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Research Papers

A STUDY TO ASSESS THE EFFECTIVENESS OF OCCIMUM SANCTUM TO REDUCE BLOOD GLUCOSE LEVEL AMONG OLD CLIENT WITH TYPE 2 DIABETES MELLITUS IN KONDANCHERRY, THIRUVALLUR

Ms. Linda Xavier
Department of Child Health Nursing, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Science, Thandalam, Chennai, Tamilnadu.

ABSTRACT
Diabetes mellitus (DM) frequency is a growing problem worldwide, because of long life expectancy and life style modifications. In old age (≥60–65 years old The World Health Organization (WHO) has reported 24 million cases of diabetic neuropathy, 5 million cases of retinopathy, and 6 million cases of amputation due to diabetes. The mortality in individuals with diabetes is chiefly due to cardiac complications. So the present study aims to assess the effect of occimum sanctum extract to reduce blood glucose level among old age client with type 2 diabetes mellitus in Kondancherry village, Thiruvallur. A quantitative research approach with quasi experimental research design was adopted to conduct the study. The study conducted among 60 clients, in that 30 clients undergone study group and another 30 undergone control group, they are selected by using purposive sampling technique. Semi structured questionarries was used to collect the demographic variables and clinical variables. The pre interventional blood glucose level was assessed by using glucometer. The occimum sanctum extract was given to study group about 50ml for 4 weeks and post test level was assessed in both groups. The obtained pretest and post test level of blood glucose was analysed by using descriptive and inferential statistics. The result of the study shows the among 60 patients ,in experimental group clients proves the The pre and post assessment of blood sugar level in study group the result shows that the mean value of pre test is 172.27 and post test is 140.23 . In the difference of mean value (32.033) and SD (11.467) value there is increase of 11.467 SD value when comparing the pre and post test blood sugar level .t=15.301 with df=29 and the p value is 0.000 it is statistically significant. In hence the finding of the study shows that the occimum sanctum extract was effective to reduce blood glucose level among client with type 2 diabetes mellitus.

Keywords: old age client, type 2 diabetes mellitus, occimum sanctum extract, blood glucose level.

INTRODUCTION
Diabetes mellitus (DM) is a chronic metabolic disease characterized by hyperglycemia and high glycated hemoglobin with or without glycosuria.

Chronic hyperglycemia leads to damage and failure of various organs, especially the heart, blood vessels, eyes, kidneys, and nerves.(1) Type 2 diabetes represents the most common metabolic disease in older adults. According to the latest estimates of the International Diabetes Federation (IDF), diabetes shows a high prevalence in people older than 65 years. In 2017, the number of diabetic people aged 65–99 was estimated to be 122.8 million (around 18% of prevalence rate), of whom 98 million had <80 years (65–79 years); these numbers are expected to easily exceed 200 million in 2045.(2) Type 2 diabetes has a heterogeneous pathophysiology, with complex interactions between age-related physical conditions and a wide range of risk factors, which make effective prevention and control of this metabolic disorder more challenging.(3) The complication of diabetes mellitus include retinopathy, peripheral neuropathy, coronary heart disease and heart failure, stroke, peripheral vascular disease, infections, cognitive disability, liver disease and functional disability.(4) Tulsi leaves are known as elixir of life because of their diverse healing properties. From warding off some of the most common ailments, strengthening immunity, to fighting bacterial & viral infections-the benefits of tulsi are multifarious. This herb is said to improve pancreatic beta-cell function and insulin secretion, and further increases the uptake of glucose by muscle cells.(5) The extracts of holy basil leaf have also lowered blood sugar, reduced some measures of the response to physical stresses, recent trends and current innovations create a very good opinion on alternative therapy and Indian medicines, so the investigator took this study to assess the effectiveness of holy basil leaves extract on lowering blood sugar level.(6)

METHODS AND MATERIALS
Quantitative approach was used in this study and quasi experimental research design was adopted for this study. The sample size comprised 60 clients ,in experimental 30 samples and control group 30 samples. Inclusion criteria were Old age client above 60 years old.Client who is willing to participate the study. Client who knows Tamil/English language.Client without physical disability. The exclusion criteria were Client who have communicable disease. Client who have other associated disease condition. Client who is not available during

the study. Client undergone insulin therapy. The study was conducted at Kondancherry village Thiruvallur , after obtaining formal permission the Principal of Saveetha College of Nursing. An authorized setting permission was obtained from, Kondancherry Panchayat and peoples. A total of 60 samples who met the inclusion criteria were selected by using convenience sampling technique for the study . In the experimental 30 samples was received the occimum sanctum extract as intervention. Remaining 30 in the control group was not received intervention and routine treatment was given . The investigator administered structured questionnaire to obtain demographic and clinical data for duration 20 minutes. Patients was adviced to taken 50 ml of occimum sanctum extract in morning before taking the medicine for diabetes mellitus. The patient was advised to follow the intervention for 4 week, the post test was conducted to assess the blood glucose level. The control group was   received only regular routine treatment. The data was tabulated and analyzed by descriptive and inferential statistics.

RESULT AND DISCUSSION

Section A: shows that most of the old age clients in the experimental group, 11(36.7%) were aged between 60 – 65 and 66 – 70 years respectively, 18(60%) were male, 16(53.3%) were married, 20(66.7%) belonged to nuclear family, 18(60%) were illiterates and 15(50%) had two children. Also shows that in the control group, most of the old age clients, 9(30%) were aged between 60 – 65 and 66 – 70 years respectively, 16(53.3%) were male, 19(63.3%) were married and were belonged to nuclear family, 15(15%) had schooling and were graduates respectively and 11(46.7%) had one child. In the experimental group and majority of them were females 56.7%(17) in both control and experimental group on the basis of religion most of them are Hindus 88.3%(26)in experimental and 90%(27) in control group. Majority of the Type II Diabetic Patients 50.0%(15) in experimental and control group were educated up to secondary school level, very less percentage 3.3% (1) in experimental and 6.7% (2) in control group were illiterate, around 10% (3) in experimental and 3.3% (1) in control group were diploma holders, only 3.3% (1) in control group were graduate, same percentage of participants in both group 6.7% (2) were completed their higher secondary education. Majority of the diabetic clients 90% (27) in control group were non vegetarian, Among Type II Diabetic clients only 26.7%(8) in control group and 33.3% (10) in experimental group were following exercise in their daily activity, and majority of them 23.3%(7) in control and 30%(9) in experimental were doing walking.

Section B: The result shows that the medical related information about the study participants among the participants most of them 50%(15) in experimental, 56.7%(17) in control group were having family history of diabetes mellitus,and in that 23.3%(7) in control group and 50%(15) in experimental group members father had diabetes mellitus, and same percentage 20%(6) of 60%(18) control group participants were having diabetes more than 5 years, about 23.7%(7) of participants in both group have excessive thirst, hunger and urination. Among the type II diabetes clients around 56.7 %(17) of participants in both group are on medication above 5 years, and around 83.3 %(25) were on regular treatment. All the type II diabetic clients are taking allopathic medication among that 100 %(30) in experimental and 86.7 %(26) in control were taking Tab. Most of the participants believed complication of DM is eye problem 23.3 %(7) in experimental and 20 %(6) in control group.

Section C: The comparison of pre test and post test Blood sugar level among Experiment and Control group. It shows that the comparison was made by student independent test and the tvalue of pre test among Experiment and Control group is 4.68 , df =58, p=0.001 is statistically significant. Likewise the t value of post test among Experiment and Control group is - 5.01, df = 58, p= 0.001 it is also statistically significant.

Section D: The result shows the effectiveness of the study. It reveals that there is 18.6% of reduction found in experimental group but in control group there is only 1.22%. Around 17.38% of reduction of blood sugar level in experimental group when compared with the control group. Thus the hypothesis was proved.

Table 1: Distribution of Demographic Variables of client with Type IIDiabetic mellitus.
N = 60(30+30)

Demographic Variables	Experimental Group		Control Group	
	F	%	F	%
Age in years				
60 – 65 years	11	36.7	9	30.0
66 – 70 years	11	36.7	9	30.0
71 – 75 years	6	20.0	5	16.7
Above 75 years	2	6.6	7	23.3
Gender				
Male	18	60.0	16	53.3
Female	12	40.0	14	46.7
Marital status				
Married	16	53.3	19	63.3
Unmarried	-	-	-	-
Widow/Widower	14	46.7	11	36.7
Divorced / Separated	-	-	-	-
Type of family				
Nuclear	20	66.7	19	63.3
Joint	10	33.3	11	36.7
Educational status				
Schooling	12	40.0	15	50.0
Graduate	-	-	-	-
Illiterate	18	60.0	15	50.0
No. of children				
No child	1	3.3	0	0
One child	4	13.3	11	46.7
Two children	15	50.0	10	33.3
More than two children	10	33.3	9	30.0
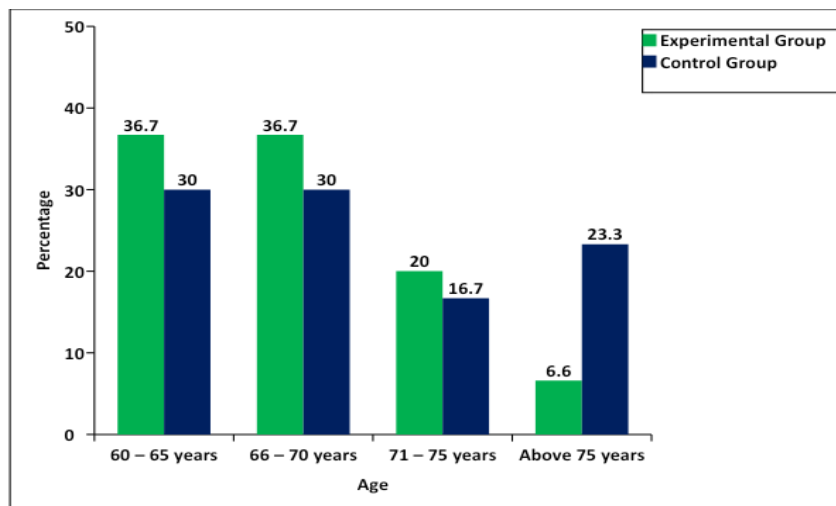
Figure 1: Bar diagram showing Percentage distribution of age of the old age clients in the experimental and control group

Table 2: Pre and post assessment of blood sugar level amongexperimental and control group.

Type of bloodsugar	Group	N	Mean	SD	Paired t test
Pre test	Experiment	30	172.27	9.720	t= 4.68
	Control	30	159.27	11.715	** p =0.001
Post test	Experiment	30	140.23	14.330	t =- 5.01
	Control	30	157.33	11.828	** p = 0.001
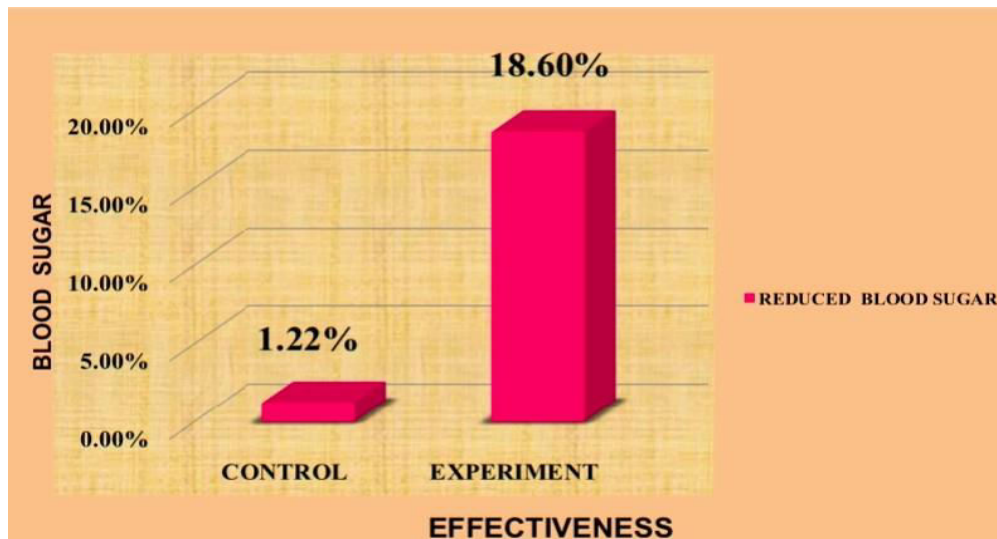
Figure 2: Bar diagram showing that Effectiveness of occimum sanctum among experimental group

Table 3: Association between level of blood sugar reduction and theirclinical related variables (Experimental Group)

