman interference and inadequate promotion measures have mean between 3.1 to 6.0. This indicate that agro-based MSMEs industries faces low challenges on these measures.

Table 6 Measures of Production challenges faced by Agro- based MSMEs industry

Measures	Mean	SD
Lack of modern technologies	8.46	2.14
Scarcity of material	8.2	2.12
High cost of machinery	7.8	2.18
Low productivity	9.34	1.7

Source: Primary Data

For Low productivity measure, mean value is above 9.0. This indicate that measure, agro- based MSMEs industry will increase, is a very high challenges. For Lack of modern technologies, Scarcity of material and High cost of machinery mean value lies between 6.1 to 9.0. This indicate that agro- based MSMEs industries face high challenges on these measures.

Table 7 Measures of Business Performance Indicator of Agro- based MSMEs industry

Measure	Mean	SD
Perishability of agro inputs	6.34	2.1
Lack of finance	6.0	1.9
Lack of well-equipped infrastructure	5.8	2.54

Source: Primary Data

The mean value of measure of business performance indicator Perishability of ago-based MSMEs lies between 6.1 to 9.0 which indicate that my business unit is making continues profit is a high measure. Lack of finance and Lack of well-equipped infrastructure low indicator of business performance as their mean lies between 3.1 to 6.0.

Table 8 Result of correlation between challenges and business performance

Challenges	Business Performance Correlation (r)	Sig
Infrastructural	-0.84**	0.002
Personnel	-0.926**	0.000
Financial	-1.188	0.000
Marketing	-1.2	0.000
Production	0.154	1.114

** Significance at 0.02 level

It is clear that there is significant negative correlation between infrastructural ($r = -0.84$), Personnel ($r = -0.926$), financial ($r = -1.188$), marketing ($r = -1.2$), Production ($r = -0.154$) problems and business performance. Hence the hypothesis H01, there is no significant correlation between challenges faced by agro- based MSMEs industries and their business performance is rejected except in the case of production challenges ($r = 0.154$).

Limitations of the study

The study was conducted with a very small sample of 120 agro-based MSMEs units in Dindigul district of Tamilnadu. Therefore, the future studies can include a large sample of agro-

based MSMEs units to generalize the result. The challenges selected in the study may not cover all the challenges faced by agro-based MSMEs units and there could be other challenges.

Findings and Suggestions

- Infrastructural challenges faced by agro-based MSMEs industry. On an average the agro-based MSMEs unit face low infrastructural challenges as their mean lies between the ranges of 3.1 to 6.0 respectively. Thus, it is concluded that agro-based MSMEs industries do not have infrastructural challenges.
- In case of Personnel challenges measures, mean is between 6.1 to 9.0 which indicate that agro-based MSMEs industries face high challenges on these measures. In case of Unionization mean lies between 3.1 to 6.0 thus agro-based MSMEs industries face low challenges on this measure. This indicate that except the measure, Unionization all other measures are challenges for agro-based MSMEs industry.
- Study of Lack of subsidies measure shows that mean is above 9.0. Therefore, Lack of subsidies measure agro-based MSMEs industry is a very high challenges. In case of Shortage of working capital and High rate of interest measures, mean value is between 6.1 to 9.0 this indicate that measures such as high challenges for agro-based MSMEs industry.
- In case of Competition measure, mean is above 6.01 and below 9.0 which indicate that is a high challenges for agro-based MSMEs industry. Middleman interference and inadequate promotion measures have mean between 3.1 to 6.0. This indicate that agro-based MSMEs industries faces low challenges on these measures.
- For Low productivity measure, mean value is above 9.0. This indicate that measure, agro-based MSMEs industry will increase, is a very high challenges. For Lack of modern technologies, Scarcity of material and High cost of machinery mean value lies between 6.1 to 9.0. This indicate that agro-based MSMEs industries face high challenges on these measures.
- The mean value of measure of business performance indicator Perishability of agro-based MSMEs lies between 6.1 to 9.0 which indicate that my business unit is making continues profit is a high measure. Lack of finance and Lack of well-equipped infrastructure low indicator of business performance as their mean lies between 3.1 to 6.0.

Suggestions

Based on the analysis of this present study, the following suggestions are provided

- Shortage of working capital and High rate of interest are the major challenges faced by agro-based MSMEs. So, the MSMEs should concentrate on effective management of working capital by analysing their working capital needs. In case of high rate of interest, the MSMEs may approach Institutional finance for their working capital operations.
- Non-availability of skilled labour is the major hurdle which makes impact on quality of the product. MSMEs may hire skilled labour through outsourcing or they can create skilled workforce hub with their peer operating companies.
- As far as Competition concerned, Companies should make effective marketing and promotional strategies.
- Low productivity is a serious challenges which hinder profitability of the MSMEs. It should be reduced through effective management of human resources and other resources.
- Perishability of agro products one of the major cause which create unfavourable production climate in MSMEs. Through proper storage and godown facility should be provided for MSMEs.

Conclusion

The study explored the challenges faced by agro-based MSMEs industries in Dindigul district of Tamilnadu. The study examined challenges like Infrastructural, Personnel, Financial, Marketing, Production and Business challenges. It also aims to find the effect of challenges on the

business performance of the agro-based MSMEs units. Among the independent variables, production challenges have greater impact on the business performance of the Agro based MSMEs in Dindigul district, followed by personnel and marketing challenges.

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A STUDY ON PERSPECTIVES AND EVALUATION OF ENTREPRENEURIAL DEVELOPMENT PROGRAMMES OFFERED TO COLLEGE STUDENTS IN DINDIGUL DISTRICT

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Abstract

The accelerating process of EDPs among the college student is very essential in India where the more the half of working community is as young Indians. For this purpose, a separate department for EDPs should be established in each institute and make the possibilities to offer the EDP course as an add on course to the all student. In addition, proper statistical data with respect of year wise transformation of students to entrepreneurs should be maintained in the motivational perspective. It is also the duty of Indian investors to invest the new projects of pass out students as a post treatment for EDPs' participants.

Key words: *EDPs, Students Entrepreneurs, EDP Course.*

Introduction

The Entrepreneurial Development programme (EDPs) consists of development of human community in the spheres of promotion , launching and carrying out of business activities in order to make profit and services to this society by optimum utilization of various kinds of resources of one nation In this connection, contribution of young entrepreneurs to Indian national income has been estimated as in increased trends It is the fundament responsibility of both central and state government to implement and encourage to provide the various kinds of EDPs to the young Indians falling under the age group ranging from 18 years to 29 years . In this context , Ministry of Human Resources Development (MHRD) of Central Government and Higher Education and Labour welfare department, Departments of MSMEs of various state governments, University grants commissions and KVIC are offering funds for the projects of EDPs which is implemented for transformation of students in to young and first generation entrepreneur. In addition to it, Educational institution with the collaboration of NGOs and Industries also offers EDPs to students under either curriculum and non curriculum basis. The accelerating process of EDPs among the college student is very essential in India where the more the half of working community is as young Indians.

In this connection, the Didigul district consists of 6 engineering colleges, 7 ploy technique colleges and more than 10 arts and science colleges. It also consists one Mother Theresa Women University(MTU) and one central Gandhigram Rural Institute (GRI) deemed university. In addition to it, Teachers education institutions, Pharmaceutical and Nursing institutes and Industrial Training Institute. Out these education institutions, GRI is a specialized institutions for transformation of college students into entrepreneurs in various angles such as Cooperative entrepreneurs, Agro based entrepreneurs, Handloom entrepreneurs, FMCG entrepreneurs and entrepreneurs with rural back ground. It offers specialized courses for Bakery Manufacturing technology, Handloom weaving technology, Natural dyeing practices and etc . GRI and other arts colleges also includes the EDP practices in the curriculum for the commerce and management students for the period of one semester. The ploy technique colleges are organizing lot of EDPs with the collaboration of District Industrial centre and industrial development institutes

Statement of the Problem

The entrepreneurial development activities are very essential to those countries like India in which majority of population are belonged to the younger age group . But the numbers of specialized higher education institution with provides practical oriented entrepreneurship are in small numbers. The implementation of EDPs projects to student community including training and workshops are in single digit in a district . So the ratio of EPDSs per student is not in positive trend. On the other hand most of private colleges never support to organize the EDPs in their premises frequently . Theses institution are providing more support the curriculum of the students . In addition to it, there is a need of different methods of teaching practices to the students belonged to different disciplines . But most of EDPs offered to students community are in same manner. It does not consider the students' degree of aspiration , attitude and level of commitment regarding Entrepreneurship . There is also vast gap between the existing present EDPs offered to students community and sector wise or industrial wise EDPs which is the prominent demand of student community . Another important problem is that there is a specific responsible and accountable authority or nodal agencies to provide the EDPs at specialized mode to transform the student as an entrepreneurs. The ratio of conversion of students into entrepreneurs is not properly measured . The maintenance of these data at district and national level is very essential but no agencies have the accurate data in this background and does not project the trends of transformation of students into entrepreneurs .

The present EDPs consists of barriers to success of EDPs among the student community such as lack of Post –EPDs practices, lack of supply of study material , insufficient duration of EDPs, Poor ratio of trainers / organizer and Participants in EDPs, Lack of Skill development activities and Low budget allotment for EDPs In this context, a study has been undergone to evaluate the perspectives and impact of EDPs offered to college students with special reference to Dindigul District of Tamil Nadu.

Scope and Limitations of the Study

The study has been undertaken to enumerate and analyze the various activities of EDPs offered to college students falling under arts and engineering disciplines in Dindigul district. In addition to, it has also evaluated the causes and effect relationship of EDPs offered to college students and the limitations of EDPs offered in the study period. The study period has fixed as 3 years from 2017-18 to 2019-2020. The effects of COVID -19 has also considered in this study.

Objectives of the Study

1. To study nature of sample college students undergone the EDPs in Dindigul district
2. To analyze the perspectives of various kinds of EDPs offered to sample college students in Dindigul district
3. To evaluate the impact of EDPs offered among the sample college students of Dindigul district
4. To assess the issues and limitations in EDPs offered to college students in Dindigul district
5. To propose the practical changes and reforms in existing EDPs.

Research Design

The descriptive study has been undertaken with both primary data and secondary data. The purposive sampling technique has been adopted. 4 College including one Arts and Science college i.e., A.P.A. College of Arts Culture Palani, One rural institute i.e., Gandhi Gram Rural Institute, Dindigul, ABC poly technique College, and Subramania College of Engineering and Technology have selected as the sample institutes based on numbers of EDPs offered to its students as a purposive sampling units in Dindigul district. Out these sampling units, 25 student per units who are already participated in EDPs have been selected by using simple random technique. The Total numbers of

sampling size is fixed as one hundred respondents to this study .. The collected data has properly grouped and analyzed by using T- Test , one way ANNOVA and mean and percentage analysis .

Distribution of Sample College Students Participated in EDPs

The 56 percentage of sample respondents have belonged under the age group ranging from 19 years to 21 years. Only 19 percent of sample respondents age group has calculated under the age group ranging from 16 years to 18 years Out the sample respondents, the ratio of engineering and poly techniques colleges (53 percent) students was higher than arts college students (47 percent). It is inferred that engineering and ploy technique college students have paid more attention and utilized the EDPs than the students of arts and science college. Out of engineering students, mechanical and computer science students are considered as committed personalities in the connection of participation of EDPs in the study area. (*Table 1*)

In this connection, the sample students have participated in the various EDPs consisting of Awareness Programme (17 percent), Special lecturer (17 percent) Workshops (7 percent) Training (14 percent), Projects in Entrepreneurship development (3 percent) Subject in curriculum (5 percent), Students and Entrepreneurs Meet (9 percent) Industrial Visit (14 percent) and In plant Training (16 percent). The duration for EDPs such as Projects in Entrepreneurship development and Subject in curriculum has been perceived as longer one than other . But the duration for awareness programme and special lecturer has perceived as 2 to 4 days in the study period. (*Table 2*)

Table -1 Distribution of Sample College Students Participated in EDPs

Sl.no	Particular	No of Sample Respondents		Total
		Male	Female	
I				
	16 years to 18 years	08 (16.00)	11 (22.00)	19 (19.00)
	19 years to 21 years	32 (64.00)	24 (48.00)	56 (56.00)
	22 years to 25 years	10 (20.00)	15 (30.00)	25 (25.00)
	Total	50 (100)	50 (100)	100 (100)
II				
	Courses of Study of sample students			
	Literature	03 (06.00)	05 (10.00)	08 (08.00)
	Sciences	04 (08.00)	06 (12.00)	10 (10.00)
	Arts	05 (10.00)	07 (20.00)	12 (12.00)
	Commerce and Management	08 (16.00)	09 (18.00)	17 (17.00)
	Computer Science / Technology	07 (14.00)	14 (24.00)	21 (21.00)
	Civil Engineering	11 (22.00)	03 (06.00)	14 (14.00)
	Mechanical Engineering	04 (08.00)	00 (00.00)	04 (04.00)
	Electrical and Electronics Technology	08 (16.00)	06 (12.00)	14 (14.00)
	Total	50 (100)	50 (100)	100 (100)
III				
	College of the study of Sample students			
	Arts and Sciences Colleges/ Institutes	20 (40.00)	27 (40.00)	47 (47.00)

	Poly techniques	10 (40.00)	08 (40.00)	18 (18.00)
	Engineering college	20 (40.00)	15 (40.00)	35 (35.00)
	Total	50 (100)	50 (100)	100 (100)

(Source : Complied from primary data)

Sl.no	Particular	No of Sample Respondents		Total
		Art & Science College	Engineering College	
I	Nature of EDPs			
	Awareness Programme	07 (14.00)	10 (20.00)	17 (17.00)
	Special lecturer	08 (16.00)	09 (18.00)	17 (17.00)
	Work shops	04 (08.00)	03 (06.00)	07 (20.00)
	Training	04 (08.00)	10 (20.00)	14 (17.00)
	Projects in Entrepreneurship development	02 (04.00)	01 (02.00)	03 (03.00)
	Subject in curriculum	03 (06.00)	02 (04.00)	05 (05.00)
	Students and Entrepreneurs Meet	06 (12.00)	03 (06.00)	09 (09.00)
	Industrial Visit	08 (16.00)	06 (12.00)	14 (14.00)
	In plant Training	08 (16.00)	06 (12.00)	16 (16.00)
	Total	50 (100)	50 (100)	100 (100)
II	Duration of EDP			
	61 days to 90 days	5 (10.00)	3 (16.00)	08 (08.00)
	31 days to 60 days	0 (16.00)	0 (16.00)	00 (00.00)
	16 days to 30 days	8 (16.00)	6 (16.00)	14 (14.00)
	8 days to 15 days	4 (16.00)	10 (00.00)	14 (14.00)
	4 days to 8 days	10 (16.00)	07 (16.00)	17 (17.00)
	2 days to 4 days	19 (16.00)	08 (16.00)	27 (27.00)
	One day	04 (16.00)	06 (16.00)	10 (10.00)
	Total	50	50	100

	(100)	(100)	(100)
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Table 2 Perspectives of EPDs among the Sample College Students in Dindigul District

(Source : Complied from primary data)

Impact of EPDs on the Carrier of Sample College Students in Dindigul District.