Variables		Level of Blood sugar								Total		Chi ±square
		Decrease <10		Decrease 11-19		Decrease 20-29		Decrease 30 & above				
		N	In %	N	In %	N	In %	N	In %	N	In %	
Family history	Yes	0	-	2	6.7	2	6.7	11	36	15	50	X^2=3.093 P=0.378
	No	1	3.3	1	3.3	5	16.7	8	42.1	15	50	
Relationship	Father	0	-	2	6.7	0	-	3	10	5	16.7	X^2=10.772 P=0.292
	Mother	0	-	0	-	2	6.7	4	13.3	6	20	
	sibbling	0	-	0	-	0	-	4	13.3	4	13.3	
Duration of Illness	< 1year	0	-	0	-	0	-	2	6.7	2	6.7	X^2=13.348 P=0.147
	1-3year	0	-	0	-	4	13.3	1	3.3	5	16.7	
	3-5year	0	-	0	-	1	3.3	4	13.3	5	16.7	
	>5 year	1	3.3	3	10	2	6.7	12	40	18	60	
Symptoms before diagnosed	Giddiness	1	3.3	1	3.3	2	6.7	8	26.7	12	40	X^2=12.850 P= 0.380
	ĹKXQJHU, WKUXVW, urination	0	-	1	3.3	2	6.7	4	13.3	7	23.3	
	Itching in genital area	0	-	0	-	2	6.7	3	10	5	16.7	
	All the above	0	-	1	3.3	0	-	0	-	1	3.3	
	Not known	0	-	0	-	1	3.3	4	13.3	5	16.7	
Duration of treatment	< 1 year	0	-	0	-	0	-	2	6.7	2	6.7	X^2 =13.787 * P= 0.030
	1-3 year	0	-	0	-	4	13.3	1	3.3	5	16.7	
	3-5 year	0	-	0	-	1	3.3	5	16.7	6	20	
	>5 year	1	3.3	3	10	2	6.7	11	36.7	17	56.7	
Regularity of treatment	yes	1	3.3	3	10	5	16.7	16	53.3	25	83.3	X^2= 1.525 P= 0.677
	No	0	-	0	-	2	6.7	3	10	5	16.7	
Drugs	Metformin	1	3.3	3	10	7	23.3	19	63.3	30	100	Constant
Experienced Hypo glycemic symptoms	Giddiness	1	3.35	1	3.3	2	6.7	8	26.7	12	40	X^2=11.922 P= 0.218
	Profuse sweating	0	-	0	-	2	6.7	3	10	5	16.7	
	palpitation	0	-	1	3.3	0	-	0	-	1	3.3	
	Others	0	-	1	3.3	3	10	8	26.7	12	40	
Knowledge	Eye problem	1	3.3	1	3.3	3	10	2	6.7	7	23.3	X^2=13.839

of complication	Kidney problem	0	-	0	-	0	-	4	13.3	4	13.3	P=0.740
	Nerve problem	0	-	0	-	0	-	1	3.3	1	3.3	
	Cardiac problem	0	-	0	-	1	3.3	2	6.7	3	10	
	Foot ulcer	0	-	2	6.7	1	3.3	3	10	6	20	
	CVA	0	-	0	-	1	3.3	4	13.3	5	16.7	
	others	0	-	0	-	1	3.3	3	10	4	13.3	

*   Significant ------------p =0.05   ** - highly significant------   p =0.001 *** - very high significant p =0.0001
                                            ≤

CONCLUSION
In hence the finding of the study shows that the occimum sanctum extract was effective in reducing the blood glucose level among client with type 2 diabetes mellitus.

ACKNOWLEDGEMENT

AUTHOR'S CONTRIBUTION
All the authors are participated well in the work of the study. All authors are read and approve the final manuscript.

CONFLICT OF THE INTEREST
The authors declare no conflict of interest.

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UNDERSTANDING THE DRIVERS OF EWOM ACTIVITIES AND THEIR INFLUENCE ON CONSUMER PURCHASE DECISIONS IN INDIA

[1]Esha Joshi and [2]M. V. Rama Prasad

[1]Program Manager (Yellow Pages), PhD. Student (GITAM University, Visakhapatnam), MS – Marketing (UWM, Milwaukee, USA), MBA - Marketing (ICFAI University), BA – Economics (Delhi University)
[2]Professor, GITAM School of Business, GITAM University, Bengaluru Campus

ABSTRACT

The evolution of the web has had tremendous impact on all aspects of Marketing. Marketing today is not only limited to the 4Ps of product, price, place and promotions, but also focuses on customers, communications, and convenience. Growth in information technology has shifted the power of promotions and communications from companies to customers. It has altered the way consumers gather information about different product and services. The Internet allows customers to express their opinions about products/services in real-time with others online. This type of word-of-mouth communication over the World Wide Web is called electronic word-of-mouth communication (eWOM). Most studies on eWoM are limited to developed economies. In order to fully understand the influence of eWOM on consumers, it is essential to conduct research on eWOM in emerging economies as well. There is a lack of research exploring the effects of eWOM activities on consumer behavior in India. Considering the fact that India is one of the rapidly growing markets and ranks third in the number of Internet users across the World, absence of research in this area is quite substantial. This research is designed to study the drivers of eWOM activities and their influence on consumer purchase decisions in India.

Keywords: eWOM, Purchase Decision, Indian Consumers, Consumer Behavior, Online Consumer Reviews

INTRODUCTION

Traditionally, consumers have relied on the experiences and reviews of others while making their own purchase decisions. Opinions of friends, family members, colleagues, experts and acquaintances have been an important determinant of product/ service choices of customers. These opinions/ recommendations from trusted sources are known as *word-of-mouth communication* (WOM). Word of Mouth communication (WOM) has been defined as 'oral, person to person communication between a receiver and a communicator whom the receiver perceives as non-commercial, concerning a brand, a product or a service'. Thus, it is an informal communication between private parties concerning evaluations of goods and services.

Introduction of web-based technology coupled with the credibility of word-of-mouth communications, altered the way consumers gather information about different product and services. Today, marketing and promotions have become more customer-driven, and purchases are increasingly influenced by opinions of others. The Internet has increased the power that customers have over the success/ failure of a company. Companies need to acknowledge and embrace the power of online customer opinions.

Nowadays, customers communicate with other customers, as well as directly with companies, through various online channels. The Internet allows customers to express their opinions about products/services, real-time with others. This type of word-of-mouth communication over the word wide web is called *electronic word-of-mouth communication* (eWOM). Electronic word-of-mouth communications is defined as 'any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet.' Popular media channels used for eWOM are: blogs, Facebook, Twitter, social networks, YouTube etc. eWOM saves a lot of time on searching information about products/services and also helps customers in making more informed decisions.

eWOM allows customers to share their opinions about service delivery/ product performance with other customers. Online discussion boards give them an opportunity to discuss concerns about products/services. They can also communicate directly with the companies that they like or dislike. In today's electronically connected world, eWOM is an important determinant of a company's reputation.

Globally, more and more customers look at online sources to gather product and services information before making any purchase decision. This information is generally gathered first from family members and close friends, and consequently from those who are considered to provide 'expert opinions' about particular product(s)/service(s). This form of electronic word-of-mouth marketing activity between customers has gained a lot of popularity especially in emerging markets like India. This study has been designed to examine eWOM specifically in India since very few studies have been conducted on eWOM activities and their influence on Indian consumers.

Changes in Marketing

Traditional marketing methods focused on brands and their messages for current/potential customers. The brand was the originating point for all forms of marketing communications. Advertising and promotion strategies were such that there was a one-way interaction. Consumers could neither participate in promoting the brands that they liked nor complain to the brands that they disliked. As the number of brands in the market increased, so did the number of brand messages that customers were being exposed to. This clutter of brand-generated messages led to a decline in the trust that customers placed on traditional marketing communication strategies. Over time brands began to realize that customers wanted to share their pleasant/non-pleasant opinions about the products/services with the parent brands. The focus of marketing shifted from brands and brand-generated messages to customers. Companies started providing better service to each customer in an attempt to generate positive reviews from them. It was observed that satisfied customers could convince other customers to try the brand much easier than brand promotion messages. Moreover, customer generated promotions were less costly than traditional promotion methods like advertising.

There are numerous advertising and promotions messages that customers are exposed to. Traditional advertising conveys an exaggerated product/brand/ service picture to the customers. This leads to a drastic reduction in the trust that the customers have on company-generated marketing content. Researchers have observed that any form of consumer skepticism towards a brand can be overcome by WOM messages. WOM is considered to be more influential than other marketing and promotional activities undertaken by companies. In WOM marketing, the source of information- 'the communicator'- is considered more reliable since he does not get (or is perceived to not get) any financial rewards for his message. People trust WOM messages because these messages come from personal sources.

Word of Mouth communication can be either positive or negative. The influence of negative word of mouth communication on customer behavior has been observed to be much more than the impact of positive word of mouth messages. Research has shown that every unhappy customer tends to share his/her story to at least 9 other people. Moreover, customers tend to be cautious while buying products/services from those companies for which they have heard negative reviews. Thus, a single negative WOM message has the power to outweigh positive WOM messages.

Focus of WOM activities is to move customers up the loyalty ladder of a company. WOM activities try to convert prospects into brand advocates by building and maintain relations with them.

Figure 1: Loyalty Ladder
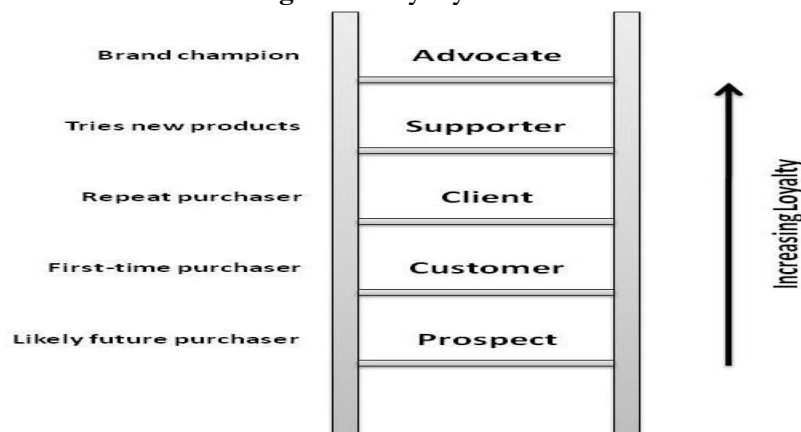
Electronic Word-of-Mouth marketing (eWOM)

Changes in cyberspace have had an impact on the way customers interact with each other as well as with different brands. The Internet has opened numerous venues for customers to share their opinions with others. Now customers can influence others by posting user generated content on a variety of platform: blogs, discussion forums, social networking sites, retail websites etc. This online, social phenomenon of customer-to-customer communication has gained a lot of importance in today's web-based world.

eWOM has been defined as 'any positive or negative statement made by potential, actual or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet' (Henning Thurau, Gwinner, Walsh and Gremler (2004)). The Internet allows a free exchange of opinions among consumers. This gives a lot of power to the consumers who can compare prices, product performances and product images before making purchases. They can also directly interact with the companies that they like or dislike.

Customer Motivations and eWOM

Customer motivation is the internal state of a customer that drives customers to behave in a particular way. One way to understand the reasons that customers contribute to or read eWOM communication is by looking at the motivations behind these actions. The concepts of needs and motivations are very closely related to each other. For a customer, different needs can lead to different reasons of contributing to eWOM activities.

In order to understand the reasons that motivate customers to participate in eWOM, Maslow's hierarchy of needs model can be used. American psychologist Abraham Maslow divided the needs of people into five levels: physiological/ functional needs, safety needs, need for belongingness and love, esteem needs, and needs for self-actualization. Each of these needs have a direct or indirect effect on the behavior of customers in participating in eWOM activities.

Figure 2: Maslow's hierarchy of needs
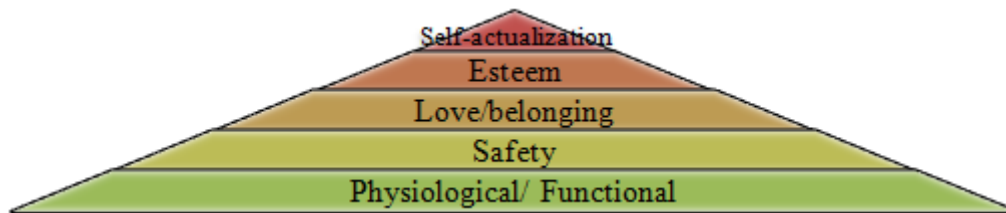
Functional needs

Customers might engage in eWOM activities as it saves them time, especially during the search phase of decision-making. It helps them to learn about products/services that can satisfy their needs. It might help them to make better purchase decisions. Sometimes, customers get financial incentives from the company to engage in eWOM. Other incentives like free product for trial, discount coupons might be given for eWOM activities. The company might also offer points for eWOM, which can be redeemed by customers for rewards.

Social Needs

One of the important reasons of customers engaging in eWOM activities is to communicate with others. Social interactions, involvement as well as a 'concern for others' have been found to be significant determinants of eWOM. Some researchers have tried to study social needs of customers by evaluating 'tie strength' as well as 'perceived risks' between message senders and receivers. They have observed that strong ties with the senders (like friends or close relatives) are preferred than weak ties (like expert opinions). If the 'perceived risk' of trying the product/service is high, customers tend to get more information about the product/service through eWOM communication. This is one of the reasons why high-involvement products have greater eWOM activity. Another aspect of social need is that customers engage in eWOM activities for those companies with whom they want to develop better relations. They either identify with the company or would like to help the company by engaging in eWOM.

Esteem Needs

Customers have a need to reduce any purchase-related doubts that they might have during post-purchase evaluation phase. A confirmation by other consumers tends to reduce any product/services related uncertainty that they have. People might engage in eWOM to be appreciated by others for their knowledge and reviews about a product/service. They might perceive that they are gaining social status in the eyes of the receivers.

Other motivations for eWOM

Other motivations for eWOM activities might be 'product involvement', where the customers are extremely satisfied with the product experience and would continue to repurchase the product. Senders of eWOM might have an expert knowledge about the particular product or service. Such customers are called 'Market Mavens'; they gather information from various sources and like to share them with others. Finally, customers might engage in eWOM activities just for fun and entertainment. It might be a way of unwinding and relaxing for them as well as a means of escapement.

Research Design

This study has been designed to understand eWOM activities of customers in India. India is one of the fastest growing markets in the world, coupled with the presence of a young, tech-savvy population, it represents a perfect opportunity for brands to benefit from eWOM activities. There are about 243mn Internet users in the country with an average annual usage growth rate of about 14%. Although the number is large, only about 19% of the population uses the Internet. For any marketer, this represents a huge opportunity especially if he wants to generate and spread positive eWOM about the brand. As we know, eWOM can be archived for future reference,

if the marketer is able to generate a lot of positive buzz about his brand, the messages will be available for new customers as well.

Another important characteristic of the Indian digital market is that although this sphere is relatively new, it is gaining a lot of popularity and customer acceptance. Customer skepticism towards e-commerce is declining as more and more customers are buying from e-retailers. E-commerce in India is expected to reach $24bn by the end of 2015.

When it comes to social media, there are about 106mn active social media users in India. Facebook has about 100mn users, while twitter boasts of about 33mn users in India. All these numbers represent the enormous opportunity that companies operating in the country have to generate (free) publicity by positive eWOM.

There are many ways by which eWOM activities can take place. For this study, the following eWOM activities have been considered:

- Online messages from friends on social networking sites

- Online messages from company sources/salespeople on social networking sites

- Online reviews about products/services

- Online consumer communities

- Blogs about products/services

Two forms of customer participation in eWOM communication have been considered:

Writing
People share their opinion about brands by writing online reviews about products/services. Some of the motivations behind writing reviews can be: self-expression, concern for others or social interaction.

Reading/Watching
Reading/watching eWOM communication can influence the opinion a reader has about the product/service offered by a brand. Few of the reasons for a person to read eWOM messages are: reduce the cost of finding information from other sources, expert opinion from trusted sources or learning about new trends.

It is evident that the decision to engage in eWOM activities is guided by various customer motivations to fulfill their needs. Following is a summary of the customer needs, motivations and the survey questions that have been used in this study:

Table 1: Questions used in research

Customer Motivation	Questions included in the survey
Personal motivation (Writing eWOM messages)	I share my experience about products/services online because I like to help others It is a way of self-expression I like to warn others about bad products/services
Personal motivation (Reading/watching eWOM messages)	I find online product/service reviews very helpful I trust the experiences that are posted on online communities about products/services I buy those products/services that are recommended by people who have an expertise about that product/service
Social Interaction (Writing eWOM messages)	I like to be an active member in various social media channels as it gives me a chance to interact with others I make new friends by sharing my opinions online I want to help others by telling them about products/services that I have tried I post about products/services so that I am appreciated by others
Social Interaction (Reading /watching eWOM messages)	I like to view online videos about products/services posted by my friends I like to try those products/services that are recommended by my friends on social media channels Engaging in online activities helps me to interact with others I purchase products/services recommended by my online friends to

	get their approval I make a good impression on my friends when I purchase products/ services that are recommended by them
Economic benefits (Writing eWOM messages)	I get financial rewards when I post about a product/service
Economic benefits (Reading /watching eWOM messages)	Online opinions about products/services reduce my risk of making a wrong purchase decision Such opinions reduce the cost of finding information through alternative sources
Functional benefits (Writing eWOM messages)	My own product/service knowledge gets strong when I share my views about it
Functional benefits (Reading/watching eWOM messages)	I get to know about 'hot' products/services through eWOM messages Social media activities help me to learn more about brands

THEORETICAL FRAMEWORK

The conceptual model proposed for this study has been depicted in the next page. It shows the relationship of the constructs that have been used in the study. However, these are not the only factors that affect a consumer's decision to write, read or watch eWOM messages. In terms of consumer behavior, the study assumes that positive purchase intention and purchase immediacy leads to actual purchase behavior. This relationship is based on the assumption that consumers make rational decisions from the information available to them. In the proposed model, positive attitude towards a product is viewed as the determinant of the final purchase decision made by consumers. This product attitude is affected by their participation in eWOM activities that are affected by various motivations.

Figure 3: Conceptual Model
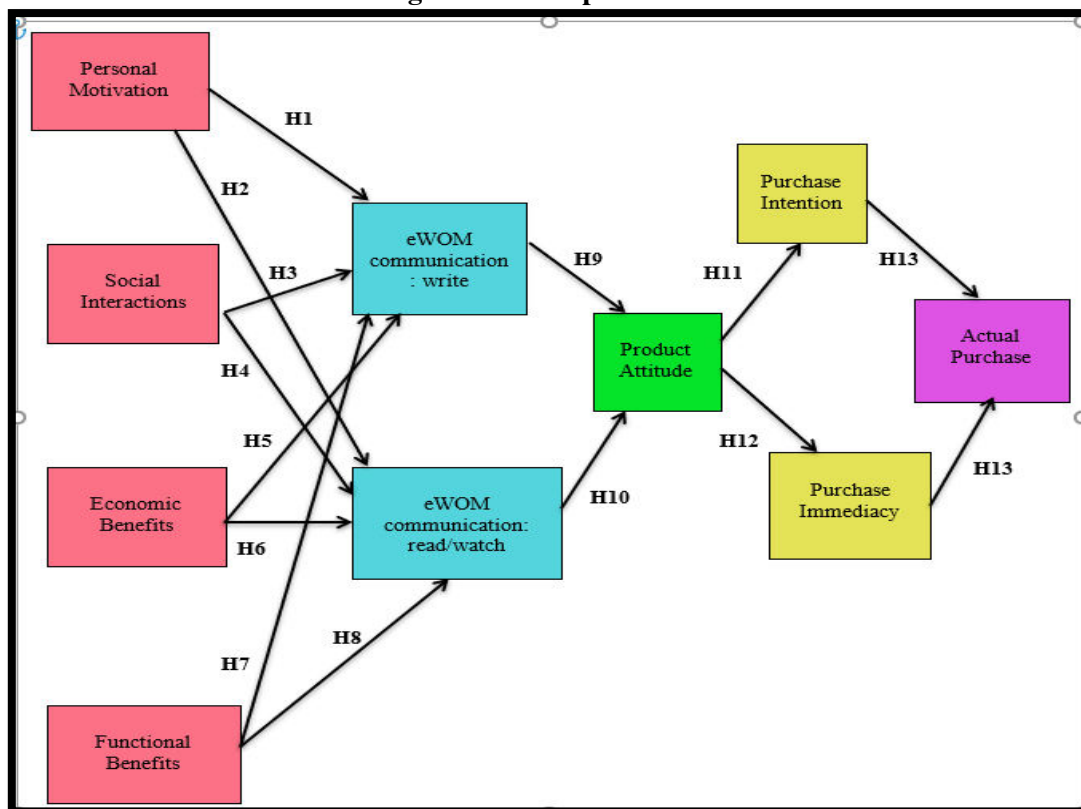
HYPOTHESES

The following hypotheses have been developed for this study:

Hypothesis 1 (H1): A consumer's personal motivation positively affects the intention to write about the product/service

Hypothesis 2 (H2): Consumer's personal motivation positively affects the decision to read/watch eWOM messages

Hypothesis 3 (H3): Engaging in social interactions is the reason behind a consumer's decision to write eWOM messages

Hypothesis 4 (H4): Social interaction is the reason behind a consumer's decision read/watch eWOM communication

Hypothesis 5 (H5): Consumer's are motivated by economic benefits to engage in eWOM

Hypothesis 6 (H6): Economic benefits motivate consumers to read/watch eWOM messages

Hypothesis 7 (H7): Functional benefits encourage consumers to contribute to eWOM communication by writing eWOM messages

Hypothesis 8 (H8): Functional benefits encourage consumers to contribute to eWOM communication by reading/watching eWOM messages

Hypothesis 9 (H9): Consumers develop a positive attitude towards a product/service, if they write positive eWOM messages about the product/service

Hypothesis 10 (H10): Consumers develop a positive attitude towards a product/service, if they read/watch positive eWOM messages about the product/service

Hypothesis 11 (H11): Positive attitude towards the product/service is positively related to purchase intention

Hypothesis 12 (H12): Positive attitude towards the product/service is positively related to the immediacy of purchase

Hypothesis 13 (H13): Consumer's purchase intention and purchase immediacy positively affect the decision to purchase

RESEARCH METHODOLOGY
For this study, survey method was used for collecting consumer data. Collecting data through a questionnaire is a great way to understand the opinions, attitudes and behavior of customers. Moreover, it is an effective tool to understand the cause-and-effect relationship between variables. Thus, a questionnaire was constructed. The questionnaire was made using Google Docs. A link of the form was available through Google Docs that was shared with the respondents. Designing an online questionnaire made data collection more accurate and convenient.

DATA COLLECTION AND ANALYSIS
Data for this study to investigate the drivers of eWOM activities in India was collected through a questionnaire. The questionnaire was posted online, and a link was shared with the participants of the study. There were two qualifying criteria to participate in the survey: minimum age (above 16) and participant location (India). These criteria were specified to all participants who would share the link of the questionnaire with others.

Sample Size
Sample size of 230 was selected for this study. The link for the questionnaire was distributed to 230 respondents. Of these, 221 questionnaires were selected for the analysis. 9 questionnaires were deemed unusable for analysis because in 2 of them the respondents did not include their demographic information, 5 of them were incomplete and 2 respondents did not complete the survey even after repeated reminders from the researcher.

Method of Data Analysis
The collected data was analyzed using Microsoft Excel and Minitab. Hypotheses were tested and correlation analysis was conducted.

Questionnaire Development
The survey included general questions about the demographics, educational qualifications and average usage rate of the Internet. These questions, especially about age and location of the respondent, acted as qualifying criteria for the responses. Next, the questions concerning the different motives behind a consumer to participate in eWOM activities were included. The next set of the constructs was designed to help in understanding the effect of eWOM activities on product attitude and final purchase decision of consumers.

All the questions used a five-point Likert-scale was used in the questionnaire. The questionnaire scale ranged from 1 = Strongly Disagree to 5 = Strongly Agree.

DATA ANALYSIS

Various descriptive analyses were performed to examine the characteristics of the sample, demographics, income levels and use of the Internet.