The perception of Arts college sample students and Engineering college sample students were obtained through the five point likert scale and converted to numerical data. The data were also fitted to the statistical tool ‘t’ test to calculate the mean value, ‘t’ value and the level of significance of impact of EPDs offered along with their studies. Both Arts college sample students and Engineering college sample students have given high mean scores to the impact of EPDs such as Partially starting Entrepreneurial activities in family business , Undergoing practical training to become a entrepreneur in MSMEs, Starting a micro level trading /services marketing practices at time of studies and Undergoing the project work in the Entrepreneurship.

Table - 3 Impact of EPDs on the Carrier of Sample College Students in Dindigul District.

Sl. No	Perception	Arts college students N=50		Engineering college students N=50		“t” Value	Level of Significance
		Mean \bar{x}	Std. Deviation 'S'	Mean \bar{x}	Std. Deviation 'S'		
1	Increased level of Motivation and commitment	3.0033	1.107	3.1154	1.084	0.44	0.802
2	Final determination of Carrier of student to become as an Entrepreneur	3.6632	1.357	3.4479	1.305	-0.43	0.713
3	Partially starting Entrepreneurial activities in family business	3.9134	1.144	3.7332	1.621	1.88*	0.151
4	Undergoing practical training to become a entrepreneur in MSMEs	3.7120	1.115	3.6203	0.762	-0.36	0.811
5	Undergoing practical training to become a entrepreneur in Agricultural sector	3.9662	1.162	3.7990	0.933	-0.30	0.677
6	Proposing to select the EDP courses for their academic studies	3.3333	1.166	3.2251	1.484	0.44	0.833
7	Starting a micro level trading /services marketing practices at time of studies	3.7002	1.307	3.8119	1.305	-0.50	0.703
8	Undergoing the project work in the Entrepreneurship	3.9134	1.123	3.7830	1.411	1.98*	0.161

(Source: Complied from primary data * Significant at 5 percent level)

Significance deference of perception between the Arts college sample students and Engineering college sample students was noticed in the respect of two kinds of impacts of EPDs i.e., one variable i.e., Partially starting Entrepreneurial activities in family business and Undergoing the project work in the Entrepreneurship. Since the “t” value of Partially starting Entrepreneurial activities in family business (1.88) and Undergoing the project work in the Entrepreneurship (1.98) have been found to be statistically significant at 5 percent level. (Table 3).

Limitations and Issues in EDPs offered to sample college students

The perception of Arts and Engineering colleges sample respondents were obtained through the five point likert scale and converted to numerical data. The data were also fitted to the statistical tool 't' test to calculate the mean value, 't' value and the level of significance of the Association of Profile Factor "nature of students " with the **Limitations and Issues in EDPs offered** ..Both Arts and Engineering colleges sample respondents have given high mean scores to the following limitations/ issues with the respect of EDPs offered to college students in Dindigul district such as "Duration of the period of EDPs is not very low and not adequate", "Insufficient numbers of practical sessions / In plant Training / Industrial Visit", "Poor ratio of trainers / organizer and Participants in EDPs" and "No productivity efficiency orientation practices in EDPs" (*Table 4*)

Table - 4 Nature of students wise perception on Limitations and Issues in EDPs

Sl. No	Perception	Arts college students N=50		Engineering college students N=50		“t” Value	Level of Significance
		Mean — X	Std. Deviation ‘S’	Mean — X	Std. Deviation ‘S’		
1	Duration of the period of EDPs is not very low and not adequate	3.8755	1.377	3.9700	1.214	0.47	0.882
2	Study material is not supplied	3.2331	1.217	3.3476	1.295	-0.61	0.513
3	Lack of Post –EPDs practices	3.8937	1.176	3.8771	1.420	1.56*	0.132
4	Insufficient numbers of practical sessions / In plant Training / Industrial Visit	3.8129	1.185	3.7275	0.412	-0.61	0.792
5	Poor ratio of trainers / organizer and Participants in EDPs	3.9002	1.052	3.8891	0.621	-0.42	0.557
6	Lack of Skill development activities	3.2211	1.610	3.4389	1.671	0.39	0.799
7	No productivity efficiency orientation practices in EDPs	3.9712	1.516	3.9901	1.431	-0.49	0.694
8	Low budget allotment for EDPs	3.7675	1.190	3.6521	1.290	1.67*	0.143
9							

(Source: Complied from primary data * Significant at 5 percent level

Significance deference of perception between Arts and Engineering colleges sample respondents was noticed in the respect following two kinds of issues such as Lack of Post –EPDs practices and Low budget allotment for EDPs . Since the "t" value of the such variables respectively 1.56 and 1.67 were found to be statistically significant at 5 percent level. (Table 4)

Conclusion

The average numbers of EDPs offered to students in each colleges should be maximized . A separate department for EDPs should be established in each institute and make the possibilities to offer the EDP course as an add on course to the all student. In addition, proper statistical data with respect of year wise transformation of students to entrepreneurs should be maintained in the

motivational perspective. It is also the duty of Indian investors to invest the new projects of pass out students as a post treatment for EDPs' participants.

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PATIENTS' SATISFACTION WITH THE QUALITY OF NURSING CARE IN APOLLO MULTISPECIALTY HOSPITAL IN MADURAI

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Abstract:

This research paper aims at investigating the level of relationship of satisfaction with selected variables. The data used in the study is primary in nature which has been collected through issue of structured questionnaire. A sample of 120 patients' in Apollo multispecialty hospital in Madurai has been selected through consecutive sampling technique. Simple percentage analysis, mean, standard deviation, 't' test and chi-square test are applied in analyzing the data. The study discloses that there was no significant difference between mean satisfaction of patient with quality nursing care with regard to the age of the patient, sex, education and economic category.

Key Words: Patients Satisfaction, Quality of Nursing.

Introduction:

Affiliation among patients and health-care providers measured an indispensable part of quality of health care. Patients in unusual health-care settings want to take for granted more control and attachment in decision making. Among is the patients' satisfaction that has been assumed as an involved section in monitoring hospital's quality of care. The very important aspect of patient's contentment is nursing care. Nurses are implicated in almost every aspect of patient's care and work together with patients supplementary over and over again than any other healthcare specialized in a hospital. Ongoing edification is a phrase used to portray the programmes or courses that support qualified nurses in increasing and maintaining the medical expertise that promotes quality-nursing care. In the precedent, a nurse's position consisted of given that care and reassurance to clients and the theater specific nursing functions. The role of contemporary nursing has extended to embrace a sensitive accent of illness anticipation, health endorsement and unease for the clients holism. Today's nurse engages in just about in eight unified roles: caregiver, advocate, critical thinker, teacher, communicator, manager, researcher and rehabilitator.

Review of Literature:

Andaleeb (2011) reveals that the poor patient satisfaction can lead to poor adherence to treatment with consequently poor health outcomes. So satisfaction of patient has an impact on outcome of treatment and to maintaining good interpersonal relationship. On this line, assessing the satisfaction of patients with nursing care is crucial in order to identify the area of dissatisfaction and at the same time improve the nursing services. **Ijeoma et al., (2011)** conducted that the helpless patients were satisfied with physical and psychological care but satisfaction with spiritual care was marginal. Nurses seemed to lack skills for meeting spiritual needs of the patients. Patients' satisfaction with nurses' attitude was marginally positive. The study showed that there was need for improvement in the care nurses provide for helpless patients in the spiritual dimension. **Yim et al., (2008)** conducted that the factors affecting the satisfaction of the program were age, religion, income, stage of disease at diagnosis, source of health information, duration of Internet usage, and whether the patient performs breast self-examination. Although the program was evaluated as somewhat useful and satisfactory, it should be improved upon

by providing in-depth and cutting edge breast health information especially for women from a higher educational and income background. **Lynn et al., (2007)** show that content validity was established and constructs validity has been explored preliminarily by examining the relationship between the Patient's Assessment of Quality Scale-Acute Care Version scores and patients' compliance. The Patient's Assessment of Quality Scale-Acute Care Version is a relatively new measure of quality nursing care; it has met many criteria for an adequate measure of quality care. **Fahad (2005)** reveals that there is significant positive correlation ($r = 0.36, P = .01$) was also found between overall patient satisfaction and their reported intentions of returning and recommending the hospital to others. Overall patient satisfaction is linked with quality nursing care, which, in turn, depends on the quality of leadership practiced at the institution. **Johansson et al., (2002)** describe eight domains that have an influence on patient satisfaction with nursing care; the socio-demographic background of the patients, patients' expectations regarding nursing care, the physical environment, communication and information, participation and involvement, interpersonal relations between nurse and patient, nurses medical technical competence, and the influence of the health care organization on both patients and nurses. An important implication for future research is to elucidate the factors that influence satisfaction with nursing care, as seen from the Patients perspective.

Need of the Study:

Enduring contentment is an imperative piece of health care diligence in this aggressive era. Patient pleasure leads to drift in both new and old patients, which hinders the sustainability of any hospital in lengthy sprint. Patient satisfaction surveys are useful in fast and kind of the user needs and their discernment of the service acknowledged. The promising health care copy suggests that patient satisfaction is a prevailing worry that is disheveled with premeditated decisions in the health services. Patient fulfillment should be as indispensable to assessments of quality as to the design and executive of health care systems. But for quality development becomes a right of way, the costs are depressing.

Significance of the Study:

Nursing care is one of the main fitness care services. It contributes a bunch to the patient healing procedure. To develop the excellence nursing care, the nurses require to be acquainted with what factors influence patient satisfaction. Even despite the fact that there are proficient physicians present in a given health foundation, it would not be tolerable without fitting nursing care. Nurses have 24 hour got in touch with patients as well as being close to them. Thus, as they are the vanguard, the patients expect more from them and nurses should also fulfill patients' needs with proficiency and an empathetic draw near. If the patient is deprived of appropriate care the healing process is evidently compromised. Patient can look forward to and require satisfaction from nursing care and be tolerable take and vigorous part in decision-making on the subject of their care.

Objectives of the Study:

In order to seek answers to the question raised above, the following objectives have been framed.

1. To assess the patient satisfaction with nursing care quality.
2. To identify the relationship of satisfaction with selected variables.

Research Methodology:

The present study is mainly based on primary data which have been collected from the hospital nurses' in Madurai through the issue of structured questionnaires. The questionnaire contains questions relating to the personal profile of nurse, their occupational details and level of satisfaction with nursing care quality in the hospital. The study consists of 120 samples which have been collected from Apollo Multispecialty Hospital in Madurai using consecutive sampling method. The data gathered from the

hospital nurses' have been analyzed using simple percentage, mean, standard deviation, 't' test and chi-square test.

Results of the Study:

The findings of the study are separated into three wide sections namely, simple percentage, chi-square test and mean, standard deviation and p value of the patients' in Apollo multispecialty hospital in Madurai.

(i) Simple Percentage Analysis

Table 1 Demographic profile of sample respondents

Category	Particulars	Respondents	Percent
Age	Below 20	16	13.33
	21-40	25	20.84
	41-60	65	54.16
	61-80	14	11.67
Gender	Male	53	44.17
	Female	67	55.83
Educational Qualification	Uneducated	20	16.67
	Below 9 th standard	40	33.33
	10th-12th	50	41.67
	Degree	10	8.33
Economic Category	Below Rs. 1,000	58	48.33
	Rs. 1,000- 5,000	38	31.67
	Above Rs. 5,000	24	20.00
Marital Status	Unmarried	45	37.50
	Married	53	44.17
	Widow	22	18.33
Occupation	Business	14	11.67
	House wife	20	16.67
	Geriatrics	34	28.33
	Studying	40	33.33
	Employed	12	10.00
Regarding Hospitalization	First time admission	25	20.83
	One to two times	55	45.83
	More than three times	40	33.34
Admitted to Medical units	General surgery units	50	41.67
	Obstetrics and gynecology unit	70	58.33
Physical facilities	Wheel chair services	30	25.00
	Bed in the hospital	25	20.83
	Cleanliness	20	16.67
	Comfort of the ward and rooms	45	37.50
Satisfaction towards Behavior	Ward boys	50	41.67
	Sweepers	45	37.50
	House keepers	25	20.83

ii) Chi-Square Test

To examine the association between the selected variables and level of nursing care quality with the patients' in Apollo multispecialty hospital in Madurai, the Chi-square test has been employed.

Ho: There exists no association between the selected variables and level of nursing care quality toward patients'.

Table 2 The level of nursing care quality

Variables Considered	d.f	Calculated χ^2 Value	Table Value		Remarks
			5%	1%	
Age	2	7.595*	5.991	9.210	Significant
Gender	4	20.638**	9.488	13.277	Significant
Marital Status	2	4.806	5.991	9.210	Not Significant
Educational Qualification	2	7.076*	5.991	9.210	Significant
Occupation	2	6.775*	5.991	9.210	Significant
Economic Category	2	0.291	5.991	9.210	Not Significant
Regarding Hospitalization	2	0.421	5.991	9.210	Not Significant
Behavior of Duty Nurse	2	27.133**	5.991	9.210	Significant
Physical Facilities	6	31.667**	12.592	16.812	Significant

* Significant at five per cent level

** Significant at one per cent level

Out of the total nine variables selected for testing, six variables are found to be associated with the patient satisfaction with nursing care quality. Of which age, educational qualification and occupation found to have significant association at five per cent level whereas the variables like gender, behavior of duty nurse and physical facilities are found to have highly significant association at one per cent level with the patient satisfaction with nursing care quality.

iii) Mean, Standard Deviation and P Value of Patient Satisfaction

Table 3 Level of Patient satisfaction

Categories	Mean(S.D)	P Value
Below 20	29.86 (2.93)	0.66
20 - 40	30.13 (3.16)	
Above 40	30.87 (3.05)	
Male	29.86 (2.98)	0.07
Female	31.53 (2.90)	
Below 12th standard	30.42 (2.99)	0.84
Above 12th standard	30.24 (3.19)	
Below Rs. 1,000	29.95 (3.02)	0.42
Above Rs. 1,000	30.66 (3.05)	

The above table shows that the satisfaction of patients with quality nursing care less than 20 years range from 20 to 40 with a mean of 29.86 ± 2.93 , with age between 30 to 49 years range from 22 to 34 with a mean of 30.13 ± 3.16 and age more than 50 years from a range from 25 to 36 with mean of $30.87 \pm (3.05)$. There is a minimal increase in mean satisfaction with nursing care with increase in age probably due to small sample. By doing unpaired t-test there is no statistical difference in the mean satisfaction ($p = 0.37$) of patients with quality nursing care with regard to age. Satisfaction of patients

with quality nursing care by sex, in male patient's satisfaction range from 22 to 35 with a mean of 29.86 ± 2.98 and in female patient's satisfaction range from 27 to 36 with a mean of 31.53 ± 2.90 . Females have slight more satisfaction than males. By doing student t test there is no statistical difference in the mean satisfaction ($p = 0.07$) of patients with quality nursing care. Satisfaction of patients with quality nursing care by educational level, below 12th standard range from 22 to 36 with a mean of 30.42 ± 2.99 and above 12th standard range from 25 to 36 with a mean of 30.24 ± 3.19 . By doing student t test there is no statistical difference in the mean satisfaction ($p = 0.84$) of patients with quality nursing care with regard to educational status. Satisfaction of patients with quality nursing care by economic category according to the hospital protocol. Below Rs. 1,000 category range from 22 to 35 with a mean of 29.95 ± 3.02 and above Rs. 1,000 category range from 25 to 36 with a mean of 30.66 ± 3.05 . There is more satisfaction seen in more paying category with nursing care probably due to small sample. By doing student t test there is no statistical difference in the mean satisfaction ($p=0.42$) of patients with quality nursing care with regard to economic category according to hospital protocol.

Conclusion:

In review, patient's satisfaction with nursing care depends principally on patients' sensitivity of quality of nursing care. Patients tend to distinguish quality of nursing care as being individualized, having a specialized mode and caring position which may clarify variations in patients' satisfaction if nursing care provided is special from what the patients are expecting. Patient satisfaction is admired way of evaluating nursing perform in most developing countries. Satisfaction studies can utility to give care providers several idea of how they would have to modify their stipulation of armed forces in order to make their patients more satisfied. Satisfied patients regularly belief their health care providers, and as a comeback they comply with checkup and nursing orders.

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BIO-MEDICAL SOLID WASTE MANAGEMENT OF MULTISPECIALTY HOSPITALS IN MADURAI MUNICIPAL CORPORATION

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Abstract

The Bio medical solid waste management rules (BMSWRs) 2016 governs the rules and regulation of bio medical solid waste management practices in India. There is a gap between in existing infrastructure facilities and other devices including manpower for collection, transportation, storing and treatment of Bio medical solid waste and as per as actual requirement and norms specified in BMSWMRs . In addition to it, funding for the bio solid waste practices for government and Missionary hospital are not sufficient to meet the demand for the same in heavy emergency periods. The enforcement of BMSWRs should be at maximum level in both rural and urban part of India. The curriculum of hospital services marketing practices should includes this functional area. The Government and local bodies should specially establish the treatment plant for bio-medical waste throughout the country.

Keywords: Bio-Medical Solid Waste Management, Municipal Corporations, Multi Specialty hospitals.

Introduction

The Bio medical solid waste management practices is mostly critical and very seriously handling functional area of multi specialty hospital management process on the back ground legal requirement and health care of human beings in India .The Bio medical solid waste management rules (BMSWRs) 2016 governs the rules and regulation of bio medical solid waste management practices in India. The Bio medical solid waste is the a solid waste generated in the process of diagnosis, testing treating and post treatment activities of human and animal beings. But there is a gap between in existing infrastructure facilities and other devices including manpower for collection, transportation, storing and treatment of Bio medical solid waste and as per as actual requirement and norms specified in BMSWMRs . In addition to it, funding for the bio solid waste practices for government and Missionary hospital are not sufficient to meet the demand for the same in heavy emergency periods.

Distribution of Multispecialty Hospitals in Madurai District

The Madurai district consists of Public, NGO and Private brands Multi specialty hospitals situated throughout the district. Out these three brands, Rajaji Hospital, Other cities' government hospitals, Madurai Municipal corporation hospitals are the state government hospital, Aravind eye hospital, Vellammal medical college hospital Meenakshi mission and other Christian missionary hospitals are the examples of NGO organizations hospitals. On the other hand, Appollo hospitals ltd, Guru hospital, Jayam hospital, K.K Hospital, Padma specialty care hospital, DD Fenn hospital Pandian hospital , Abban hospital and etc come under the head of private hospital .

Statement of the problem

The legal norms delegate the responsibilities for maintenance of bio medical solid waste to concern hospitals and municipal corporation or local bodies. The manpower strength of Solid waste management does not revised as per as the rate of increased of volume of bio medical solid waste from

time to time. In addition to it, there is a lot of vacancies in low level solid waste management practices without filling the same. The Impact of shortage manpower collapses the scheduling of sweeping and collection of bio medical solid waste in various places or wards in the hospitals. This is a remarkable problem that collection points, Equipments, Devices and vehicles used for bio medical solid waste management practices are not maintained in hygienic manner and without cleanliness. In other words, sanitation practices have been carried out without sanitation. In addition to it, Lack of sanitation in bio solid waste management spreads the bad smell, infected diseases to hospital workers and the nearby households. The rural area hospitals never show high level importance for the same. So a study has been undertaken to analysis the bio medical solid waste management practice followed by multi specialty hospitals in Madurai distract.

Scope and Limitation of the study

This study has been confined with bio medical solid waste management practices of selected government,missionary and private hospitals of Madurai district. The perception regarding the bio solid waste management practices has also been evaluated in this study. The study period has been fixed as three years i.e., 2017-18 to 2019-2020.

Objectives of the study

1. To analyze the nature and pattern of bio medical solid waste generated in sample Multi specialty Hospitals in Madurai District
2. To evaluate the bio solid waste management practices of sample Multi specialty Hospitals in Madurai District
3. To assess challenges and problems in bio solid waste management practices of sample Multi specialty Hospitals in Madurai District
4. To analyze the perception of sample patients on bio solid waste management practices in Madurai District
5. To suggest the implementable recommendation to improve the bio solid waste management practices among multi specialty hospitals in Madurai district.

Methodology

The descriptive study has been undertaken with both primary data and secondary data. The multi stage random sampling techniques have been adopted. 6 hospitals including each 2 two from one category of multispecialty hospital m has been selected as sample hospital for this study. Out of 6 sample hospitals, 60 sample respondents consisting of 20 bio solid waste handling workers including operators of bio medical solid waste storage, health and sanitary workers per hospital have been selected as 5 percent sample respondents for this study by using lottery method. In addition to it, 100 patients were selected and collected the data regarding the bio medical solid waste management practices in sample hospital in Madurai district. The collected data has properly grouped and analyzed by using T- Test , one way ANNOVA, Compound growth rate (CGR) and mean and percentage analysis .

Nature and pattern of bio medical solid waste generated in sample Multi specialty Hospitals in Madurai District

The stages of bio medical solid waste preparation process have been present in the table and perception of the bio solid waste management process of various kinds of workers of Government , Missionary and private hospital have also collected and presented in the one way ANNOVA table .The respondents belonged to “Government hospital’ and NGO –Missionary hospital” have highly rated the following bio solid waste management process such as Appointment of well trained operator

and health workers (3.7320, 3.5678), "Establishment of Bio medical waste storage location "(3.6883, 3.6608), "Collection and segregation of bio-medical waste from overall solid waste"(3.6441. 3.7240,)The respondents belonged to Private hospital have rated highly the process of , "Continuous health check up and raising the immunity level of operators and workers handling the bio medical sold waste" (3.7608). Significant difference of perception among the three groups of respondents were found in respect of three bio solid waste management process such as "Procurement of bio medical solid waste maintenance equipment chlorinated plastic bags, gloves ,blood bags and other items" (0.0524), "Continuous health check up and raising the immunity level of operators and workers handling the bio medical sold waste" (0.0505) and Communication of Major accidents (0.0515)The 'F' value has been found to be statistically significant at 5 percent level since these value was above the tabled 'F' Value. Therefore, these process has been considered to be influencing bio medical solid waste management process in the hospitals (Table 1)

Sl. No.	Contributing Factors	Mean Score-Nature of Hospital			F Ratio	F Probability
		Govt Hospitals	NGO-Missionary	Private Hospital		
1	Establishment of Bio medical waste storage location	3.6883	3.6608	3.2308	0.6457	0.5224
2.	Appointment of well trained operator and health workers	3.7320	3.5678	3.2343	0.9315	0.3892
3	Procurement of bio medical solid waste maintenance equipment chlorinated plastic bags, gloves ,blood bags and other items	3.4112	2.9222	3.5668	3.2877*	0.0524
4	Continuous Training and developmental programme for operator and health care workers	3.5258	3.5562	3.4784	0.2212	0.7681
5	Continuous health check up and raising the immunity level of operators and workers handling the bio medical sold waste	3.3006	3.2601	3.7608	3.3978*	0.0505
6	Collection and segregation of bio-medical waste from overall solid waste	3.6441	3.7240	3.3541	0.4834	0.6689
7	Optimum Transportation and Treatment of Bio medical solid waste	3.2104	3.7205	3.1013	2.8003	0.1774
8	Categorization of Bio medical solid waste as Yellow, Red , White and Blue waste	3.6233	3.4880	3.6998	0.6557	0.5114
9	Bar -coding of bags of bio medical solid waste	3.7120	3.0078	3.2143	0.9105	0.3342
10	Updating of Bio medical solid waste resisters , and other records for incineration and etc from time to time	3.9934	3.3915	3.6713	2.8713	0.1884
11	Communication of Major accidents	3.8396	3.7621	3.7548	3.3788*	0.0515
12	Preparation of annual reports for bio medical solid waste .	3.6704	3.8654	3.5417	0.5853	0.6003

Table 1**Association of the Profile Factor “ Nature of Hospitals ” with “Bio medical Solid waste management Procedures ”**

(Source: Compiled from primary data * Significant at 5 percent level

Sl. no	Nature of Hospital	Category of Bio Medical Waste	Quantity of Bio medical Waste Handled			Total	CGR
			2017-18	2018-19	2019-20		
1	Government Hospital	Yellow	2.05	2.15	2.22	6.42	1.02
		Red	0.05	0.07	0.06	0.18	1.06
		White	1.75	1.95	2.01	5.71	1.05
		Blue	2.30	3.18	2.40	7.88	1.01
	Total		6.12	7.35	6.33	19.8	1.01
2.	NGO Missionary Hospital	Yellow	2.02	2.37	1.87	6.26	0.97
		Red	0.04	0.05	0.03	0.12	0.90
		White	0.80	0.97	0.76	2.53	0.98
		Blue	0.59	0.76	1.09	2.44	1.23
	Total		3.45	4.15	3.75	11.35	1.03
3	Private Hospital	Yellow	1.95	2.07	1.74	5.76	0.96
		Red	0.03	0.04	0.04	0.11	1.10
		White	1.55	1.62	1.59	4.76	1.00
		Blue	2.35	2.37	2.54	7.26	1.02
	Total		5.88	6.10	5.91	17.89	1.00
	Grand Total		15.48	17.60	16.35	49.43	

The Quantity of Bio medical solid Waste generated in sample Multi specialty Hospitals

Table 2

Distribution of Bio medical Solid Waste in Sample Multi specialty Hospitals

(Quantity in MTs)

(Source : Complied from primary Data)

The bio medical solid waste has been classified into four categories such as yellow wastes including human and animal anatomical solid waste, Discarded medicines, various types of medical laboratory wastes and expired medicines, red solid waste consisting of contaminated bio solid waste, White bio solid waste including waste sharps and blue bio solid waste includes the solid waste of medical equipment, bags and other devices. The Government hospitals have generated the bio solid waste 6.12 MTS, 7.36 MTS and 6.33 MTS respectively 2017-18, 18-19 and 19-20. The overall bio medical waste generated during the study period has been calculated as 19.8 MTS with Annual Compound Growth Rate(CGR) of 1.01 percent during the study period. The NGO -Missionary hospitals have generated the bio solid waste 3.45 MTS, 4.15MTS and 3.75 MTS respectively 2017-18, 18-19 and 19-20. The overall bio medical waste generated during the study period has been calculated as 11.35 MTS with Annual Compound Growth Rate(CGR) of 1.03 percent during the study period. The private hospitals have generated the bio solid waste 5.88 MTS, 6.10 MTS and 5.91 MTS respectively 2017-18, 18-19 and 19-20. The overall bio medical waste generated during the study period has been calculated as 17.89 MTS with Annual Compound Growth Rate(CGR) of 1.00 percent during the study period

Issues in Bio medical Solid Waste Management Practices

It has been ascertained that lack of staff member such as operators and solid waste handling health workers and transportation equipment were the important issues during the study period from 2017-18 to 2019-20. The trend of this problem positively registered with the 0.71 percent of CGR in this study period. This kind bio solid waste management practices have not attracted to the majority of workers. So labour turnover was the other important issues in this study area.