Figure 4: Gender of respondents
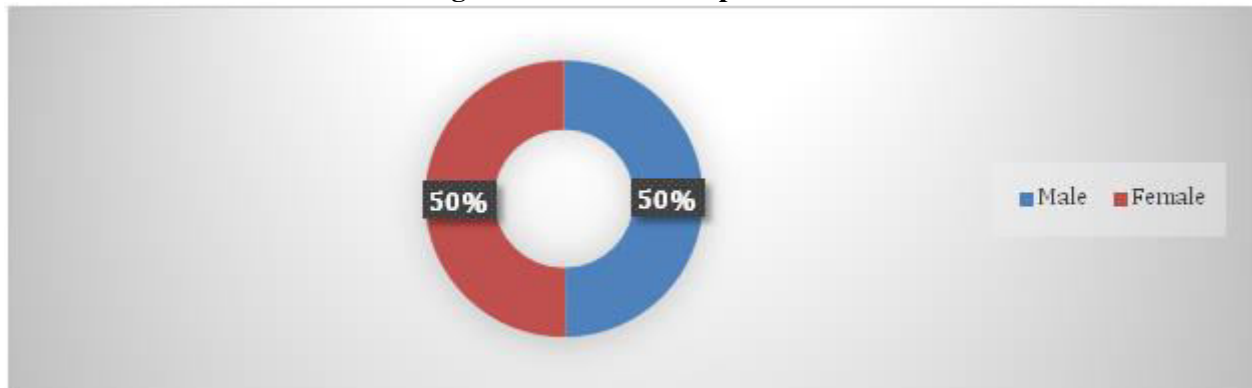
Figure 5: Age of respondents
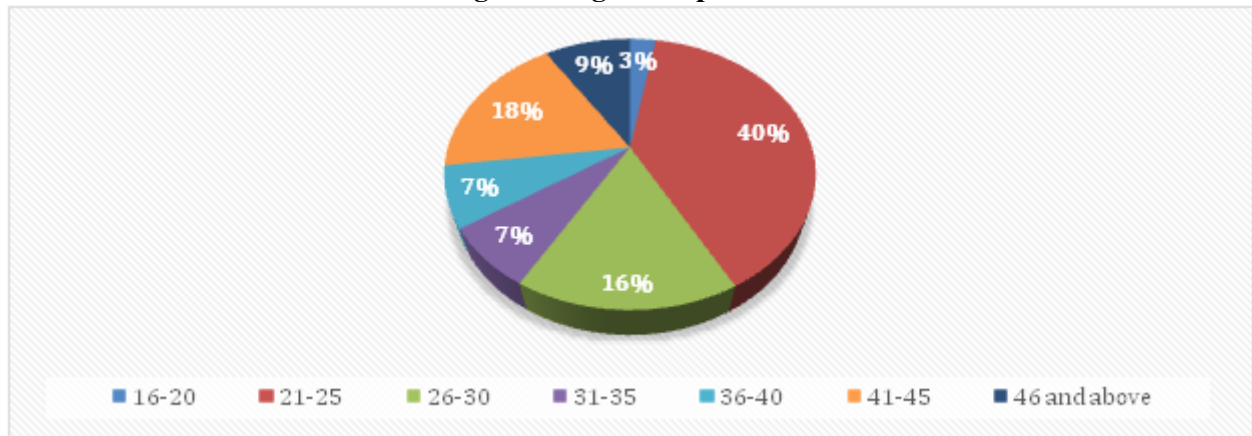
Figure 6: Qualification of respondents
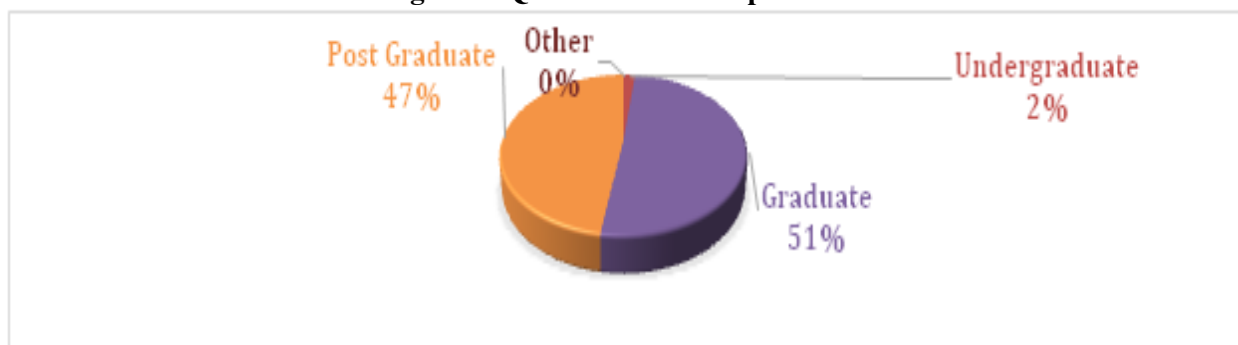
Figure 7: Profession of respondents
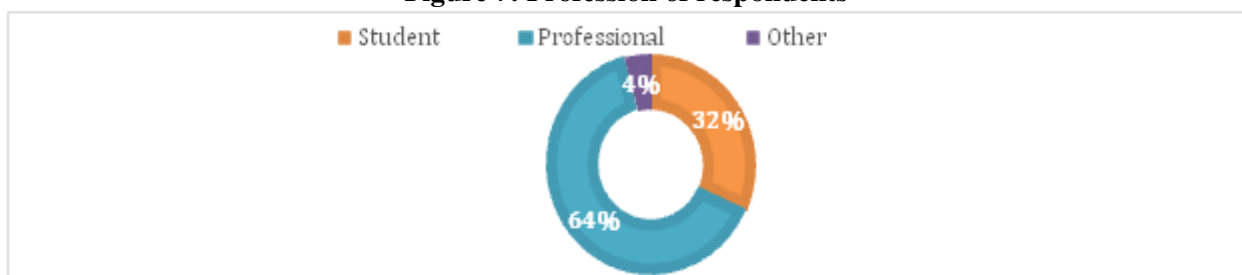
Figure 8: Annual incomes of respondents
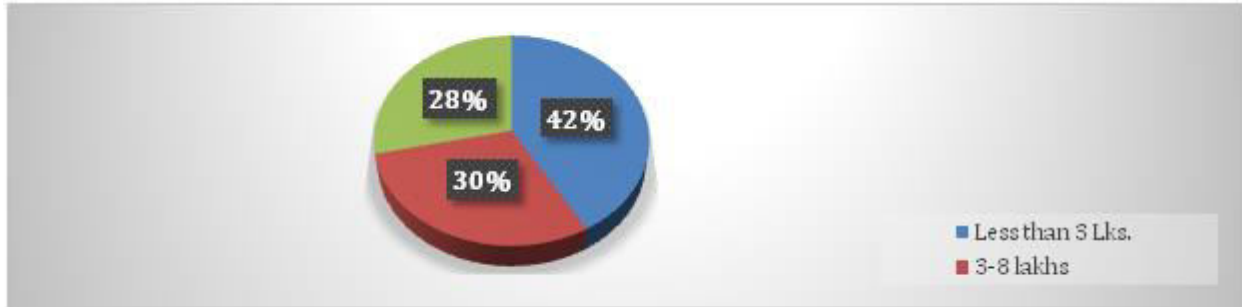
Figure 9: Hours spent online in a week
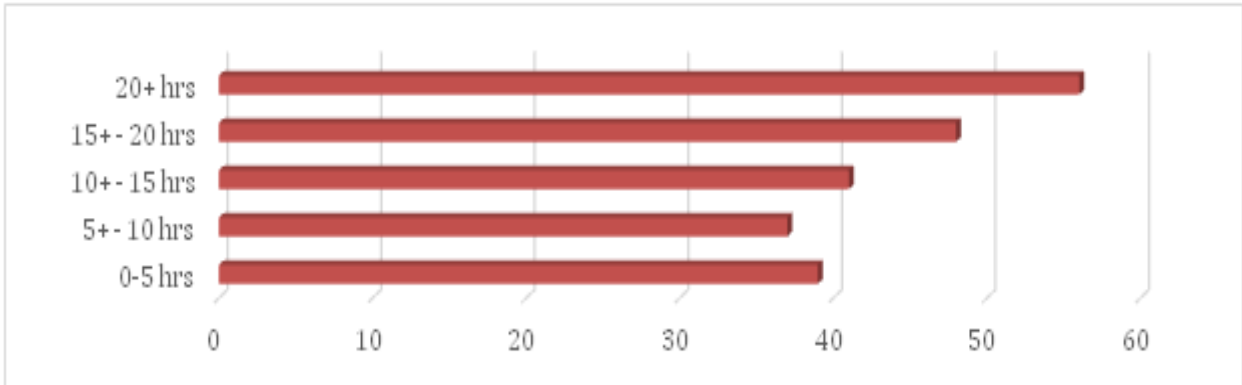
Figure 10: Average time spent online daily
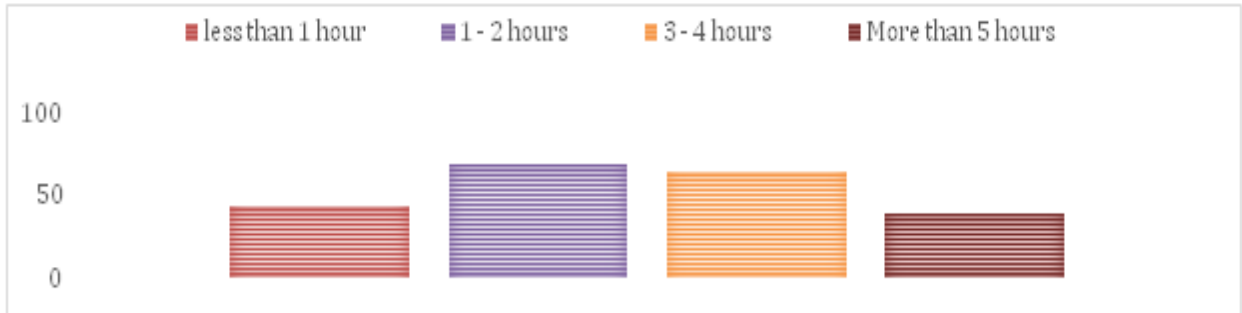
Figure 11: Frequency of reading/watching eWOM messages
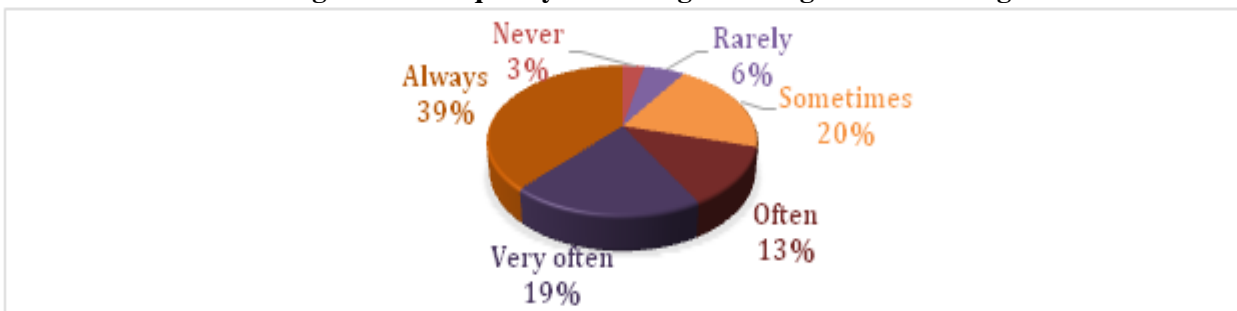
Figure 12: Occasion for searching information online
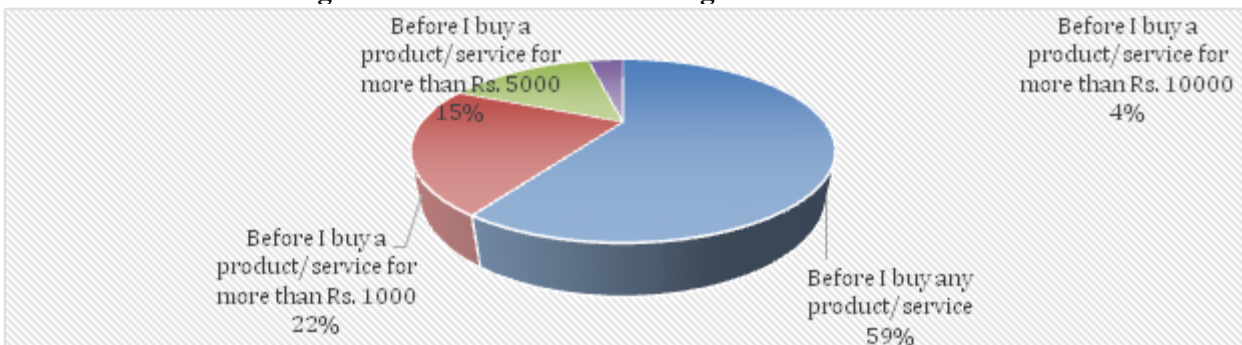
Figure 13: Made a purchase after reading/watching eWOM messages
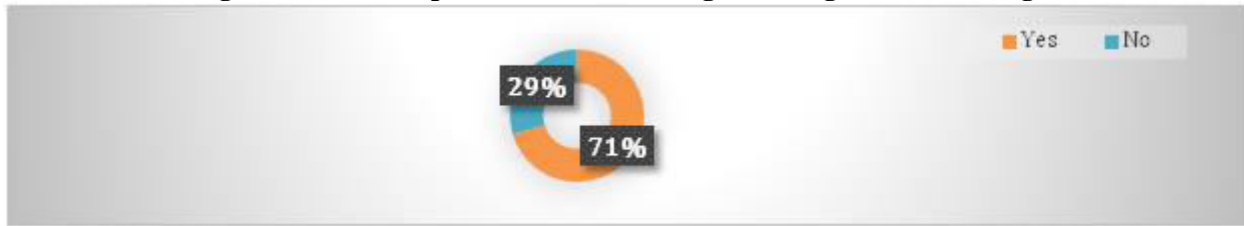
Figure 14: Frequency of writing eWOM
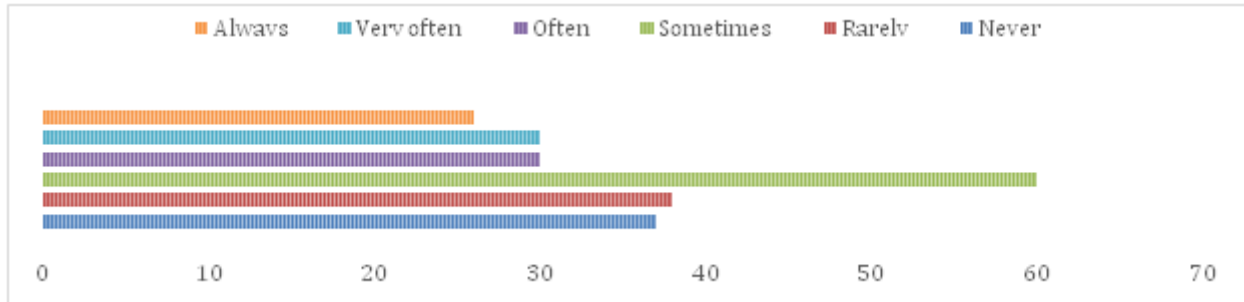
Figure 15: Repurchase after writing eWOM messages
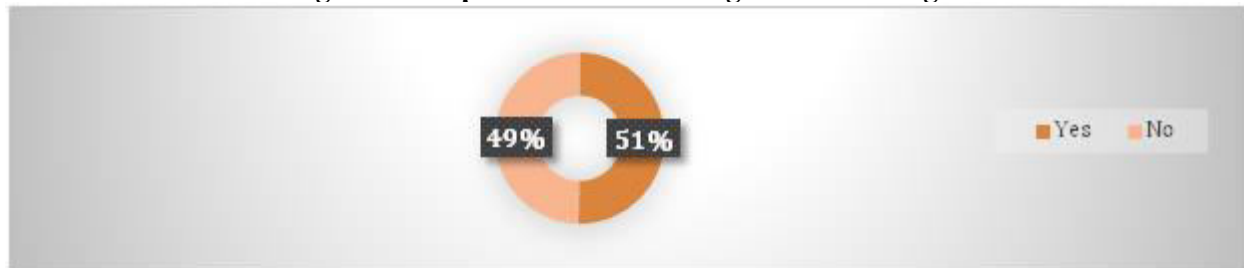
Hypothesis Testing