The CGR for the labour turnover has been calculated as 0.42 percent during the study period. The need for extension of storage with CGR of 0.57 percent, Lack of neat and cleanliness and bad smell due to improper cleaning and storing with CGR of 0.67 percent and Occupational Diseases with the CGR of 0.67 percent and Gap between the treatment of bio medical waste and legal provisions with CGR of 0.78 have been identified as the important issues in bio medical solid waste management practices during the study period from 2017-18 to 2019-2020 (Table 3)

Table 3

Numbers of issues in bio solid waste management practices of sample Multi specialty Hospitals in Madurai District

Sl. No	Issues	Numbers of issues Handled			Total	CGR
		2017-18	2018-19	2019-20		
1	Occupational Diseases	04 (22.22)	06 (33.33)	08 (44.45)	18 (100)	0.67
2	Need for extension of storage	07 (25.00)	09 (32.14)	12 (42.86)	28 (100)	0.57
3	Staff turnover from this work to other worker	11 (28.20)	13 (33.33)	15 (38.47)	39 (100)	0.42
4	Cutting of Bio medical waste bags and its infection	18 (64.28)	07 (25.00)	03 (10.72)	28 (100)	0.05

5	Insufficient numbers of handling equipments and bags in emergency	04 (26.67)	06 (40.00)	05 (33.33)	15 (100)	0.42
6	Lack of staff members and transportation equipment	08 (21.05)	13 (34.21)	17 (44.74)	38 (100)	0.71
7	Gap between the treatment of bio medical waste and legal provisions	03 (21.43)	04 (28.57)	07 (50.00)	14 (100)	0.78
8	Lack of neat and cleanliness and bad smell due to improper cleaning and storing .	06 (22.22)	09 (33.33)	12 (44.45)	27 (100)	0.67

(Source : Compiled from Bio- medical Solid Waste Register of sample hospital)

The perception of Male and Female sample respondents were obtained through the five point liked scale and converted to numerical data. The data were also fitted to the statistical tool ‘t’ test to calculate the mean value, ‘t’ value and the level of significance of the Association of Profile Factor “Sex” with bio medical solid waste management practices of sample multi specialty hospitals .Both male and female respondents have given high mean scores to the predictor variable supporting for the process Recycling of Solid waste in Solid waste management as “Storing and final disposal of bio medical solid waste” 3.9112, 3.8794) and “Operators and health workers overall performances ” (3.7432 , 3.8679). In addition to that, the female Patient have considered the predictor variable, “Infrastructure facilities for collection, storage and disposal of bio medical waste ” (3.6554) to be important for final disposal of bio medical solid waste Significance deference of perception between the male and female respondents was noticed in the respect of only one variable i.e., “Collection and segregation of bio medical solid waste.” . Since the “t” value of the variables(1.78) was found to be statistically significant at 5 percent level. (Table 4)

Table – 4 Gender wise perception of Sample patients on Bio medical solid waste management practices

Sl. No	Perception	Male N=50		Female N=50		“t” Value	Level of Significance
		Mean - x	Std. Deviation ‘s’	Mean - x	Std. Deviation ‘s’		
1	Infrastructure facilities for collection, storage and disposal of bio medical waste	3.4533	1.177	3.6554	1.284	0.34	0.812
2	Operators and health workers overall performances	3.7432	1.397	3.8679	1.315	-0.53	0.743
3	Collection and segregation of bio medical solid waste	3.8234	1.134	3.4532	1.561	1.78*	0.163
4	Transportation of bio medical solid waste	3.5223	1.125	3.5213	0.782	-0.46	0.834
5	Storing and final disposal of bio medical solid waste	3.9112	1.154	3.8794	0.954	-0.32	0.688

(Source: Complied from primary data * Significant at 5 percent level)

Suggestion and Conclusion

The level of awareness among the public and hospital authorities should be optimized to reduce the gap between the actual level and actual demand for bio medical solid waste management practices in Indian hospitals. The enforcement of BMSWRs should be at maximum level in both rural and urban part of India. The curriculum of hospital services marketing practices should includes this functional area . The Government and local bodies should specially establish the treatment plant for bio-medical waste throughout the country.

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IMPACT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING FOR ENTREPRENEURSHIP

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Abstract

Early 2000, Many Organizations are unawares about Artificial Intelligence and Machine Learning Technologies. As per Current Forecasting of Global Machine Learning Market is expects that Machine Learning Market Size, Growth and Share values might goes nearly 9 billion ie approximately 45 % than 2017 values. This induce much interest by many researchers, institutions, Multi-National Corporates, Financial Sectors etc. focussed their deep sights on developing algorithms, services, products much on AI & ML related technologies. In this paper, we are going to discussed about the effects of AI in various multi-disciplinary and identified the differences between Business Intelligence (AI) and Artificial Intelligence (AI). Thus the paper concluded how much the technologies such as Artificial Intelligence, Machine Learning, Cloud computing, Internet-of-Things and Smart Tools are plays vital role in our regular life basis.

Keywords: AI, BI, ML, IoT, Cloud, Entrepreneurs, Applications.

1 Introduction

Artificial Intelligence and Machine Learning made this decade to new industries 4.0 in a giant invest in R & D to enhance the advantages over all modern trends among industries globally. The modern AI came in 1956 significantly made this 21st century fascinated to dream world that developing technologies capable of rational and performing like human. In fact, most of users are interact with AI in several form daily like Email spam filtering, OCR, Voice recognition chat bot, etc[1].

Oxford Dictionary states that AI as, “the development of computer systems able to perform tasks that usually require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages”. Machine Learning is “an application of AI that provides systems with the ability to learn and improve from experience without being explicitly programmed automatically [2]. According to expertsystems.com Machine Learning focuses on the development of computer programs that can access data and use it to learn for themselves”.

“Artificial intelligence” is a broad and general term that refers to any type of computer software that engages in humanlike activities, including learning, planning and problem-solving. Calling specific applications “artificial intelligence” is like calling a 2013 Honda Accord a “vehicle” – it’s technically correct, but it doesn’t cover any of the specifics. To understand what type of artificial intelligence is predominant in business, we have to dig deeper. To learn like humans, AI has to think and perceive like humans. This is where **Artificial Neural Networks** come into play [3].

Business intelligence and analytics are data management solutions implemented in companies and enterprises to collect all data, while using statistics and software to analyse raw information, and deliver insights for making better future decisions [4].

Machine learning is category of artificial intelligence whereas feed much ideas and knowledgeable sector for all stake holders in development. These types of AI’s algorithms that appear to be “learn” and implement periodically in a finite time for betterment of services and product competition. Feeding to a machine using learning algorithm is complex task over the real time sensitive data and its modeling is difficult. Machine learning over Internet of Things, Cloud Technology, and Block Chain Technology leads to Industry 4.0 in surprise way in this era for humans.

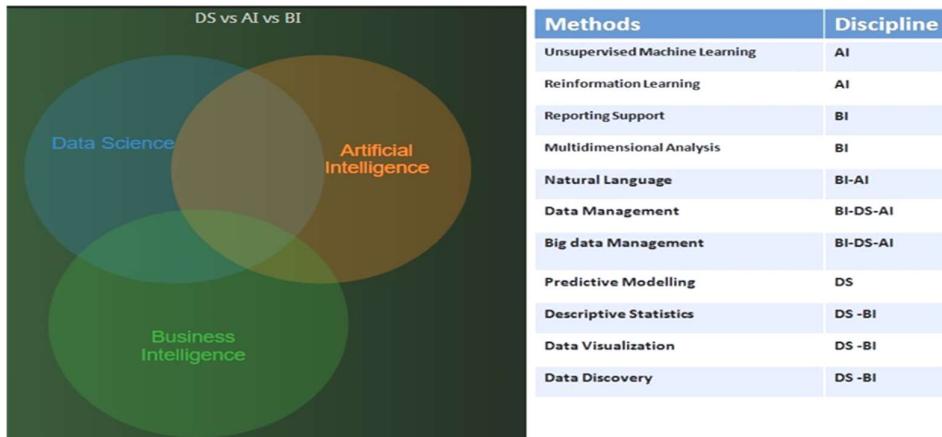


Figure 1.1: DS vs AI vs BI and Methods used in each Discipline

Machine learning algorithms such Regression, Decision Tree, Random Forest, KNN, etc are used to identifying business patterns with big data and anomalies [5].The growth of ANN, an interconnected internet of artificial intelligence "nodes," has given rise to what is known as "Deep Learning (DL)." Artificial Intelligence is a superset for Machine Learning (ML) and Deep Learning (DL) and its various real time applications shown in Figure 1.2.

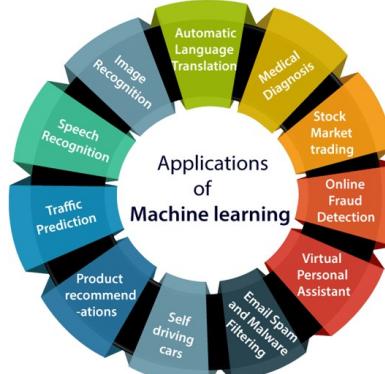


Figure 1.2 Applications of AI & its Types

1.1 Generation of Business Intelligence and Cons

The major distinguish among **Business Intelligence** and **Business Analytics** is the way how the stakeholders responses to the queries. BI prioritizes **descriptive analytics**, which provides a summary of all data to show what has happened or what is currently happening. Figure 1.3 shows the brief summary of generation business intelligence from IT Generated to Machine Generated.

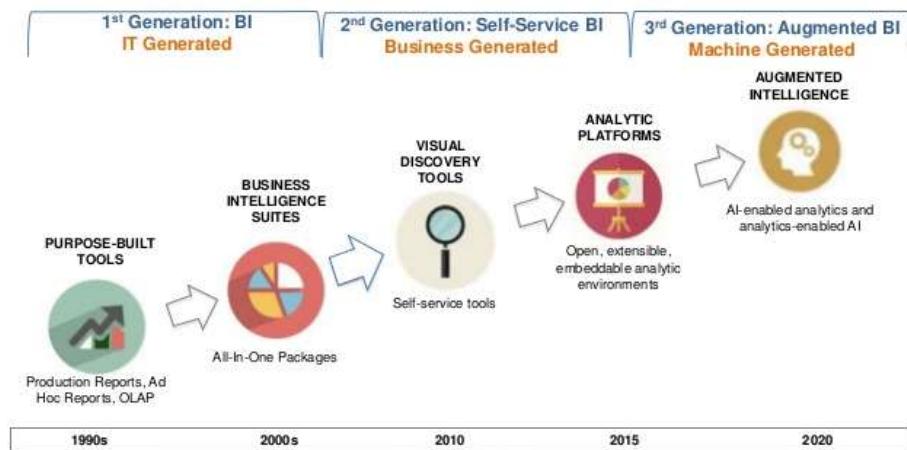


Figure 1.3 Summary of BI Generations from IT to Machine

The every entrepreneur must keep in mind that robustness, integration capabilities, ease-of-use (from a technical perspective) and pricing is achieved by choosing best tools opted for your business environment. Some of the standard BI tools used for all BI analytics in micro level to macro levels are as follows:

- *SAP Business Intelligence*
- *Datapine*
- *SAS Business Intelligence*
- *QlikSense*
- *Zoho Analytics*
- *Microsoft Power BI*
- *Tableau*
- *Oracle BI*
- *IBM Cognos Analytics*

2. Related Work and Impacts

OECD's AI Experts Group (May 2019) states that AI Systems are a integrated machine-based system that has well defined human vision, mission, effective analysing, solid recommendations for real / virtual environments [9]. It uses machine and/or human-based inputs to perceive inputs; abstract such perceptions into models either automatic or manual by using model inference to formulate options for information or action.

Enormous theoretical studies & reviewed had addressed the opportunities and essential of AI in multi-disciplinary domain such as *services* (Huang and Rust, 2017, 2018; Van Doorn et al., 2017; Wirtz et al., 2018), *personalization* (Kumar et al., 2019), *advertising* (Kietzmann et al., 2018), *sales management* (Singh et al., 2019), *industrial marketing* (Martínez-López and Casillas, 2013), automation in *business logistics systems* (Klumpp, 2018), *market research* (Wirth, 2018), *smart warehousing* (Mahroof, 2019), *AI platforms* (Dawar and Bindle, 2018), *tourism management* (Stalidis et al., 2015), and *ethics* (Fullerton et al., 2017; Nunan and Di Domenico, 2017) [10].

Today we are in the world of AI & ML that results significantly in many core and related Technologies of Data Science & AI for business environments are as follows:

- Voice and Character Recognition (VCR) Expert System
- Email Filtering and Spamming
- Virtual Personal Assistant (VPA)
- Self-Driving Vehicles or Autonomous Driving
- Robotic Process Automation (RPA)

2.1 Industries that uses AI & ML over BI

Deloitte (2007) from Artificial Intelligence for the Real World surveyed over 250 BDE's around the world in different companies with innovative technologies as produced the following survey results shows the AI initiatives [6]. Figure 2 shows clearly that half of the product services are improved and reducing head count by 22% of industries.

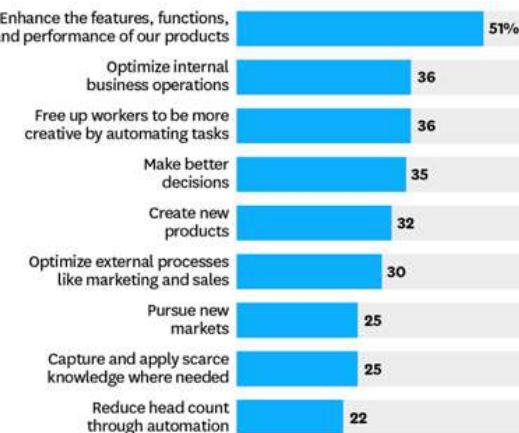


Figure 2 DELOITTE 2007 Survey for Benefits of AI over BI

3. Challenges in AI and Machine Learning Integration

Past 10 years is machine emerging era has clearly witnessed the boundless escalation of Artificial Intelligence. Especially, in Digital world, AI has made a substantial effects and control over the Business Administration and Management in Small to Corporate office. As per the survey done by Dr.Gartner's survey in the middle of 2018 and 2019, the organizations that have incorporated AI into their business operations grew from 4% to 14% [7].

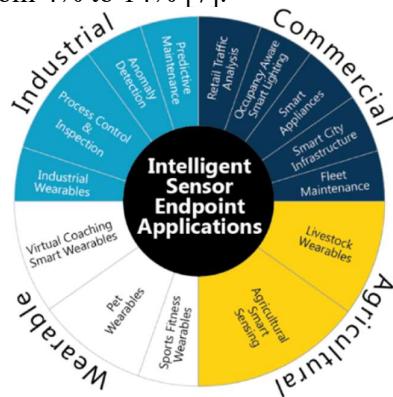


Figure 3: Research Enhancement Applications

But the present 2020 New Year begins, it is critical for entrepreneurs to find and got opportunities over this powerful technology are going to have a further impact on businesses.

Figure 3 clearly demonstrated the various applications for freelancer and entrepreneurs to be involved Research Enhancement of AI and ML in real time scenarios.

The following lists are some major influences and tasks over Artificial Intelligence and Machine Learning for any type of Entrepreneurs would provide for your small businesses.

1. *Accurate Digital Decision Making*
2. *Improve HR and Recruitment*
3. *Mobile Interaction*
4. *Customer Services*
5. *Better Security*

4. Conclusions

As of now, in this paper we discussed about the impact and efforts of AI & ML that supports various Industries and Stakeholders especially small scale business people and Entrepreneurs. The year 2021 is emerging year after the impact of Covid 19, Industry 4.0 results that AI is the most prominent emerging technology compromised lot of modern technologies such as WSN, IoT, Digital

Marketing, Cloud Technology, and Big Data Analytics. Any Entrepreneurs or Freelancers have a sound knowledge in AI with ML have a bright future in the upcoming years as per the source of the research firm **Spice works** forecasts that 30-35% of businesses are migrate to industrial revolution 4.0 with current trends[8]. This shows that maximum jobs, careers, business etc towards AI related technologies.

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A SOCIOLOGICAL STUDY ON SOCIAL INEQUALITY TO WOMEN IN PANCHAYAT RAJ INSTITUTIONS IN DIDINGUL DISTRICT OF TAMIL NADU.

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Abstract

The share of women representation has been estimated as 45 percent at the national level. The present social system such as caste system, low social value to women community, dominance of male community in PRIs administration and political movements, economically and socially weakening behaviours and dependences of women community have subjected to treat unequally with male community. The sources for inequality treatment in implementing welfare schemes and welfare services offered to women has been ascertained as representatives of PRIs, Employees of PRIs including women staff members, community heads, senior male members in the particular village.

Keywords: Social Inequality Practices, Women in Panchayatraj, Development of Women Governance and *Inequality Treatment*

Introduction

The reservation of women representation in the Panchayat Raj Institutions(PRIs) has paved the means for development of women governance in the rural social structure of India. It is the dream of lot of freedom strugglers of India. It also eradicate the male dominances in the PRIs and legally provide an opportunity to the rural uneducated women to participate in the administration and social development of their native villages. In this connection, India consists of 13.79 lakh of women elected representatives in the 276718 PRIs. It is designed as three tier system. The three tier PRIs consists of 269347 village level local governments, 6717 numbers of the block level Panchayat unions and 654 District panchayats throughout the country. The share of women representation has been estimated as 45 percent at the national level.

Background of the Study

The fundamental goal of PRIs is to ensure basic amenities including food, water, shelter, educational and health care services and other facilities improving standard of living of residents and sustainability of village based rural social system and village infrastructures development. For this purpose, the PRIs at three tier level have implemented various central governments and state government and its own welfare measures grouping under the two heads i.e., Welfare schemes and welfare services for eligible citizens in concerned villages. The present social system such as caste system, low social value to women community, dominance of male community in PRIs administration and political movements, economically and socially weakening behaviours and dependences of women community has subjected to treat unequally with male community. The sources for inequality treatment in implementing welfare schemes and welfare services offered to women has been ascertained as representatives of PRIs, Employees of PRIs including women staff members, community heads, senior male members in the particular village. In this context, women members in the rural social system have been also discriminated in the various back ground such as economical, social, cultural, ethical, religious back grounds. The existing social pattern and its beliefs have bracketed the women community as a secondary one. The acceptances and supportive thoughts of women members of this rural social system also motivates the inequality treatment not only in the PRIs but also in rural cooperatives and educational institutions situated under rural society.

Objectives of the Study

This study has the following objectives to be accomplished.

1. To examine the nature of welfare measures offered with inequality practices by selected PRIs in Dindigul district
2. To assess the sources for inequality practices by sample PRIs in Dindigul district
3. To identify the various backgrounds for inequality practices by sample PRIs in Dindigul district.

Methodology of the Study

This study has been conducted in descriptive cum analytical nature. The eighty women beneficiaries from eight villages such as Ayyampalayam, Keeranur, Ambakkai, Vadakavunji, Navamarathupatti, Athur Muthampatti and Naransigapuram (10 beneficiaries per villages) situated respectively following eight blocks such as Palani, Thopampatti, Oddanchatram, Kodaikannal, Vedasandur, Athur, Dindugul and Nillakottai panchayat unions blocks in Dindigul district have been selected as sample respondents for this study by using simple random sampling techniques. The Convenience sampling method has been adopted. The primary data has been collected from this above said sources. In addition to it, secondary data from the reports and records of concerned PRIs has also collected regarding the enrolment, implementation of welfare measures to the sample respondents. The simple percentage method has been used for analysis of the data.

Results and Discussion

The supply of drinking water, solid waste management practices and Maintenance of streets in the rural and remote villages of Dindigul district has a lot of issues and challenges due to Seasonal draught condition, Poor financial positions of PRIs, Lack of sufficient equipments and devices for the rendering of such services to general public.

On other hand, Planning for implementation of welfare schemes, allotment of such schemes to eligible person, step by step construction or execution of this scheme, payment of finance and other material, Evaluation and post service on the scheme have consisted a lot of problems and obstacles for both PRIs and beneficiaries at the time of execution of such scheme. The particulars of sample women beneficiaries of selected welfare schemes and services have been presented in the table .1. Out of 80 sample respondents, 40 (50.00 percent) sample women have mostly benefitted from welfare services render by the Village panchayat in Dindigul district. On the other hand, 40 (50.00 percent) sample women have either constructed green house/ Toilet or employment opportunities in the study period under the various welfare scheme.

Table 1 Distribution of sample Women Beneficiaries Subjected to Social Inequality by Selected PRIs in Dindigul District

(Figures in Numbers)

Sl. No	Kinds of Welfare Measures	Nature of Welfare Measures	Social Class		Overall sample Respondents	Inequality Treated Social Class		Inequality Treated Respondents
			OBC	SC/S T		OBC	SC/ST	
I	Welfare Service	Solid Waste Management Practices	10 (12.50)	04 (5.00)	14 (17.50)	08 (13.35)	04 (6.65)	12 (20.00)
		Supply of drinking Water	06	10	16	04	10	14

			(7,50)	(12.5 0)	(15.00)	(6.65)	(16.65)	(23.35)
		Concrete streets street Lights and sanitation facilities	04 (5.00)	06 (7,50)	10 (12.50)	00 (00.00)	04 (6.65)	04 (6.65)
		Total	20 (25.00)	20 (25.0 0)	40 (50.00)	12 (20.00)	18 (30.00)	30 (50.00)
II	Welfare Schemes	Housing schemes	05 (6.25)	08 (10.0 0)	13 (16.25)	04 (6.65)	07 (11.60)	11 (18.35)
		Employment schemes	07 (8.75)	10 (12.5 0)	17 (21.25)	07 (11.60)	07 (11.60)	14 (23.20)
		Scheme for construction of Toilets	05 (6.25)	05 (6.25)	10 (12.50)	02 (3.41)	03 (5.14)	05 (8.55)
		Total	17 (21.25)	23 (28.7 5)	40 (50.00)	13 (21.66)	17 (28.34)	30 (50.00)
		Grand Total	37 (46.25)	43 (53.7 5)	80 (100)	25 (41.66)	35 (58.34)	60 (100)

(Sources: Complied from primary data Note: Figures in brackets are percentage to total)

In this connection, with the respect of selected services offered by PRIs, Supply of drinking water to the public has been considered as an essential service to the general middle class families and BPL families in the rural villages. 16 (15.00 percent) sample respondents have primarily considered this service as prominent services of village panchayats in Dindigul district. Next to this service, 14 (17.50 percent) sample women respondents have highly benefited from the Solid Waste Management Practices of village panchayats. The utilization of concrete Cement streets, street Lights and sanitation facilities have been seemed by 10 respondents as the most benefit able services offered in Village Panchayats .

Out of 40 sample beneficiaries of selected three welfare scheme, 13 (16.25 percent) sample respondents has constructed the green houses under the state government housing scheme named as Chief Ministers' solar powered green house scheme (CMSPGHS) and 17 (21.25 percent) sample respondents have got the employment opportunities and source for their livelihood through the Central government scheme named as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNRGS). In addition to it, Scheme for construction of Toilets has been offered under clean India moment (Swachh Bharat Mission (Gramin)) to 10 sample respondents residing in the various blocks of Dindigul district Panchayat. Out of the overall respondents, 60 respondents have been subjected under social inequality treatment.

The various sources of social inequality practices on Sample Women Beneficiaries of selected welfare schemes and services offered by PRIs have been presented in Table No.2. .It has been found that 20 (46.33) sample women respondents including 8 (13.33 percent) consumers of various welfare services offered by Village Panchayats and Panchayt Unions and 12 (20.00 percent) women enrolled respondents in selected three welfare schemes in Village Panchayat have been discriminated by Employees of PRIs. In addition to it, the employees play the major role in rendering the public services

and implementation of various welfare schemes to the general public. So this committed position with certain degree of powers and authorities has inclined the employee to involve the gender discrimination practices on the rural partially uneducated women Beneficiaries in the study area.

Table -2 Sources of Social Inequality Treatment on Sample Women Beneficiaries of selected welfare schemes and services offered By PRIs in Dindigul District

(*Figures in Numbers*)

Sl.No	Sources of Discriminating Practices	Sample Women Beneficiaries of Welfare services	Sample Women Beneficiaries of Welfare Schemes	Total
1	Elected members of PRIs	15 (25.00)	10 (16.67)	25 (41.67)
2	Employees of PRIs	08 (13.33)	12 (20.00)	20 (46.33)
3	Inter linked outside person (Third party) A. Contractor B. Banker C. Service render D. Distributors and E. Co-male Beneficiaries F. Family Male Members	02 (03.33)	13 (21.67)	15 (25)
	Total	25 (41.66)	35 (58.34)	60 (100)

(Sources: Complied from primary data
brackets are percentage to total)

Note: Figures in

The 41.67 percent of sample respondents has been unequally treated by elected members of PRIs in Dindigul District. It included percent of women consumers of public welfare services and 25 percent women Beneficiaries of CMSPGHS, MGNRGS and Swachh Bharat Mission (Gramin)). On the other hand, outside politicians and community leaders who supported and worked for victory of elected women members, bankers, contractors, service renders, Distributors of various materials for construction of Houses and Toilets and co-male beneficiaries have unequally treated 15 (25 percent) sample respondents in this study period. It has been observed that male employees of PRIs have been identified as a major source of social inequality practices.

Background for Social Inequality Practices on Sample Women Beneficiaries of selected welfare schemes and services offered by PRIs

Table: 3. Background for Social Inequality Practices on Sample Women Beneficiaries of selected welfare schemes and services offered by PRIs

(*Figures in Numbers*)

Sl.No	Social Inequality Practices	Sample Women Beneficiaries of Welfare services	Sample Women Beneficiaries of Welfare Schemes	Total
1	Caste Background	15 (25.00)	10 (16.66)	25 (41.66)
2	Gender Background	04 (06.67)	15 (25.00)	20 (31.67)

3	Social value	04 (06.67)	05 (8.34)	08 (15.01)
4	Sexual Background	02 (03.33)	05 (8.34)	07 (11.67)
	Total	25 (41.66)	35 (58.34)	60 (100)

(Sources: Complied from primary data.

Note: Figures in brackets are percentage to total)

The relevant background with rationale cause and effect relationship for the social inequality practices on Sample Women Beneficiaries of selected welfare schemes and services jointly offered by PRIs have been enumerated to the analysis and interpretation in order to determine the linear relationship between the result of gender discrimination and nature and scope of discrimination.

Out of 60 Sample Women Beneficiaries, 25 (41.66 percent) respondents have been discriminated on the base of status of their social class (Caste) status. The nature of 7 respondents' gender inequality discrimination has been perceived under sexual Background. The impacts of discrimination on the base of sexual background have created mentally unrest, distributed the women employees' normal thinking habits, normal food taking activities and frustrated in performing the day to day activities.

Recommendation of the study

The governances capacity building and quality work life balance should be generated. The role of NGOs should be modified with spreading the concept of gender equality and equal participation of both male and female community. The education level should be increased .It is the only one way for devaluation of caste and communal disparities in the rural social structure.

Conclusion

The concept of community vote banking, under estimation of respondents as the non voter of particular elected members of PRIs, low level involvement in a particular political party by the sample women beneficiaries, Consideration of particular respondents as supported to oppose political party by the both independent elected members and other concerned political leaders have been perceived as supporting factors for gender discrimination practices on the basis of political back ground. 8 sample women beneficiaries have been affected on their poor social value.