One of the primary objectives of this study was to examine the effect of eWOM communications on the purchase decision of customers. It is proposed that various motivations make a consumer contribute to eWOM communication (writing, reading or watching), contribution to eWOM leads to the development of positive/negative product attitude, which in turn determines the purchase intention and immediacy. Finally, purchase intention and immediacy lead to actual purchase behavior. The hypotheses were tested using MS Excel and Minitab. 95% confidence interval was considered for the analysis of data. Multiple Regression was the major statistical technique used.

Relation between Purchase Intention, Purchase Immediacy and Actual Purchase

A multiple regression model was built to understand the relationship between purchase intention, purchase immediacy and actual purchase behavior. To arrive at this model, actual purchase behavior was taken as the dependent variable and purchase intention and immediacy were considered to be independent variables. The assumption behind this model was that a positive intention to purchase and urgency to purchase would translate to actual purchase behavior of consumers.

Pearson correlation was used to explain the relationship among the constructs. The table below shows the result of Pearson correlation coefficients between the constructs:

Table 2: Pearson Correlation among Constructs

	Intention	**Immediacy**	**Actual purchase**
Intention	1		
Immediacy	0.81290385	1	
Actual purchase	0.632524554	0.679062784	1

Positive intention to purchase and urgency to purchase have a positive relation with the intention to purchase.

Next, a multiple regression model was built to explain the relationship between constructs:

Y=β0+ β1X1 +….+ βnXn

Purchase Behavior = β0+ β1 Purchase Intention + β2 Purchase Immediacy

Table 3: Regression output showing the effect of purchase intention and immediacy on actual purchase behavior

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.692991408
R Square	0.480237092
Adjusted R Square	0.475468625
Standard Error	0.904026254
Observations	221

ANOVA

	df	SS	MS	F	Significance F
Regression	2	164.6148446	82.3074223	100.7110015	1.05384E-31
Residual	218	178.1634359	0.817263468		
Total	220	342.7782805			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.070644103	0.197769543	5.413594454	1.62448E-07	0.680859002	1.460429204	0.680859002	1.460429204
Intention	0.256727869	0.090679199	2.831166044	0.00507174	0.078007728	0.435448009	0.078007728	0.435448009
Immediacy	0.53858326	0.092891522	5.797980819	2.33618E-08	0.35550284	0.72166368	0.35550284	0.72166368

The R-squared value is 0.48 and adjusted R-squared is 0.46 indicating a good model. Further, the F-test has a low p-value <0.001, indicating that the regression parameters explain Y.

In the above model, the p-values of all predictors is low indicating significance, moreover, VIF values were obtained by using Minitab, that are less than 10 indicating no multicollinearity.

Table 4: VIF values: checking for multicollinearity

Coefficients

Term	Coef	SE Coef	T-Value	P-Value	VIF
Constant	1.0706	0.1978	5.41	<0.0001	
Intention	0.25673	0.09068	2.83	0.0051	2.94822332
immediacy	0.53858	0.09289	5.80	<0.0001	2.94822332

The result supports hypothesis 13 (H13), which states that consumers' purchase intention and purchase immediacy positively affect their decision to purchase products/services.

Testing Hypotheses 1 to 12

To test the hypotheses 1 to 12, Pearson correlation among individual variables was considered. From the table given below, we can see that there is high correlation between personal, social, economic and functional motivations and consumers' contribution to eWOM activities (write and/or read/watch).

Similarly, correlation between participation in eWOM activities influences the product attitude of consumers, which in turn determines the purchase intention and immediacy.

Table 5: Pearson Correlation among All Variables

	Personal Motivation	Social Motivation	Economic Motivation	Functional Motivation	Product Attitude	Purchase Intention	Purchase Immediacy	eWOM Write	eWOM read/watch	Actual Purchase
Personal Motivation	1									
Social Motivation	0.7419660081	1								
Economic Motivation	0.7225876963	0.833925797	1							
Functional Motivation	0.5949780357	0.6820368428	0.6996550458	1						
Product Attitude	0.6878111579	0.7464780617	0.7860908021	0.7248019194	1					
Purchase Intention	0.6548229821	0.7880609924	0.8201614949	0.6645256765	0.7748281305	1				
Purchase Immediacy	0.6704643967	0.7840630695	0.8403124652	0.688841083	0.8104761471	0.8129038498	1			
eWOM Write	0.8433505125	0.7599097476	0.7332722238	0.6824456066	0.7302203331	0.6544274348	0.7201457445	1		
eWOM read/watch	0.7852207143	0.7335454738	0.7354123198	0.6711176608	0.6665046569	0.625941362	0.7315623529	0.7983681075	1	
Actual Purchase	0.6898135361	0.6773848311	0.6844504454	0.6312058085	0.6257004242	0.6325245538	0.6790627845	0.7312975986	0.73771955516	1

Relation between Product Attitude and Purchase Intention
In addition to the correlation coefficient constructed above, a regression analysis was done to test the various hypotheses. The first regression analysis was done to understand the effect of product attitude (independent variable) on purchase intention (dependent variable).

The regression between the constructs measuring product attitude and purchase intention gave the following result:

Table 6: Regression between Product Attitude and Purchase Intention

Regression Statistics					
Multiple R		0.807312154			
R Square		0.651752913			
Adjusted R Square		0.646938437			
Standard Error		0.685752559			
Observations		221			
ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	190.9809705	63.66032351	135.3735968	1.88173E-49
Residual	217	102.045676	0.470256572		
Total	220	293.0266466			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	
Intercept	0.425333166	0.16647881	2.554878703	0.011307159	
Q37	0.271444306	0.048728844	5.570505713	7.47701E-08	
Q38	0.016704515	0.049896455	0.334783611	0.738111701	
Q39	0.502693911	0.051298269	9.799432287	5.25295E-19	

Surprisingly, negative eWOM activities were not found to be a predictor of consumer purchase intentions. Overall, the result supports the hypothesis:

Hypothesis 11 (H11): Positive attitude towards the product/service is positively related to purchase intention

For the regression between product attitude and purchase intention, R-squared is 0.65 and R-squared adjusted is also 0.65 which indicates that the proposed model is a good fit.

Further, for the model, F-test has a low p-value, which means that the independent variables do explain the dependent variable.

Relation between eWOM Communication (Writing and Reading) and Product Attitude
To test hypotheses 9 and 10, a multiple regression model between the constructs, product attitude and eWOM communications was built. Product attitude was considered the dependent variable and the other two variables were considered to have an effect on forming product related-attitude of customers.

Results show an interesting fact that when consumers write positive reviews about products/services, their own attitude towards that brand becomes even more positive. This fact can be used by brands that want to increase customer loyalty: by engaging customers and encouraging them to contribute to positive eWOM activities, brands can build a loyal base of customers.

While the effect of individual questions measuring the effect of eWOM (reading/watching) on product attitudes was found to be:

Results show that eWOM activities (reading/watching) do affect a consumer's overall attitude towards the product/service. This again shows the marketing managers that in today's connected world, it is important to keep customers engaged with the brand by having constant dialogues with them.

Testing Hypotheses 1 to 8
In order to test hypotheses 1 to 8, separate regression analysis were done, by taking contribution to eWOM activities (write/ read or watch) as the dependent variable and different motivations (personal, functional, economic and social) as the independent variables. The regression models support Hypotheses 1 to 8. Thus, economic benefits need for social interactions, personal motivations as well as functional benefits motivate consumers to engage in eWOM activities.

The strength of each individual motive on the consumers' decision to engage in eWOM activities is beyond the scope of the present research and is a topic that the author would be willing to evaluate in future research.

CONCLUSION

This research was successful in understanding the different drivers of eWOM activities in India. With a lack of research in this field in India, this research can be used as a building block by other researchers. The research found that one of the most common reasons of participating in eWOM activities in terms of writing is that the consumers want to warn others of bad products. This means that consumers are quicker in sharing bad experiences to warn others about the brands. Marketing managers can use this information to try to provide best experiences to all their consumers to reduce bad eWOM publicity.

eWOM activities were found to be a way of searching for 'hot' and trendy products. Almost 59% of the respondents search for online information about before making any purchases; this again shows the importance of positive eWOM messages for any brand. Most respondents do not receive any financial rewards for contributing to eWOM activities. Brands that want to generate positive buzz can provide financial and other befits to consumers to encourage them to post online reviews and messages.

An interesting fact about eWOM activity was found that once a consumer posts about a brand, his/her own opinion about the brand gets strengthened. Again, this applies to both negative as well as positive opinions. This researcher believed that there would be a high number of respondents that purchase brands just to get approval from their friends, surprisingly this number was not very high. One reason could be because eWOM activities are still relatively new in India. The research also found the popularity of online channels in India. Compared to American consumers, a smaller number of Indian consumers are active on websites like Twitter, Instagram and Pinterest. This author believes that when these sites will gain more popularity, online eWOM activities too will start having more influence on consumers in India.

MANAGERIAL IMPLICATIONS

There is a lack of research on eWOM, in India, which is very surprising given the large number of people who use the Internet. As the number of users and websites will increase, so will the importance of eWOM activities for brands. Marketing managers need to understand the importance of positive eWOM on their business. They would have to formulate strategies where they partner with their consumers to promote their products and services. This will be the only way to cut through the clutter of brands that are vying for consumer's attention.

The results of the study indicate that Indian consumers try to find expert opinions and reviews about the products or services that they buy. This is especially true in case of those products that are expensive especially hedonic products. When buying such products, they trust the opinions of online experts. There is also a high level of trust on the opinions of friends and family members. Managers who are looking for increasing sales in the Indian market can utilize this information. If they can influence the views of online opinion leaders, they can gain acceptance with the buyers. One strategy could be by giving these opinion leaders products to try and comment on online forums.

Managers also have to understand that an increase in the use of the Internet will give more power to the consumer who will be able to communicate freely with everyone. This means that consumer's satisfaction/dissatisfaction with the brand will be broadcasted in real-time for everyone to see. Managers would have to try to create better relations with all their customers. Today, the Internet and eWOM activities have made it very easy for brands to keep in constant touch with their customers and this trend will continue in the future.