The existing culture pattern, the real human value of women community belonged to BPL, Male dominant attitude, Male guided culture and rural cultural log has supported the social inequality treatment on sample women beneficiaries on the cultural background. The welfare scheme respondents have been exploited on the base of gender at the time of availing the welfare measures in their own villages. It has been observed that the effect of the gender discrimination based on Psychological background has resulted not only Pressure, Ulcer and Heart related diseases but has also made the one part of affected respondents to undergo the consulting or treatment of Psychologists for more the one year period .

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A STUDY ON IMPACT OF WORK FROM HOME EMPLOYEES IN INFORMATION TECHNOLOGY SECTOR IN CHENNAI DURING COVID – 19

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ABSTRACT:

Covid -19 is a pandemic disease and it is affected all the over country. The Covid – 19 affects the economic position of all organization because of lockdown announced by the Government of India and it results to make an impact towards employees of all organization. To Transform the economy, Government of India encourage the virtual working system i.e., Work from Home via Computer or Mobile to accomplish the daily tasks of the employees in their home. This system has been successfully implemented in IT Sector because IT Sector employees are well versed in operation of computer and mobile technologies and their work is always with computer and mobile computing accessories. This study is conducted in Chennai because of considering a fact called “Chennai is the second largest seller / exporter of software in India after Bangalore in India. Normally there is a distress among the employees regarding the job during this Covid 19 and to resolve this distress and make a psychological wellbeing and effectiveness in balancing the work, health and also to get a guarantee towards the job is an important constrain among the employees of IT Sector in Chennai. This study aims to make a clear clarification to make an observe whether employees are well able to make a balance in their work life which reflects to contribute effectively while such technical employees works from home during the Covid -19.

Keywords:Covid – 19, Information Technology, Work from Home, Lockdown

INTRODUCTION:

The pandemic disease which was discovered in December 2019 called Covid – 19 in China will slowly spreads all over the country and make a severe impact by affecting the economic position of all over the country. The chance of spread of such virus is high, so all Country’s Government decided to make a lockdown to prevent their people from such pandemic virus. Normally in working place or anywhere all the peoples who are gathered together to work or discuss about their activities or about their nature of work. This is a routine cause and it can be follow up during the Covid -19, so Government decided to implement a lockdown and also intimate to follow up the social distancing the public places.

The Covid – 19 has drastically changed all the routine activities and operations of any business and also transforms the work culture of the employees in the organization. Information Technology is ever booming sector in India especially in the following cities like Chennai, Bangalore and Mumbai. Every area of operations is transformed as Artificial Intelligence and this development is achieved because of introduction of new software’s which has been coded by Information Sector employees. To continue such improvement in all the activities, IT Companies decided to adopt Work from Home practice to continue their operational activities. The main hurdle of this Work from Home activity is that companies is having a constant look by monitoring and also deriving the same performance level of their output operations among their employees in terms of the quality and productivity in the long run to achieve the constant output.

NOTABLE ADVANTAGES OF WORK FROM HOME:

1. **Reduction of Operation Cost** – It is confined that the working operation costs can be reduced approximately 50%. Example: Normally IT Employees are picked up and dropped using company transportation and it is being stopped and reduced during this Covid – 19.
2. **Good Work Life Balance** – IT operations are normally based on 12 hours' operation of work. This leads to make short spending among time among the family members. But this Covid – 19 lockdown makes the employees to spend a long time by boost up the energy of the employees to work more effectively.
3. **Improvement in Productivity** – The productivity is the end result in every IT Sector. Normally Work in an office having a lot of disturbances liked team commitments and others but working in a home makes a new change of behavior to work more for the organization.
4. **Improvement in Job Satisfaction** – Job Satisfaction is a key motivational factor to work in an organization for an employee. It leads to create a positive environment among the employee and their organization. Covid – 19 work from home strategy increased the job satisfaction among the IT employees.

MENTIONABLE DRAWBACKS OF WORK FROM HOME:

1. **Difficulty in Monitoring the Performance** – IT Employees works are target based operation. It is very difficult to monitor the working time and also equip the performance of the employees during Work from Home.
2. **Less Staff Integration** – Team Affinity is the key root of success in IT Sector. But there is no team cooperation among the employees because of social and physical distancing factor.
3. **More Distractions** – In an IT Office, there is no distraction for an employee but in a home there are some disturbances like neighbours, Family Members, etc...
4. **More Telecommunication Network Costs** – During the Work from Home, IT employees have to use their own internet for their working operations and it is one of the heavy burden by making increment in the monthly expenses of the employees.
5. **No leave in Work from Home** – Normally there is a weekly off in a week for all IT employees. But Staying at home and Work from home means that employees have work always i.e., 24 * 7 of the work environment which affects the mental wellbeing of the employees.

REVIEW OF LITERATURE

1. **Gayathri Harikumar and Ashok (2020)**, conducted a research study about the IT employees practices in Work from Home. From their perspective, work from home may affects the productivity and quality of work. Even though the wellbeing facilities are provided by the organization but there is no job enrichment for the employees because of the fear of Covid-19 mental distress among the mindset of employees.
2. **Callum J. Jones, Thomas Philippon, VenkyVenkateswaran (2020)**, provided an extension by giving a neo classical model to include the dynamical approach to study the different policies which are framed by Government during the Covid 19 which are being practiced by the companies to make a success implementation of Work from Home which will be quantitatively reduce the spread of disease in the Country.
3. **Schall, Marie Antoinette (2019)**, confined that when the positivity of work from home increases may leads to increase the job satisfaction. In addition to that there are some obstacles like perceived independence without team, work from family conflict and increase in telecommunication costs are practical difficulties which makes negative vibration to implement the work from home system. But in the point of view of employer, there is more benefit of the employer by cutting off many unwanted costs.

4. **Kalpana and Deshmukh (2018)**, investigated that the conflicts in work life balance of working women that cause and affect the health than the male employees in a working organization. It is furthermore suggested that Health, Safety and Welfare programs should be practiced and implemented according the Factories Act Legislations to balance the work life of Women in balancing the personal and working life.
5. **Margrethe H. Olson and Sophia B. Primps (2010)**, focused on work from home concept by doing an exploratory investigation of organizational arrangements by adopting the Work from Home. From the perspective of management, work from home may threaten the loss of control among the employee's performance. This system will increase in autonomy and resulting the job enrichment leads to make a positive outcome for employer and employee in an organization.

PROBLEM STATEMENT FOR THE STUDY

Normally, India is the only country which majorly depends upon the Agriculture in the traditional days. After Information and Communication Technology Sector emerges the three hot cities in India namely Mumbai, Chennai and Bangalore are most competitive cities in all over the world by information technology enabled service to all over the world. Information Technology sector in India is the only sector by providing more flexibility option to make an arrangement by providing work from home during the pregnancy and other medical caring periods for the employees. When Covid – 19 increases, Work from Home becomes normal as per the instruction given by the Government of India.

This makes the researcher to study about the effectiveness of employees in the IT Sector by adopting the Work from Home strategy and its impact during the lockdown period of Covid – 19. This study exclusively reveals the analysis of convenience level, healthy precautions, work life balances of IT employees in the Chennai because the Chennai is the second largest exporter of software enabled services to all over the world. So the researcher took is study at Chennai and the finding in the Chennai will also help the future researchers to assess the position of the IT employees in the other hot cities like Mumbai, Bangalore, etc...

OBJECTIVES OF THE STUDY

1. To measure and analyze the demographic variables of employees who are working from home in the IT Sector from Chennai
2. To predict whether there is a convenient and capacity of ease level of working from the work from home strategy for the employees in adopting and handling their job activities
3. To study whether the Work Life Balance is healthy and it is maintained by the employees in a confident manner while work at home during the pandemic Covid – 19.
4. To suggest the needed solutions to overcome the difficulties from work from home strategy in the future.

METHODOLOGY OF RESEARCH ADOPTED FOR THE STUDY

1. Population : Employees who are adopted in IT Sector of Chennai
2. Sample Collection Method : Convenient Sampling Method
3. Technique of Data Collection : Primary data through structured questionnaire
4. No. of Samples : 140 IT employees from Chennai
5. Tools used for the Study : Percentage Analysis, Chi Sqaure Analysis and Correlation Analysis
6. Statistical Software used : SPSS

DATA ANALYSIS AND DATA INTERPRETATION FROM THE STUDY

1. Demographic Analysis using Percentage Analysis:

Based on the Gender:

Gender	Frequency	Percent
Male	85	61.00%
Female	55	39.00%
Total	140	100.00%

The study was conducted with 140 employees and it shows that 61.00% respondents are male and 39% are female.

Based on the Age:

Age	Frequency	Percent
Below 30 years	101	72.00%
31 – 40 years	25	18.00%
41 – 50 years	10	07.00%
Above 50 years	04	03.00%
Total	140	100.00%

The study was conducted with 140 employees and it shows that 72.00% respondents are in the age group of below 30 years, 18.00% respondents are in the age group of 31 – 40 years, 07.00% respondents are in the age group of 41 – 50 years and 03.00% respondents are in the age group of above 50 years.

Based on the Educational Qualification:

Educational Qualification	Frequency	Percent
UG	46	33.00%
PG	86	62.00%
Others	08	05.00%
Total	140	100.00%

The study was conducted with 140 employees and it shows that 33.00% respondents are qualified with UG Degree and working in the organization, 62.00% respondents are qualified with PG Degree and working in the organization and 05.00% respondents are qualified with more than UG Degree and PG Degree Qualification and working in the organization.

Based on the Income Level:

Income Level	Frequency	Percent
Below Rs. 30, 000	38	27.00%
Rs. 30,001 to Rs. 50, 000	74	53.00%
Above Rs. 50, 000	28	20.00%
Total	140	100.00%

The study was conducted with 140 employees and it shows that 27.00% respondents are earning the income below Rs. 30, 000 per month, 53.00% respondents are earning the income in the category of Rs. 30, 001 to Rs. 50, 000 per month and 20.00% respondents are earning the income above Rs. 50, 000 per month.

Based on the Experience:

Experience	Frequency	Percent
Below one year	55	39.00%
1 – 5 years	71	51.00%
Above 5 years	14	10.00%
Total	140	100.00%

The study was conducted with 140 employees and it shows that 39.00% respondents are having below one year of experience in IT Sector, 51.00% respondents are having the experience in the range of 1 – 5 years in IT Sector and 10.00% respondents are having above 5 years of experience in IT Sector

2. Association between Gender and Convenient Level of Work from Home using

Chi Square Analysis:

Null Hypothesis (Ho) : There is no significant association between gender of employees and Convenient Level of Work from Home.

Alternative Hypothesis (Ho) : There is a significant association between gender of employees and Convenient Level of Work from Home.

Chi – Square Test			
	Value	Degrees of Freedom	Significance
Pearson Chi – Square	4.474 *	2	.107
Likelihood Ration	4.264	2	.119
N – Valid case	110	-	-

The Calculated Value of Chi – Square (0.107) is less than the table value of (0.119), so we accept the null hypothesis and conclude that there is no association between Gender and the Convenient Level of Employees from Work at home.

3. Relationship between Work from Home and a Work Life Balance among Employees using Correlation Analysis:

Null Hypothesis (Ho) : There is no significant relationship between Work from Home and Work Life Balance among employees.

Alternative Hypothesis (Ho) : There is a significant relationship between Work from Home and Work Life Balance among employees.

Correlation Test			
		Work from Home	Work Life Balance
Work from Home	Pearson Correlation	1	.550
	Significance	-	.000
	N	110	.110
Work Life Balance	Pearson Correlation	.550	1
	Significance	.000	-
	N	110	110

Correlation is significant at 0.01 level at 2 tailed distribution

The above table interprets that the Pearson Correlation Co-efficient value as 0.550, clearly notifies that there is a positive correlation between Work from Home and Work Life Balance of IT Employees in Chennai.

FINDINGS

1. Majority of the respondents (61.00%) are male respondents.
2. Majority of the respondents (72.00%) are in the age group of below 30 years
3. Majority of the respondents (62.00%) are qualified with PG Degree and working in the IT Sector Employees of Chennai.
4. Majority of the respondents (53.00%) are earning the income in the category of Rs. 30, 001 to Rs. 50, 000 per month in IT Sector Employees of Chennai.
5. Majority of the respondents (51.00%) are having the experience in the range of 1 – 5 years in IT Sector Employees of Chennai.
6. There is no association between Gender and the Convenient Level of Employees from Work at home in IT Sector Employees of Chennai
7. There is a positive correlation between Work from Home and Work Life Balance of IT Sector Employees of Chennai

SUGGESTIONS

1. The IT Companies are able to provide / bear the cost of telephone or network expenses used by the employees for their Work at home for doing their official work.
2. The IT Companies should enhance the flexibility in working hours to maintain a work life balance to improve the quality and productivity in work.

CONCLUSION

The Covid – 19 is a pandemic disease. Still there is a fear among the peoples. At this situation there is a difficult to perform the work at home. Work from home is quite indispensable during the pandemic period. Even though there are some quite difficult constraints happened, the IT sector employees are able to maintain the positive work life balance while they are work from home and it can motivate the employees in the long run to ensure the quality and productivity in the work in the organization by adopting flexible work from home strategy.

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EFFECTIVENESS OF GOVERNMENT SPONSORED HEALTH INSURANCE SCHEMES IN INDIA

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Abstract

The Government sponsored health insurance scheme can be grouped into three categories such as National level government sponsored health insurance scheme, State level health insurance scheme and sector level health insurance scheme. This kind of comprehensive and integrated HIS save the lakhs and lakhs of lives of BPL citizens of India .The emergency health care services, digitalized health care services and post care actives have made very successful history of these kinds of state level HISs The fund allotment and payment of contribution on the behalf of beneficences, nature and quality of services offered by the public , private and missionary trust hospitals are the success criteria to make effectiveness of various kinds of government sponsored HISs.

Keywords: Health Insurance scheme, SCHIS.