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FOOD SECURITY POLICY IN THE PERSPECTIVE OF SDG'S IN INDONESIA

Solichin[1], Retno Widyani[2], Endang Sutrisno[1] and Ibnu Artadi[2]
[1,3]Universitas Gunung Jati, Cirebon, West Java, Indonesia- 45131
[2,4]Universitas Muhammadiyah Cirebon, West Java, Indonesia- 45611

ABSTRACT

The food security policy in Indonesia is based on Pancasila and the 1945 Constitution which aims to create a just and prosperous society, sufficient for clothing, food and shelter. However, in reality, currently there is still poverty, so Sustainable Development Goals (SDGs) are needed to overcome poverty and reduce inequality, together with various other countries in the world. This research was conducted to determine food security policies in Indonesia from the perspective of SDG's. The method used is literature study and literature review and collects the thoughts of experts in various seminars and scientific meetings. The results of the study show that agriculture is the largest contributor in Indonesia with the spirit of millenah agriculture, forging ahead and never giving up. In accordance with Law No. 18 of 2012 concerning food, the state is obliged to realize the availability, affordability and fulfillment of sufficient, safe, quality and nutritious food consumption in a timely manner by utilizing local resources, institutions and culture. At present, there are still some nutritional problems, some of them suffering from stunting, which can be overcome by regulatory policies, empowerment, technology and access. All of these problems must be addressed immediately in order to complete the SDG's goals by 2030 with the 2020-2024 RPJMN having included various strategies and policies to meet the needs for adequate, affordable, healthy, nutritious, safe and diverse food and nutrition; maintain the sustainability of the carrying capacity and capacity of agricultural resources; improve the welfare and productivity of agricultural human resources; and providing food, especially from domestic production. The problem of food access and supply is overcome by policies to create new jobs. The problem of food borne disease is overcome by policies to improve food safety. Three of the 17 SDGs are related to food security. The problem of food availability, the affordability of food by the community both physically and economically, and utilization/consumption of adequate food and nutrition. Ideally, all of these aspects must be fulfilled and become the focus of food-related policy making, not just focusing on one aspect. From this definition, let's see how government policies relate to food security from the planning and budgeting aspect. The Food Security Policy is the priority program "Increasing Availability, Access and Quality of Food Consumption". The program is measured by 5 (five) indicators, namely Farmers' Exchange Rate, Energy Adequacy Rate, Protein Adequacy Rate, Prevalence of Undernourishment, and the Food Insecurity Experience Scale.

Keywords: Policy, resilience, food, SDGs, Indonesia

INTRODUCTION

The Sustainable Development Goals (SDGs) have been a central issue since 2016. The SDGs, which contain 17 Goals and 169 Targets, are a global action plan for the next 15 years (valid from 2016 to 2030), to end poverty, reduce inequality and protect the environment. SDGs apply to all countries (universal), so that all countries without exception developed countries have a moral obligation to achieve the SDGs Goals and Targets.

Food security in Indonesia shows that the agricultural system still has a lot of room for development, including homogeneous commodities that can be processed into heterogeneous commodities, SDGs can be achieved if carried out comprehensively and must be carried out by all lines, sustainable agriculture is important because agriculture is a big contributor to climate change and it is necessary to develop the final value of agricultural business so that agriculture can progress and develop into millennial agriculture. Forward and Never Give Up

Food security is the main thing that must be guaranteed by the state. Through food security, the government guarantees the availability of food for the community, and ease of access to it. Regarding food security, the government already has Law No. 18 of 212 concerning Food. Under the law, the state is obliged to realize the availability, affordability and fulfillment of adequate, safe, quality and nutritionally balanced food consumption, both at the national and regional levels to individuals evenly throughout the territory of the Unitary State of the Republic of Indonesia at all times by utilizing natural resources. , institutions, and local culture. But in its implementation, it doesn't work properly. According to a representative from the Cooperative, Achmad Syawaluddin, there are problems among farmers, who are food providers. Currently, farmers are experiencing complex levels of degradation, one of which is related to increased productivity. This arises because there is no coordination in implementing the system, the system is not integrated between the center and the regions so that the existing system actually makes farmers not independent or more dependent. Farmers are made helpless. For example, suppose we buy goods wherever the seller determines the price. But it's different with farmers.

Farmers cannot determine their own price, which determines the buyer's price. This is an extraordinary weakness in agriculture that makes our farmers helpless, makes farmers the lowest caste. Just fixing the price alone can not. In addition, he also criticized government policies related to imports. The government often issues policies on importing foodstuffs that can actually be produced by domestic farmers, on the grounds that imported products are premium and organic products. Indonesian farmers are still able to produce premium products, it's just that there is minimal guidance from the government. The government opens imports for other things, the reason they say is for premium, special grades, and because Indonesian farmers are unable to provide organic products. It's just that our farmers don't have anyone to guide them. When they are guided, directed, their enthusiasm is far more extraordinary [1].

Speech by Klaus Shwab, Executive Chairman of WEF at the opening of the G 20 in Bali stated that President Jokowi started as a businessman and mayor in his hometown, as mayor himself to eradicate poverty. He is the first Indonesian president without a military background or political elite and his victory symbolizes the victory of democracy in a country of more than 17,000 islands, 300 ethnic groups and 280 million people. Serving for his second term President Jokowi has worked tirelessly to achieve socio-economic development in Indonesia by launching a universal anti-corruption health scheme, education and infrastructure programs across the country. To make the G20 meeting successful, it takes an extraordinary leader who is talented and someone who is chosen and trusted by all groups. Humble and peace-loving leadership, the people are in the best hands. Not only a leader of the Indonesian people, but also someone who embodies the spirit of global cooperation as a catalyst for collective peace and prosperity. President Jokowi's leadership will color various policies including food security policies. This article discusses food security policies from the perspective of SDGs in Indonesia

RESEARCH METHODS
The method used in this research is literature review from various secondary sources, journals, books, websites, print and electronic media. As well as the results of seminars and conferences related to food security policies in Indonesia

RESULTS AND DISCUSSION
In the Indonesian Rector Forum (FRI) discussion on food security, various thoughts were presented from various perspectives. Prof. Hardiansyah delivered a presentation on nutrition and food quality for human resource development. The Chancellor of Sahid University explained that the improvement in health (death rate) in this world over the last 2 centuries was due to improvements in nutrition, sanitation, immunization, economy and technology [2].

Nutritional problems in the world have decreased, including in Indonesia, where in the last 5 years, however, efforts to improve nutrition still need to be carried out, especially to overcome the problem of stunting. The Chancellor who is also a Professor of FEMA IPB explained the results of a study showing that the Intelligence Score (Raven's scores) of elementary school children was better for children who were fed meat, and it would be even better for the group of children who were given meat and milk compared to those who were not. The role of fish is also very important in meeting nutritional needs and increasing intelligence, besides being able to contribute to improving health. Several suggestions were conveyed by Hardiansyah in dealing with food problems, especially those related to improving nutrition and food quality, requiring regulatory, empowerment, technology and access approaches. In addition, it is necessary to determine the level of malnutrition and the number of stunted children as indicators to measure non-income poverty [2].

Another perspective in efforts to deal with food problems was conveyed by Drajat Martianto. The Deputy Chancellor for Education and Student Affairs of IPB explained the importance of achieving the SDGs goals, specifically related to Goal 2, namely eliminating hunger, achieving food security and good nutrition, and promoting sustainable agriculture. Currently, Indonesia is still facing several problems in terms of food security and nutrition, including the problem of natural resource potential and vulnerability, food quality and security problems, purchasing power or economic access problems, and macro food availability problems. All of these problems must be addressed immediately in order to complete the SDGs goals by 2030. Drajat informed that the government's policy directions for the next 5 years related to the 2020-2024 RPJMN have included various strategies and policies to meet the need for sufficient, affordable, healthy, nutritious food and nutrition. , safe and diverse; maintain the sustainability of the carrying capacity and capacity of agricultural resources; improve the welfare and productivity of agricultural human resources; and provide food, especially from domestic production [2].

Meanwhile, the Chancellor of Al-Azhar University, Asep Saefuddin, explained food improvement solutions from the perspective of the need for locality innovation for food self-sufficiency. This IPB FMIPA Professor

concluded several important points including the need to strengthen agriculture-based universities in areas with local advantages (oil palm, rubber, cocoa, illan, livestock, etc.), the importance of locality-based R&D, the need for Youth/Millennial Training Centers in building agriculture with the power of disruptive technology (Blockchain, etc). Another thing that was conveyed was that universities should be allowed to form business entities based on the strength of local natural resources, as well as the need to link universities with production and market centers through infrastructure. On the other hand, the role of the central government is needed to give mandates to several universities to focus on research in certain fields in order to answer the needs for exports, national and regional food according to the strength of the natural resources of the region [2].

The problem of food access and supply is an important part of food security. In this case, trading activities have an important role in fulfilling food security. The perspective of food security from the trade side is the topic emphasized by Dr. Jamhari. The Dean of the UGM Faculty of Agriculture explained that currently there is still a divergence between supply and demand. Agricultural production faces serious challenges with land conversion, climate change, and so on, but the demand for agricultural products is getting higher. Facts about the food trade show that the percentage of subsistence farmers is 31%, semi-commercial is 41%, and the rest are commercial. Meanwhile, from the distribution side, agricultural products are still not efficient, in contrast to non-agricultural products [2].

Jamhari suggested that our consumption must be realistic so that we look forward (futuristically), because 2/3 of our country is sea, we need to encourage consumption of seafood. In addition, vertical farming must be used optimally and rationalize land ownership, in addition to the need to provide incentives for agriculture. Then related to the distribution aspect, where there are still 57% who have difficulty accessing food, the solution needs to be the creation of new jobs [2].

Food Safety as Part of the Sustainable Development Goals (SDG's)

Diseases due to food (foodborne diseases) are still a food safety problem in addition to the use of hazardous ingredients in food. "Food security has become part of the 2015-2019 national medium-term agenda where one direction is to increase food security to improve. He explained that the food agenda is also part of the Sustainable Development Goals (SDGs), namely 3 of the 17 main SDGs relate to food security. The government is targeting the availability of access for all people in 2030, especially for underprivileged people to obtain sufficient amounts of safe and nutritious food. In addition, water is also the 12th point in the SDG's so that water pollution is targeted, including pollution due to food waste". The government is targeting a 50% reduction in food waste at the retail level and along the food distribution chain [3].

Food Security Policy in Planning and Budgeting Aspects

Fulfillment of food sufficiency, both in quantity and quality, is a serious concern for every government in the world in line with the increasing number of world population. This encourages every government to ensure that food commodities are sufficiently available and can be distributed evenly to all levels of the population with balanced nutritional quality. This implies that the fulfillment of food is not only limited to the aspect of availability but also includes aspects of distribution or the extent to which the available food can be consumed by the entire population evenly with sufficient nutritional value. This is what underlies the Government and Parliament to agree on enacting Law Number 18 of 2012 concerning Food (Food Law).

According to the Food Law, food administration includes planning, implementing and controlling activities in the supply, affordability, fulfillment of food consumption and nutrition as well as food safety. The implementation of the food must be able to achieve a condition termed food security, namely "the condition of fulfilling food for the state down to individuals, which is reflected in the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, equitable and affordable and does not conflict with with the religion, beliefs and culture of the community, to be able to live a healthy, active and productive life in a sustainable manner. From this understanding, there are 3 (three) aspects of food security that must be met, namely food availability, food affordability by the community both physically and economically, and utilization/consumption of adequate food and nutrition. Ideally, all of these aspects must be fulfilled and become the focus of food-related policy making, not just focusing on one aspect. From this definition, let's see how government policies relate to food security from the planning and budgeting aspect.

On the planning side, according to Presidential Regulation (Perpres) Number 18 of 2020 concerning the National Medium Term Development Plan (RPJMN) 2020-2024, fulfilling food and agriculture and increasing the added value of agriculture and fisheries are part of efforts to support one of the 7 (seven) the development agenda namely "Strengthening Economic Resilience for Quality and Equitable Growth" which became known as the 1st National Priority (PN-1). The development agenda seeks to achieve several targets set as priority

programs, one of which is "Increasing Availability, Access and Quality of Food Consumption". Achievement of these targets is measured by 26 (twenty six) indicators covering aspects of food security (availability, affordability, and consumption), including corn production, meat production, tuber production, rice availability, animal protein availability, fish consumption. , meat consumption, protein consumption from livestock, vegetable and fruit consumption, protein adequacy rate, energy adequacy rate, percentage of fresh food that meets food safety requirements, Expected Dietary Pattern score, and so on.

In Presidential Decree Number 86 of 2020 concerning the 2021 Government Work Plan (RKP 2021), which is an elaboration of the 2020-2024 RPJMN for 2021, there is a program which is a representation of the Food Security policy, namely the priority program "Increasing Availability, Access and Quality Food Consumption". The program is measured by 5 (five) indicators, namely Farmers' Exchange Rate, Energy Adequacy Rate, Protein Adequacy Rate, Prevalence of Undernourishment, and the Food Insecurity Experience Scale. Details of the Priority Projects that support the Priority Program are mostly implemented by the Ministry of Agriculture and there is one project that is jointly implemented by the Ministry of Agriculture and the Ministry of Trade. The same condition also exists in the 2022 RKP as stipulated in Presidential Decree Number 85 of 2021, where the five indicators are still used to measure the achievement of the priority program "Increasing Availability, Access and Quality of Food Consumption" but the agencies implementing the details of the Priority Project are much more diverse , not only the Ministry of Agriculture.

On the budgeting side, the Government has determined food security as one of the budget thematics contained in the Financial Notes. The size of the budget for food security fluctuates every year with the highest budget realization achieved in 2016, reaching IDR 110.4 trillion and the lowest in 2006 amounting to IDR 18.5 trillion. As for the 2021 and 2022 fiscal years, the size of the food security budget is IDR 99.0 trillion (APBN ceiling figure) and IDR 76.9 trillion (RAPBN ceiling figure) respectively. The thematic food security budget in the Financial Notes consists of the budget at the Ministry of Public Works and Public Housing (PUPR) at the Directorate General of Water Resources, Ministry of Agriculture, and Ministry of Maritime Affairs and Fisheries as well as non-ministerial/institutional (K/L) budgets.