Introduction

The India consists of world's top pest population strength with 80 percent of middle class of standard of living and below poverty level. It is a premier task of democratic governments to make facilities for health care services and related insurance activities to more than 130 million population throughout the country. So the central and state government are not only establishing the various kinds of hospitals ranging from multi specialty hospital to mobile or mini primary health centre but also enrolling its populations into various state sponsored health insurance schemes. But there are the problems of identification of rights persons or covering of all relevant persons under the particular health insurance scheme to the various state and central governments due to scattered nature of living of beneficiaries in India. In additional to it, digitalized enrollment procedures, searching of concerned hospitals for the treatment, admitting of patients into hospitals for the betterment are considered as a very strive tasks to the rural based poorly literate or illiterate beneficiaries of various health insurance schemes in India. In this situation, the effectiveness of the various Government sponsored health insurance schemes has been discussed in the following headings.

State intervention in Health Insurance Sector

The central and state government wants to assures the availability of health care services to all sectors of economically weaker section of Indian peoples. So the industrial and road accidents, occupational diseases, male malnutrition, irrecoverable poverty are the majors thrust for medical services at various range from outpatient cases and in patients . It needs the laksh and laksh money to poor Indians to take the treatment for the wellness. It forces the government to provide the sector wise Health Insurance Schemes (HISs) . In this context, the employees state insurances act has been passed to provide the medical facilities for workers worked in Industries. In this connection, Handloom weaver's health insurances schemes with contributing the workers contributions by state government have also implemented with collaboration of ICICI Lombard health insurances. The health insurances schemes are also implemented among the government servants by the Tamil Nadu state government. As extension to it, Chief ministers health insurances scheme also provided under the

sponsorship of Tamil Nadir state in rural peoples of Tamil Nadu for the period of past 15 years. At present the central government has introduced the Ayush Bharath health insurance schemes to preserve the millions of populations from non availability of health care services

Distribution of Government sponsored health insurance scheme

The Government sponsored health insurance scheme can be grouped into three categories such as National level government sponsored health insurance scheme, State level health insurance scheme and sector level health insurance scheme .

Effectiveness of National level government sponsored health insurance scheme

There are majorly three health insurance schemes provided with the government support in India . The Ayush Bharath health insurance are offered to all kinds of citizens of India. It covers nearly 50 crores (40 percent of overall population) population of India. Under this scheme , the beneficiaries are getting the health care services at both public and private sector hospitals up to Rs.5 000000 per family per year .

The special insurance scheme is also offers to senior citizens of India fro 2016 to get the health care services for various health issues including the testing traeating and post treatment procedures. The both private and public hospitals have been fixed to treat the senior citizens .Effectiveness State Level Health Insurance Scheme . 1.19 lakhs senior citizens has benefited under this scheme .

Table 1 Effectiveness of National level Government Sponsored HISs

Sl.No	Name of the Scheme	Sponsor	Year of establishment	Beneficiaries	Description
1	Ayush Bharath health insurance scheme	Government of India	2018	10.74 crore families	Health care facilities is offered up to Rs. 500000 per family per year. 17.96 lakhs person are undergone the treatment under this scheme
2	Senior Citizens Health insurance scheme (SCHIS) –	Both central and state government (State government as nodal agency)	2016	2.09 crore Senior Citizen families	Health care facilities is offered up to Rs 30000 per family per year. 1.91 lakhs person are undergone the treatment under this scheme
3	Prime Minters Accident insurance	Central Government	2015	Aged 18 to 70 citizens having bank accounts (Automatically enrolled)	Accidental health care services and death and disablement benefits .

(Source : Compiled from Annual repot -2018-19 , Department of Health and Family welfare, Government of India , Pp-204-206)

Table 2
Effectiveness of State level Government Sponsored HISs

Sl.No	Name of the Scheme	Sponsor	Year of establishment	Beneficiaries	Description
1	Chief Minister's Comprehensive Health Insurance Scheme of Tamil Nadu	Government of Tamil Nadu	2011	0.6 crore families having the annual income level below Rs. 70000 per annum in Tamil Nadu	Health care facilities are offered up to Rs. 500000 per family per year. 18.13 lakhs person are undergone the treatment under this scheme
2	Karunya HIS of Kerala	Government of Kerala	2012	0.4 crore families under Below Poverty Lines in Kerala	Free health care services offered to selected health problems
3	Mahatma Jyotiba Phule Jan Arogya Yojana health insurance scheme	Government of Maharashtra	2017	Selected farmers families	Health care facilities are offered up to Rs 150000 per family per year.
4	Integrated Andhra Pradesh government HIS	Government of Andhra Pradesh and YSR trust	2016	1.BPL families 2.APL families 3.Journalists 4.Government employees	Dr,YSR arokiya HIS is offered to BPL families Arokiya Rashtra HIS is offered to APL families . Working Journalist HIS offered for Journalist. Govt employees HIS is offered for govt employees
5	Mukkikamantri HIS of Gujarat	Government of Gujarat	2012	BPL families	Up to 3 lakhs worth health care services offered to poor families of Gujarat state in govt, private and trust (aided) hospitals

(Source : Compiled from secondary data)

Effectiveness of State level government sponsored HISs

The state level health care services are offered to most of BPL families in the various states of India such as Tamil Nadu, Kerala, Andhra Pradesh, Maharashtra, Gujarat and Telangana with the collaboration of health insurance companies. These schemes offer the health care service in public and private sector hospitals to various selected health issues and accidents. The range of value of treatment varies from Rs. 150000 to Rs. 500000.

This kind of comprehensive and integrated HIS save the lakhs and lakhs of lives of BPL citizens of India. The emergency health care services, digitalized health care services and post care services have made a very successful history of these kinds of state level HISs. The mortality rates are decreased in the period of implementation of HISs to general public in the concerned states when compared with prior history. (Table -2)

Effectiveness of Sector wise government sponsored HISs

Another scheme named as Rashtriya Swasthiya Bima Yojana (RSBY) has offered health insurance for unorganized artisans and unorganized waged workers throughout the country. 4.19 crore families have been enrolled in this scheme. This scheme is implemented with private insurance company. The both the central and state government has contributed jointly workers' families insurance premium amount to those private insurance company. 3.02 lakhs unorganized workers and artisans have been obtained the health care services under this scheme on 2018-19

The employees state insurance scheme empowers the central government to establish the ESI hospital throughout the country and make all arrangement to provide the health care services to the millions and millions of workers working from cottage industries in which more than 10 workers are working to Multi National Companies. The ESI corporation also reimburse the inpatient treatment cost to its enrolled workers. This hospital very use full to take care of patients affected by COVID -19 during the year 2020 in the various parts of India. It is a very good witness of the effectiveness of Government sponsored HISs.

Table 3
Effectiveness of Sector wise Government Sponsored HISs

Sl.no	Name of the Scheme	Sponsor	Year	Beneficiaries	Description
1	Rashtriya Swasthiya Bima Yojana (RSBY)	Both central and state government (State government as nodal agency)	2015	4.19 crore unorganized workers families	Health care facilities is offered up to Rs 30000 per family per year. 3.02 lakhs person are undergone the treatment under this scheme
2	Employees' State Insurance Scheme	Government of India	1948	82.8 million industrial workers working under factory and other establishment s	A separate 145 ESI hospitals and 42 annexure with inpatient and outpatient facilities throughout India. Private hospital are allowed to provide the health care services.
3	Government employees HISs	Both central and state government (Separately)	2015 onwards	All state and central government servants including	Health care service have been offered in public and private hospitals .
4.	Awaz HISs of Kerala	Government of Kerala	2017	All kinds of Migrant workers falling under the age group ranging from 18 to 60 years of old	Health care services offered to beneficiaries up to Rs. 15 000 per year. And death benefits is offered Rs ,200000
5	Aam Aadmi Bima Yojana - Vocational health insurance schemes	Government of India	2013	Artisans such as Hand loom weavers, Fisher and carpenters	Health care services are offered to artisans and workers of particular vocation up to Rs. 300000

(Source : Complied from secondary data

In addition to it, both the central and state governments are also offers very specific HISs to artisans vocational workers and traders benefit ranging from 1 lakh to 5 lakhs during the past two decades. The Kerala government is provided special HIS migrant workers. Telanga government also offers the health insurances to Journalist next to Aandhra Pradesh. The HISs for Handloom weavers in north eastern states has been perceived very effective and more the 25 thousand handloom weavers are cured by this scheme. In this context, Finishers and carpenters, Plantation workers are very effectives treated by the special vocational HIS schemes offered by the various government.

Conclusion

The fund allotment and payment of contribution on the behalf of beneficences, nature and quality of services offered by the public, private and missionary trust hospitals are the success criteria to make effectiveness of various kinds of government sponsored HISs. So a special quality audit and continuous verification of stock of drugs and medicines, operational level of laboratory and other instrument and testing devices are essential to preserve the lives of human beings under this kinds of HISs,

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OVERVIEW OF HUMAN CAPITAL MANAGEMENT POLICIES AND PRACTICES OF THE BANKING SECTOR IN DINDIGUL DISTRICT – A STUDY

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Abstract

The commitment of employees of cooperative banks should be fixed at maximum level. The human capitals should be advised to adhere the same. The roles of industrial relation and bargaining moments in private sector banks have been observed one. The presence of the same should be ensured in order to make a good representation of the human capital on before top management and government. The job rotation and transfers of public sector employees strongly affects the work life balance of human capital and being as sources of stress and unrest of individual employees. The process of transfer and job rotation should consider the personnel issues with the respect of the same. The Human capital outsourcing contract should be abolished in the study area

Introduction

The triangle Human Capital Management policies and practices have been implemented in the various folds of banking sector. The Human capital Management polices of public sector banks has been guided by well advanced, fair and equitable nature of principles. The central government plays the two dimensional role in framing the human capital polices such as interventional role in order to promote the human capital development and employer role in order to enrich the banking operations with aiming the profit maximization and better services in all parts of India. On the other hand co-operative banks which is controlled by the state governments follow the traditional approaches in framing the human capital management policies. The most of principles of human capital polices either framed by state government or approved by the same authority. The nature of cooperative banks' human capital management polices is based on the labour and cooperative orientation. The employees of cooperative banks have been considered as a part of capital of cooperative banks. The polices also allow to human capital not only to provide the banking services to members societies and general public but also to accumulate the capital and expand the business operation as a promoter role. The well technically advanced and superior level digitalized private sector banks' Human capital management policies have followed the exploitative and non equitable nature of principles in order to boost up the capitalistic economic system.

Statement of the Problem of the study

The categorization and appointment of human capital as permanent and temporary is key or sources of creation of problems in the human capital management. The same workload has been allotted to both permanent and temporary employees under a particular grade. But compensation, job security, provision of fringe benefits has been provided at different level. The exploitative nature human capital management policies and practices allow to sail the permanent employees in red carpeted roads and curse to sail the temporary workers in critical path. The procurement of more numbers of human capitals under temporary nature is a continuous story in the pages of private sector banks. The references and influences of politicians in the procurement practices of Human capital in the Cooperative sectors banks are also dilute the productivity/ efficiency oriented recruitment practices. The most of government sector banks allow the manpower to provide the banking services at other places as out of premises under out sourcing contract basis. It creates not only private participation in

banking services and also spoil the utilization of human capital under wrong manner. The range of stand of living of such temporary workers is bracketed with question marks and thrusting for betterment. A study has been undertaken based on this circumstance. The impact of the privatization and amalgamation of public sector banks in Human capital management have made very serious and fearful unrest among the human capital of banking sector.

Scope and Limitation of the Study

The study has focused on the analysis of pattern of formation of human capital policies and its practices in the banking sector. The government intervention and guiding principles has also observed under LPG era. It also considered the perception of various kinds of human capital regarding the Human capital policies and practices in the Dindigul district. The period of study has pertained as one year i.e., 2019-2020.

Objectives of the Study

1. To comparatively analyze the public, cooperative and private sector human capital management policies and formation procedures of sample banks in Dindigul district
2. To comparatively assess the public, cooperative and private sector human capital management practices of sample banks in Dindigul district
3. To know the practical issues on Human capital management policies and practices faced by sample human capital procured in the various folds of banking sector in Dindigul district
4. To suggest the enriching recommendation for present human capital management policies and practices followed by the various folds of banking sector.

Methodology

It is an observation cum descriptive study. Both primary data which is collected from sample bank staffs by using interview schedule and secondary data which is collected from various government orders. Annual reports, financial statements and policy notes of central & state governments and sample banks. In this connection, convenience sampling technique has been adopted for this study. 6 banks including one state banks of India, Pappampatti branch, One bank of baroda, Palani Branch, (Two public sector banks), Didigul District Central Cooperative banks, Dindigul Head office and Urban Cooperative bank, Kodaikannal (Two Co-operative banks) and Axis Banks, Palani Branch and ICICI bank chatrapatti (Two private sector bank) have been selected as sample banks for this study. In addition to it, 10 staffs member per sample branch have been selected as sample respondents as 50 percent sample size by using simple random sampling technique. Total sampling respondents have been ascertained as 60 persons for this study. The collected data has properly analyzed by using statistical tools such as percentage, average and ANNOVA.

Human Capital Management Polices of Banking Sector in Dindigul District

Table 1

Comparative Analysis of Human Capital Management Polices of Sample Banks in Dindigul District

(Compiled from secondary data)

Sl.No	Human Capital Management Polices	Public Sector Bank	Co-operative Sector bank	Private Sector Bank
1	Job analysis and Manpower Planning	A Separate and expert committee is fixed with the membership of banking and government officials.	Following of the state government guidelines and regulation	Fixation of Manpower strength by Top level management
2	Recruitment and Selection polices	Through BRB/IBPM	State Employment Exchange or Advertisement with direct interview or Board of Cooperative Banks recruitment / Promotion from cooperatives societies /	Direct interview and Campus interview process
3	Wage and Salary administration polices	As per as central government regulation and settlement arrived in bargaining with unions	As per as state government regulation based on the financial position of concerned bank	Fixation by top level management at lower level when compare with other sector banks
4	Polices for Employees welfare measures	All schemes are implemented to both permanent and temporary employees as per as law	Welfare schemes are implement to those permanent employees	Discrimination policy followed in enrollment of employees in the welfare schemes
5	Motivation, Training and Development of Human capital	Lack of high level motivation polices and ensuring the stress less employment	Cooperative based motivation policy	Motivation with more stress
6	Industrial Relation and Bargaining	Workers participation in Management as the worker director	Employees have provided with share of banks . Labour oriented IR polices	No more IR and Bargaining . Every is decided by top management and high level labour turnover

7	Polices on performance evaluation of Human Capital	Reachable standards are fixed and un punishable evaluation polices	No more performance evaluation	Un reachable standards of performance and punishable nature of evaluations policy
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The banking sector consists of three folds such as Public sector banks, Private sector banks and Cooperative sector banks in Dindigul district. The Policies regarding the procurement of Human capital and system of compensation, job security, training and development programmes offered to human capital available for banking sector have been in variation manner from one kind of banking sector to another kind of banking sector. In this connection, job analysis and manpower planning, recruitment and selection process are formalized systematically and followed by Public sector banks without any deviation at national level. The BRB or IPBM are conducting the examination for selection of Human capital for the Public Sector Banks. But the private sector banks are far away from following this kinds of centralized recruitment polices. The private banks simply conducts the interviews at branch level or corporate office level and select the employees on the base their own interest. On the other hand Cooperative banks have fixed the norms and regulation for procurement of Human capital at state level or district level. The guidelines and approval of state government is mandatory. They use the government employment exchanges as one of the sources of recruitment and general advertisement is also followed as sources of recruitment in this regard. The Most of employees are appointed permanently and rarely local peoples are appointed for basic work. The salary has been fixed and revised as per as central government norms and all kinds of welfare measures such as EPF, Health insurance, Gratuity and bonus are also provided to all kinds of employees. It uplift the standard of living of human capital working in public sector banks. On other hand, Private sector bank appoints human capital both permanent and temporary basis. The high grade officials only have been appointed in permanent manner. The middle level officials have been appointed at temporary basis and salary is always fixed lower than the employees of public sector bank. The job security for the employees of private sector banks cannot be promised like as public sector. The fringe benefits only are offered to permanent workers and temporary workers have not been provided such benefits. So the standard of living of human capital in private sector banks do not ungraded and in exploitative manner. The intervention and policy formation on compensation package and welfare measures facelift the standard of living of human capital engaged in the cooperative banking sector. It shows that managing of human capital with adequate and above adequate level of standard of living by means of government controlled and intervened institutions

Human Capital Management Polices of Banking Sector in Dindigul District

Table 2

Comparative Analysis of Human Capital Management Practices of Sample Banks in Dindigul District

Sl. No.	Human Capital Practice	Sector wise Mean Score			F Ratio	F Probability
		Public Sector Bank	Co-op Bank	Private Bank		
1	Appointment of permanent Staffs	3.6771	3.5609	2.4708	0.3457	0.5114
2	Appointment of Temporary Staffs	1.7710	1.5026	3.9891	0.9225	0.5901

3.	Job description and Job Commitment	3.9311	3.5641	3.2201	0.9205	0.3871
4	Promotion and Transfer	3.8001	2.9001	3.9117	3.2821*	0.0514
5	Job Rotations	3.5258	3.5562	3.4784	0.2212	0.7681
6	On the job and off the job training	3.006	3.2601	3.7608	3.3978*	0.0505
7	Wage for Temporary workers	3.5711	3.7240	3.9140	2.2811	0.5689
8	Salary as per as government regulations	3.7333	3.7233	1.1021	2.8674	0.2363
9	Implementation of welfare measures	3.9622	3.6121	1.8242	3.0801	0.5007
10	Job security	3.7104	3.7211	1.7893	2.6152	0.5664
11	Disciplinary procedures	2.1121	2.0001	3.9183	1.9120	0.3981
12	Employees' turnover	3.1934	2.3915	3.6713	2.8713	0.1884
13	Trade union movements	3.8012	3.7210	3.7013	3.2756*	0.0521
14	Strikes and Lock outs	3.8744	3.8224	1.5406	0.6123	0.6973

(Source : Complied from primary Data Note : Significant difference – 5 percent)

The elements of human capital management process have been presented in the table-2 and perception of various kinds sample respondents working in public, Cooperative and private banks on human capital management process have also collected and presented in the one way ANNOVA table .The respondents belonged to “ Public and Cooperative sector banks ” have highly rated the following Human Capital Management process such as Appointment of permanent Staffs , Job description and Job Commitment, Salary as per as government regulations, Implementation of welfare measures, Job security, Trade union movements and Strikes and Lock outs, But all these practices have been poorly perceived by the private sector employees. It has been ascertained that the above said elements of human capital management practice has providing the issues and problems to the private sector employees. The job security and refusal of implementation of all kinds of welfare measure to the private sector bank employees are the practical issues identified in the human capital management practices of sample banks in the study area. Significant difference of perception among the three groups of respondents were found in respect of Human Capital Management practices such as Promotion and Transfer, On the job and off the job training and Trade union movements.

Recommendations and Conclusion

The commitment of employees of cooperative banks should be fixed at the maximum level. The employees should be advised to adhere the same. The roles of industrial relation and bargaining moments in private sector banks have been observed one. The presence of the same should be ensured in order to make a good representation of the human capital on before top management and government. The job rotation and transfers of public sector employees strongly affect the work life balance of human capital and being as sources of stress and unrest of individual employees. The process of transfer and job rotation should consider the personnel issues with the respect of the same. The Human capital outsourcing contract should be abolished in the study area.

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THE BENCHMARKING PRACTICES OF HEALTHCARE SERVICE SECTOR- AN EMPIRICAL STUDY WITH REFERENCE TO MADURAI.

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Abstract

Medical care and health provisions of hospital services utilization is determined by the need for care, by whether people know that they need care, by whether they want to obtain care, and by whether care can be accessed. Quality is a construct separate from access and is related to the achievement of favorable outcomes associated with utilization, not to whether health-care utilization occurs at all or to difficulties in obtaining care. The health-care delivery system has undergone great change over the past few decades. New and improved drugs, devices, procedures, tests, and imaging machinery have changed patterns of care and sites where care is provided. The growth of ambulatory surgery has been influenced by improvements in anesthesia and analgesia and by the development of noninvasive or minimally invasive techniques. rural health is identified as a major indicator in the rural development and an attempt is made in this study to trace the trend in health status, present and future health challenges and “felt need approach” of the people in health care services in rural Tamil Nadu by taking a few revenue villages in Madurai district. There is inequality in health status among different socio-economic groups defined in terms of income, education, land ownership, and housing. Therefore research studies are needed not only to examine the nexus between health and development but also the question of differentials in health status and health care utilization across socio-economic groups in rural areas. The present study will also focus intensively to find out reasons behind the health seeking behavior of people at micro level in rural Tamil Nadu by taking a few villages in Madurai District.

Keywords: Healthcare Service sector, Benchmarking

Introduction

Health is a multifaceted concept and thus it defies any precise definition. The narrow definition of health posits it as the absence of disease. The broad definition of health, however, does not rest merely on the absence of disease but the fulfillment of a whole range of personal, physiological, mental, social and even moral goals. World Health Organization's (WHO) constitution defines health as “*a state of complete physical, mental and social well being and not merely the absence of disease or infirmity*” (WHO, 1992).

The progress of a nation depends on a large extent to the development of rural society. The development is consistent and effective only when there is a balanced growth regionally. In India still the development is lop-sided. In our country, there is mismatch between objectives and resources, which leads to both inadequacies and inequalities in rural development. To minimize this problem, the people in the rural areas particularly the weaker section to be properly identified and to assess how far the developments are addressed to their needs. Today, it is widely felt that development of social infrastructure is the pre-requisite for the overall development of any economy. In this context rural health is identified as a major indicator in the rural development and an attempt is made in this study to trace the trend in health status, present and future health challenges and “felt need” of the people in health care services in rural Tamil Nadu by taking a few revenue villages in Madurai district.

Statement of the Research Problem

Tamil Nadu has sufficient infrastructure on health sector in terms of service provider and prevention of diseases. In southern part of Tamilnadu has accelerate with health service and modernization of multi specialty provisions are fastest growth. Mostly, the private sector has grown to be the main provider of curative health care in this zone. The studies on health status in Tamil Nadu show the picture of the health status in the state are based on aggregates and they conceal rather than reveal the inequalities that exist in the health conditions in the state. There is inequality in health status among different socio-economic groups defined in terms of income, education, land ownership, and housing. Therefore research studies are needed not only to examine the nexus between health and development but also the question of differentials in health status and health care utilization across socioeconomic groups in rural and urban areas. Further, this is necessary to analyze how far the health care services are considered and imperative from the public and supply by the Government in recent days. The Southern part of Tamil Nadu are perceived by people in rural and Urban areas and what are the “felt need” of the people in health services. The present study will also focus intensively to find out reasons behind the health seeking behavior of people at micro level in rural Tamil Nadu by taking a few villages in Madurai District.

Objectives of the study

- To analyze the health status and service utilization in Madurai District
- To examine the Health care expenditure of the people
- To analyze the choice of medical service of the people in Madurai

Methodology

This study is basically from descriptive in nature with empirical one. This seeks to examine the health care service utilization and practice of health care in Madurai. It has explored relationship between health status and socio- economic and other circumstances of the individuals. Primary data was collected through direct Interview and focused group discussions with key informants at the district health office.

Results and Discussion

The results are drawn from observation and interaction through primary data. The inferences are extracted by means of Factor Analysis. Because of, the primary data classification and coding had been carried out SPSS are only cross tabulation for limited variables. The positive association with independent variable are determined with the service provide to the people from Multi Specialty hospitals in Madurai Zone.

Factor-1

Variable Code	Variables	Factor
2	Occupational category	0.741
6	income	0.712
20	Expenditure on Surgery and Treatment –	0.632
21	Expenditure on Surgery and Treatment –Private	0.517
<i>Eigen value</i>		2.607
<i>% of variance</i>		8.357
<i>Cumulative %</i>		8.357

Source: Primary Data

The choice of treatment which is carried out from Government hospital or Private Hospital are preferred by the patient's family members who decide the multi specialty hospital services and approaches are conducive one, despite of expenses are abnormal which is rather than Government and other private hospitals. These are all determinant factors according to their opinion, attitude, reliable in nature of service and cost analysis. The total healthcare expenditure is divided into direct and indirect categories. The direct expenditure on healthcare services includes the money spent on provider's fee, medicine, diagnostic and clinical test charges, hospitalization fees and surgery, if any. The indirect expenditure on healthcare includes the expenditure incurred on special diet, transportation for the patients and accompanying persons, tips paid to the supportive staff, loss of earning for the patient due to illness and loss of earning to accompanying persons for providing support to the patient during the course of treatment. The factor loading 0.517, 0.0632 are positively associated with the Eigen value 2.607

Factor-2

Variable Code	Variables	Factor Loadings
13	Resident area- Urban	0.728
22	Expenditure on Surgery and Treatment	0.767
24	Cost of health service	0.542
25	Nature of Surgery	0.528
14	Finance source	0.522
<i>Eigen value</i>		2.250
<i>% of variance</i>		7.501
<i>Cumulative %</i>		16.858

Source: Primary Data

The finance source are prime factor of determinants of service utilization during major treatment and Surgery. In this connection, health insurance schemes which will be mitigating their burden of money source. These are all precautionary measures of expenditure component for health. If anyone who involved major treatment or surgery, it will help for acute financial assistance during the time. Majority of the respondents who have activated with health insurance scheme were coming under the occupational category of employed service class and own business. The cost of health services are influenced and affecting factor for health care service utilization in terms of economic parameter and desirable in nature of service provider's reputation and reliable in nature of patient's family members.

Type of treatment (procedures and follow up by the doctors) for major surgery where contained with certain regulative procedures in orders to maintained conducive atmosphere and speedy recovery of the patients. The structural arrangements of equipment utilize and handling for optimum with service accessibility. These strategies are reliable in nature with valid by the doctors. The people who prefer the Private hospital for generous approach of the nurses and house keeping maintenance.

Factor-3

Variable Code	Variables	Factor Loadings
26	Type of treatment	0.735
12	Disease status	0.715
17	Regulation and Maintenance- GH	0.622
18	Regulation and Maintenance-Private	0.701

24	Cost of health service	0.502
<i>Eigen value</i>		2.641
<i>% of variance</i>		5.469
<i>Cumulative %</i>		42.321

Source: Primary Data

In case the Government hospital, they followed bureaucratic rule with Government Guidelines which are all rigid type of practicing with service utilization while emergency time. They were approached Government hospital when the circumstances of accident or trauma from violence led by legal evidence produced by the Government premises such as , lawyer reference, police case in terms of and precautionary elements to their family in future. Factor loading shows that 0.701 , 0.622 are the positive association with the treatment procedures, cost of service, regulative measures in Private and Government hospital.

Factor-4

Variable Code	Variables	Factor Loadings
5	Hospital Administration	0.804
24	Cost of Health service	0.744
27	Multi speciality service	0.655
11	Health care delivery	0.639
<i>Eigen value</i>		2.884
<i>% of variance</i>		5.280
<i>Cumulative %</i>		33.218

Source: Primary Data

The service provider's contributions and provisions are going to accessible with utilized by the beneficiaries are considered as fulfilled benchmarking functions. In Heath sector, the major service are Health care delivery, monetary aspects, and atmosphere of surrounding, amenities provided by the administration are the major components. The factor loading result reveals that equal distribution of positive attitude on General care delivery. The combined factor result shown as positive for medical service in Multi specialty Hospital in private and Major hospital in Madurai Corporation City .

Conclusion

The catalyst nerve centers of the service provider of hospital are maintenance of housekeeping, access with medical equipments, regulation aspects. The services are highly considered by the cost of surgery, preference by the public in terms of reliable service and reputation of the doctors. Multi specialty hospitals are huge expensive health service with prompt manner in accordance with the demand for modernized world. The location of Madurai City is southern based geographically surrounded by a fewer number of multi specialty hospital and scarce limit of logistics and communication where based on Hospitals rather than metro areas. The structural arrangements of equipment utilize and handling for optimum with service accessibility. These strategies are reliable in nature with valid by the doctors.

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