The budget for food security in the K/L budget section is generally aimed at aspects of food commodity production to maintain food availability. At the Ministry of PUPR, the food security budget is earmarked for the construction and maintenance of primary and secondary irrigation networks, where one of the main uses of these irrigation networks is to support the planting of agricultural commodities. The budget for food security at the Ministry of Agriculture is primarily intended to maintain or increase the production of food commodities such as food crops (rice, corn, soybeans), horticulture (fruits and vegetables), plantation crops, and livestock (cows, buffaloes, chickens, eggs). Meanwhile, a small portion of the budget at the Ministry of Agriculture is also used to increase the competitiveness and added value of the food commodities produced. Similar to the Ministry of Agriculture, most of the budget in the Ministry of Maritime Affairs and Fisheries is used to maintain or increase fish production, which is a food commodity.

The food security budget originating from non-ministerial/institutional budgets is the budget for the State General Treasurer's Budget Section (BA BUN) related to fertilizer subsidy spending, warehouse receipt credit interest subsidies, government rice reserves, food price stabilization reserves and food security, as well as transfer spending to regions in the form of Special Allocation Funds (DAK) in the fields of irrigation, agriculture, maritime affairs and fisheries and non-physical DAK for food security services. With this composition, in line with the food security budget in ministries/agencies, the non-K/L food security budget is also mostly intended to support food security from the aspect of food availability

In the Financial Notes, the success of the food security budget is indicated by the level of food commodity production achieved by the Government in the previous period. In the Fiscal Year 2021 Financial Note, this is indicated by the production of rice, corn, soybeans, beef, and fishery products expressed in units of million tons. Furthermore, the success of the food security budget in FY 2021 will be measured based on strategic output targets which are also in the form of food commodity production targets, namely rice production, corn production, soybean production, meat production as well as targets for the construction/procurement of supporting infrastructure and facilities, namely ship assistance, insurance premiums fishermen and dams. A similar condition is also found in the narrative in the Financial Notes for the 2022 Fiscal Year, where the food commodity production target and the construction of infrastructure and facilities are still the dominant indicators for measuring the success of the 2022 FY food security budget [4].

Based on the description contained in the documents/regulations related to planning and budgeting for FY 2021 and 2022 related to food security policies, the authors are of the opinion that the food security policies contained

in the narrative of the 2020-2024 RPJMN and its indicators cover three aspects as mandated in the Food Law. The translation of the 2020-2024 RPJMN into the 2021 and 2022 RKP is focused on the quality and adequacy of nutritional intake by the community where this, in the opinion of the author, is a representation of the consumption aspect which is downstream from food security policies. Slightly different from the narrative contained in the RKP document, the budget structure and food security indicators in the 2021 and 2022 Financial Notes focus more on aspects of the availability (production) of food commodities. One of the reasons that may underlie this is because the aspect of food availability is the upstream of food security policies and the provision of sufficient national food commodities requires very large funding support by the Government related to the provision of facilities and infrastructure to support the production of food commodities [4].

In order to improve coherence with the Food Law and planning documents, according to the author, the thematic budget for food security in the Financial Notes needs to be refined by providing a more significant portion for the other two aspects, namely affordability and food consumption. This can be realized by expanding the scope of the food security budget to the budget for programs or activities that support aspects of affordability and food consumption, both at K/L and non-K/L. If necessary, special budget tagging (tagging) for the food security budget can be implemented to serve as an aid in mapping and monitoring the implementation of the food security budget based on the three aspects of food security. Furthermore, the selection of indicators to measure the success of the resilience budget also needs to consider how far the intended indicators can represent all aspects of food security [4].

The Food Security Agency compiles general policies regarding food security whose direction is to realize food self-sufficiency to ensure the availability and consumption of sufficient, safe, quality, and nutritionally balanced food at the household, regional and national levels at all times and evenly through the utilization local resources and culture, innovative technology and market opportunities, as well as strengthening the people's economy and alleviating poverty. 1. General Policy The substance of the general policy on food security consists of 14 important elements, which are arranged in the food action plan for the 2006-2009 period, which are expected to become guidelines for the implementation of general policies at the field level, namely food security implementers and stakeholders which include government agencies, private sector, BUMN, universities, non-governmental organizations and the general public [4].

The action plan is contained in operational activities which are arranged in the form of a matrix, containing policy objectives, where each of these objectives contains activities, the agency responsible, and indicators of success. Broadly speaking presented in this paper are the policy objectives and activities for each objective, as follows (the Food Security Agency):

1. Ensure food availability Activities: Development of perennial land of 15 million ha of irrigated paddy fields and 15 million ha of dry land, Development of land conservation and rehabilitation, Preservation of water resources and watershed management, Development and provision of seeds, superior seeds and agricultural machinery, Arrangement of gas supply to produce fertilizer, Development of capital schemes for farmers/fishermen, Increased production and productivity (genetic improvement and cultivation technology), Achieving self-sufficiency in five strategic commodities (rice, corn, soybeans, sugar cane, beef), Provision of investment incentives in the food sector including the sugar, livestock and fishery industries, Strengthening farmer/fisherman outreach and partnerships.

2. Manage land use and spatial planning and areas Activities: Development of agrarian reform, Preparation of regional and regional spatial planning, Improvement of land administration and land certification, Imposition of a progressive taxation system for converts of fertile agricultural land and those who neglect agricultural land.

3. Develop food reserves Activities: development of government food reserves (national, regional and village), Development of community food storage.

4. To develop a fair and efficient food distribution system. Activities: Development and rehabilitation of distribution facilities and infrastructure, Elimination of levies on agricultural and fishery products, Provision of transportation subsidies for areas that are highly food insecure and remote areas, Oversight of unfair trade competition systems.

5. Maintain food price stability Activities: Regular monitoring of staple food prices to prevent grain/rice prices from falling below the HPP, Management of food supply and buffer reserves for food price stability.

6. Increasing household accessibility to food Activities: Empowering the poor and food insecure communities, Increasing the effectiveness of the raskin program.

7. To diversify food Activities: To increase the diversification of food consumption with balanced nutrition, Provision of supplementary food for school children (PMTAS), Development of food technology, Farming diversification and local food development.

8. Improving food quality and safety Activities: Developing and implementing quality systems in processed food production and trading processes, Increased awareness of quality and food safety for consumers, Early prevention and law enforcement against violations of quality and food safety rules.

9. Prevent and deal with food insecurity Activities: Development of early signals and management of food insecurity, Improving nutrition-aware families through counseling and social guidance by improving communication, information and education (IEC) systems, Utilization of yard land to improve family nutrition

10. Facilitate research and development Activities: Adequate state budget allocation for research and development, Increasing cooperation and partnership between research institutions.

11. Increasing community participation Activities: Providing awards to communities that have contributed to the development of food security and nutrition.

12. Carry out international cooperation Activities: Overcoming international cooperation in the fight against hunger and poverty, Improving the performance of economic, social and cultural diplomacy to increase food security.

13. Developing human resources Activities: Improving food education, training and outreach programs, Provision of food and nutrition content in formal and non-formal education, Provision of guarantees for primary and secondary education, especially for women and children in rural areas.

14. Conducive macro and trade policies Activities: Fiscal policies that provide tax incentives and relief for agricultural and food businesses, Adequate APBN and APBD allocations for the development of the agricultural and food sectors, Trade policies that provide protection and promotion for strategic agricultural products. [5]

Policy Direction and Strategy The direction of developing food security is to achieve targets at the micro level (household/individual level) and the macro level (national). Targets are indicated as follows (Food Security Agency):

1. Micro (household) level: Maintained per capita energy availability of at least 2,200 kilocalories/day, and protein provision per capita of at least 57 grams/day; Increasing the ability to use and consume food per capita to meet energy requirements of at least 2,000 kilocalories/day and protein per capita of at least 57 grams/day, with a minimum PPH score of 80; Reducing the number of people who are chronically food insecure (those who consume less than 80 percent of the RDA) to 1 percent, including pregnant women who experience nutritional anemia and toddlers with malnutrition; immediate handling of residents who experience transient food insecurity in the region due to natural disasters and national disasters; Increase in the average tenure of farmers' land.

2. Macro level (national): increased self-sufficiency in food which is realized through achieving self-sufficiency in sustainable rice. Corn self-sufficiency in 2007, soybean self-sufficiency in 2015, sugar self-sufficiency in 2009 and beef self-sufficiency in 2010; as well as limiting imports of main food below 10 percent of national food needs, Increasing the land-man ratio by establishing a minimum of 15 million ha of irrigated perennial land and a minimum of 15 million ha of dry land, Increased capacity to manage regional and central government food reserves; Increased reach of food distribution and marketing networks that are fair to all regions for producers and consumers; Increasing the government's ability to recognize, anticipate, and respond early, as well as in carrying out emergency response to food and nutrition insecurity problems.

The general policy implementation strategy towards the target is carried out through a twin-track strategy (the Food Security Agency): Building an agriculture-based and rural economy to provide employment and income[; Fulfillment of food for the poor and food insecure groups through the provision of direct assistance so that they don't get worse off, as well as empowerment so that they are increasingly able to realize their food security independently.

These two strategies were carried out by involving all components of the nation, namely the government, the community including NGOs, professional organizations, mass organizations, social organizations, cooperatives and business actors. The government emphasizes that food security policies are focused on empowering

households and communities so that they are able to help themselves in realizing food security and overcoming food problems they face. Community empowerment is pursued through increasing household capital and capacity to be able to produce, process and market food products, as well as being able to enter the labor market and provide business opportunities to increase household income [6].

Indonesia as a country with a large population faces very complex challenges in meeting the food needs of its population. Therefore the policy of strengthening food security is a central issue in development and is the main focus in agricultural development. Overall there are three main programs of the Ministry of Agriculture which will be carried out in the 2005-2009 period, namely; Food Security Improvement Program. Agribusiness Development Program; and Farmers Welfare Improvement Program. In line with the Revitalization of Agriculture, Fisheries and Forestry (RPPK) which was proclaimed by the President of the Republic of Indonesia on June 11, 2005 in Jatiluhur, West Java, the mandate for this nation is to build solid food security by focusing on increasing national production capacity for five strategic food commodities, namely rice, maize, soybean, sugarcane and beef. To increase the national food production capacity, Indonesia still has the potential for land expansion for farming. Of the 100.8 million hectares of land suitable for agriculture, 68.8 million hectares have been used, so that around 32 million hectares of untapped land. In addition, there is potential for land for agricultural businesses in the form of abandoned land of 11.5 million hectares and 5.4 million hectares of yards, and not including peat and swampy lands, which have quite large potential. In order to strengthen national food security, five strategic food commodities will be developed during the 2005-2010 period, namely: rice, corn, soybeans, sugar and beef. Strategic steps and investment amounts to support the development of the five types of food commodities have been determined and prepared. One of the steps is to identify suitable land potential for the development of the five food commodities and the construction of supporting physical and non-physical infrastructure [7].

CONCLUSION

1. The basis of food policy in Indonesia is Pancasila and the 1945 Constitution. The problems faced include hunger, access, food supply, food borne disease and food security.

2. Poverty and inequality are overcome together with other countries in the world in the Sustainable Development Goals (SDGs)

3. Planning and budgeting in government policies related to food security, namely the priority program "Increasing Availability, Access, and Quality of Food Consumption". The program is measured by 5 (five) indicators, namely Farmers' Exchange Rate, Energy Adequacy Rate, Protein Adequacy Rate, Prevalence of Undernourishment, and the Food Insecurity Experience Scale.

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ALOPECIA RESEARCH: A BIBLIOMETRICS ANALYSIS OF PUBLICATIONS OUTPUT DURING 2012-2021

Dr. Deepa Sharma[1] and Dr. P. Ravichandran[2]
[1]Research Scholar, Department of Library and Information Science, Annamalai University, Tamil Nadu, India
[2]Professor, Department of Library and Information Science, Annamalai University, Tamil Nadu, India

ABSTRACT
The present study deals with the trends of Alopecia research studies in the different countries, a kind of study which is mostly affected the hair of the scalp and the entire body of all the organisms which falls into the prey of the diseases. An attempt has been made with sincere efforts to study the effects of Alopecia Research during the study period 2012-2021. A sum total of 8654 records were collected, web of science database is used for the data collection. The major aim of the study was to evaluate the year wise distribution, Author wise, Journal wise distribution, Country wise distribution of items, language wise distribution of periodicals and the relative Growth rate and doubling time of the publications during the time span of ten years. The latest years are providing enough details regarding the research 1231 records in the year 2021 with (14.23%), USA occurs at the topmost position followed by China and Germany with 2691(31.10%), 659(7.62%) and 655(7.57%)."Journal of American Academy of Dermatology", "Journal of Investigative Dermatology" and "British Journal of Dermatology". English language occupies the prominent position as it is the highest spoken language.

Keywords: Hair Fall, Baldness, Dermatology, Web of Science, Bibliometrics

I. INTRODUCTION

Measuring techniques used in the study of bibliometrics are known by the name as metric studies. Metric as a noun means a scale of measurement as we use a measuring scale for completing our various daily routine activities, in library and information studies metrics describes the research output in terms of various scales of measurement. According to Pritchard (1969) Bibliometrics is the "Application of mathematical methods to books and other media of literature" Bibliometrics is a discipline which helps to analyses the scientific publications and citations accorded to the papers to gain an understanding of the growth of bibliometrics at higher level it includes country wise output in a particular domain, institution wise, and language wise ranking of journals publications and so on. Most of the bibliometrics studies have a great impact on the literature, here the bibliometric studies is confined to the dermatological side of the humans known by the name Alopecia it is a conditions in which the humans starts shedding their hairs in a small fragments and if not property diagnosed and cured leads to complete baldness.

ALOPECIA

Alopecia is a serious threat not only to the human beings but also to the animals as the first case was detected from an animal a serious concern to the humans during. Post Covid years as many individuals lost their jobs and completely jobless the entire economy was staggered work pressure, homely environment and work dependency increases hair loss in humans. Firstly the hair starts loosing from the head region in small coin like patches which completely unites to make complete baldness. The male and female both are badly affected by this disease. The present study on Alopecia deals with its Bibliometric Analysis such as metric studies are conducted to find out the language wise distribution, form wise, year wise, authorship patterns and country wise distribution in the international level as Alopecia is a concern not only at the national level but its impact has to studied in connection with the International level.

II. REVIEW OR RELATED LITERATURE

Dixit, Saraf and Chauhan (2011) in their research paper role of psychological processes in the hair fall. Here psychology acts as a stressing phenomena every third person in this world is a patient of hair loss commonly called as Androgenic Alopecia certain fruits are devised by various dermatologists which can reverse the process like schrad fruit, petroleum ether extract applied locally to reverse the process of hair loss. It was tested on animals firstly and when the results were appropriate it was administered to the humans.

Robin Inabinet (2014) in his research paper stress on the different types of Alopecia disease it includes Alopecia Areata, a disease in which hairs starts falling from the head region in patches of round or oval shape if not properly diagnosed and treated it will leads to hairfall from the entire region of the body results in complete hair loss. He further discusses the different stages in includes Anagen, Catagen, Telophase and the exogen phase. The hair shafts become thinner and results in hairfall.

Yang and Wei (2021) in their studies had concluded that corona and hair loss are closely interrelated which gives rise to severe hair problem of Telogen Effluvium and Alopecia Areata The patients suffering from hair loss noticed a severe rise in hair problems after getting infected with Covid and Sara virus it further increases the anxiety levels of the infected patients.

Afshin Mosahebi and Shivani Dhar (2022) prepared a report on Alopecia and Covid-19 vaccination in continuation with its infectious level and found that being an auto immune disorder resulting in patchy hair loss as in the case of Alopecia Areata and in some cases the infection may increased up to complete hair loss and confirmed that that after taking Covid vaccinations with the patients who come out to be confirmed positive with corona are more prone to hair loss in respect to others persons who had taken Covid vaccination.

Kristin Walter (2022) in his research paper presets the Alopecia as a scarring types in which the hair losses accompanied with certain sores or itching of the scalp and the other is non scarring types in which hair loss not accompanied with any distraction of the skin. Patterned, Focal and Diffuse hair loss from the head region mostly from top and sides of the head, evenly loss of hair from the scalp near about 200 strands and in some cases loss of hair in head region and in some cases scalp, head, face and body.

Nguyen and Tosti (2022) while their studies on corona virus and Alopecia studies have presented in their studies regarding the close association between the two and confirmed that corona and Sars virus leads to the dreadful condition on human hairs in the form AGA, AA and TE Androgenic Alopecia, Alopecia Areata and Telogen Effluvium are the three forms of baldness which occurs as a result of Alopecia. They collected the data by searching the keywords as hairs, Alopecia and Covid -19 as the search strings from the year November 2019 onwards to August 2021. The data was collected from 1826 patients with in the age group of 50-55 years and found out that it has created a global emergency in the patients suffering from Alopecia.

Wang, Liang and Gong (2022) while conducting their studies on the most novice topic Otorhinolaryngology with a sample of about 2240 article papers using web of science core data base and it was concluded that out of 631 papers selected for the research purpose from 97 countries united states falls at the top most position with highest rank. The most prolific author was Claire Hopkins with highest no of research papers. The studies conducted on the topic Otorhinolaryngology has been studied on metric studies using descriptive method and it shows that the world is connoted completely to fight against this deadly virus.

OBJECTIVES

The following objectives have been framed for the present study:

➢ To find out the Country wise contribution in the studies of Alopecia.

➢ To find out the journal wise distribution of the items of Alopecia disease research.

➢ To study the Year wise research output on Alopecia studies.

➢ To measure the Relative growth rate and doubling time.

➢ To estimate the Language wise contributions of the different countries.

➢ To identify the contributions of top Authors.

III. METHODOLOGY

The data has been collected and retrieved from web of Science database for primary data for identifying the field of dermatology. The study is confined to ten years i.e. from 2012-2021. A total of 8654 records were retrieved in the field of Alopecia Research. The data has been classified by using the Histcite and then by using excel format for doing other calculations. Some statistical tools were used such as frequency distribution, percentile score were calculated.

IV. DATA ANALYSIS AND INTERPRETATION

Analysis of Year wise distribution of Articles Published

Analysis of the study

Table1: Year wise distribution of Number of Articles Published

Years	Records	Percentage	TLCS	TGCS
2012	589	6.81	175	4780
2013	775	8.96	167	7653
2014	711	8.22	135	4165

2015	699	8.08	260	7483
2016	731	8.45	353	9071
2017	831	9.60	473	18326
2018	912	10.54	555	14996
2019	1082	12.50	351	10163
2020	1093	12.63	705	12353
2021	1231	14.23	897	16317
Total	**8654**	**100**		

Figure No 1: Distribution of Number of Articles Published
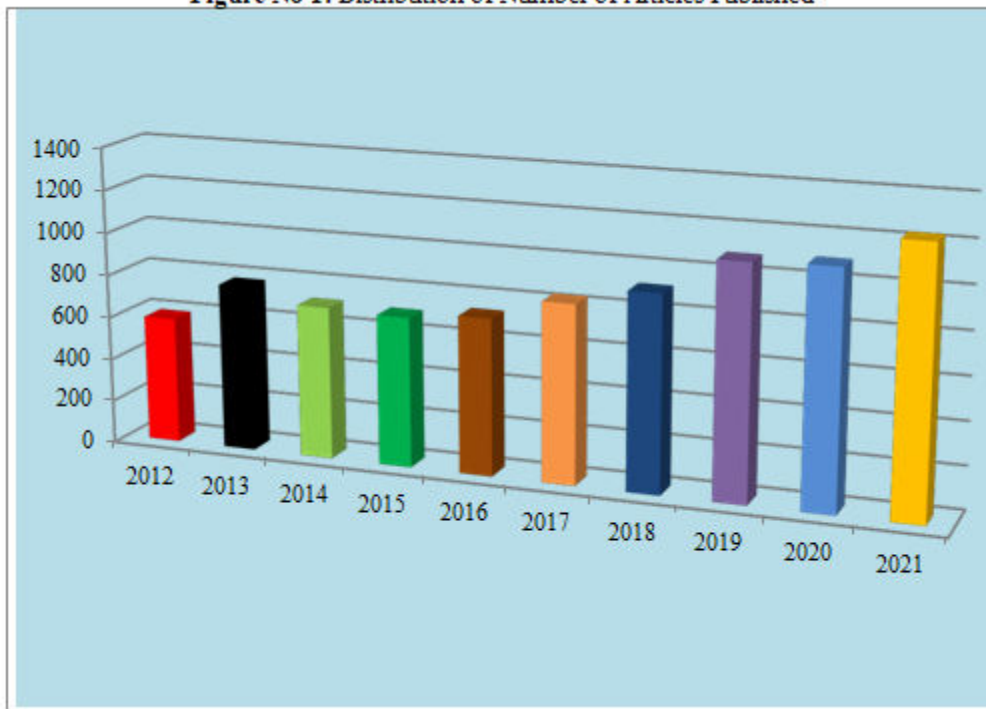
The data from the table and fig no.1 reveals that the number of research outputs published from 2012-2021 shows an increasing trend in the publications. According to the distribution of items in the table no-1 the year wise distribution of research documents, rank wise position. The year 2021has 1231 (14.23%) research documents and it stood at the first position with total local citation score of 897 and total global citation score of 16317 followed by the year 2020 with 1093 records having (12.63%). The year 2019 at the third position with 1082 no of items and (12.50%) with total local citation score of351 and total global citation score of 10163 respectively.

Publication of Journal wise distribution of items in Alopecia literature

Table No - 2 Publication Wise Distribution of Alopecia

S. No	Publication Titles	Records	Percentage	TLCS	TGCS
1	Journal of the American Academy of Dermatology	538	6.22	1081	15593
2	Journal of Investigative Dermatology	495	5.72	845	14215
3	British Journal of Dermatology	249	2.88	737	10508
4	Journal of the European Academy of Dermatology and Venereology	201	2.32	1566	21689
5	Journal of Cosmetic Dermatology	187	2.16	619	8446
6	Dermatologic Therapy	183	2.12	514	7556
7	International Journal of Dermatology	174	2.01	877	11180
8	Journal of Dermatology	171	1.98	413	1373
9	Experimental Dermatology	148	1.71	275	8280
10	Australasian Journal of Dermatology	118	1.36	147	5865

Figure No - 2 Publication Outputs of Journals
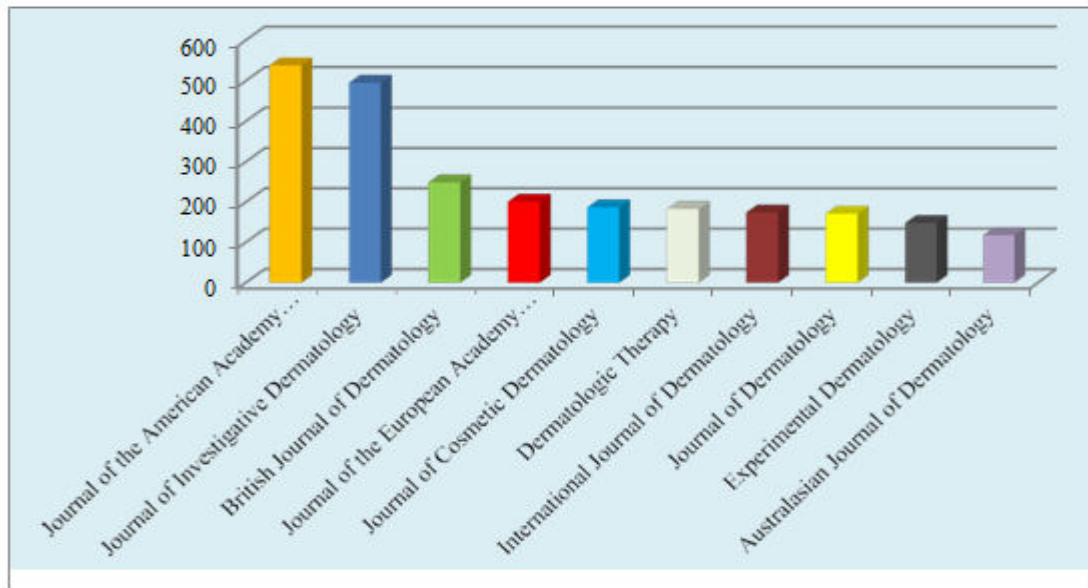
Table and fig no. 2 displays the publication output of the top ten journals in the study of Alopecia disease. Journal of the American Academy of Dermatology acquired 1st rank among the top ten Journals under consideration with its publication output having 538 (6.22%) of records, Journal of Investigative dermatology at second place followed by Journal the European academy of dermatology and Venereology, Journal of Australasian dermatology at the lowest position with 118 no of records having (1.36%).

COUNTRY WISE DISTRIBUTION OF ALOPECIA LITERATURE

Table No - 3 Country Wise Distributions of Items

S. No.	Country	Records	Percentage	TLCS	TGCS
1	USA	2691	31.10	3620	105850
2	Peoples R China	659	7.62	2392	62548
3	Germany	655	7.57	1447	18657
4	Italy	628	7.26	693	18647
5	England	618	7.14	795	15648
6	South Korea	569	6.58	455	17079
7	Japan	513	5.93	164	4024
8	India	410	4.74	606	13227
9	Spain	390	4.51	664	15232
10	Turkey	362	4.18	289	9790

Figure No - 3 Country Wise Literally Output
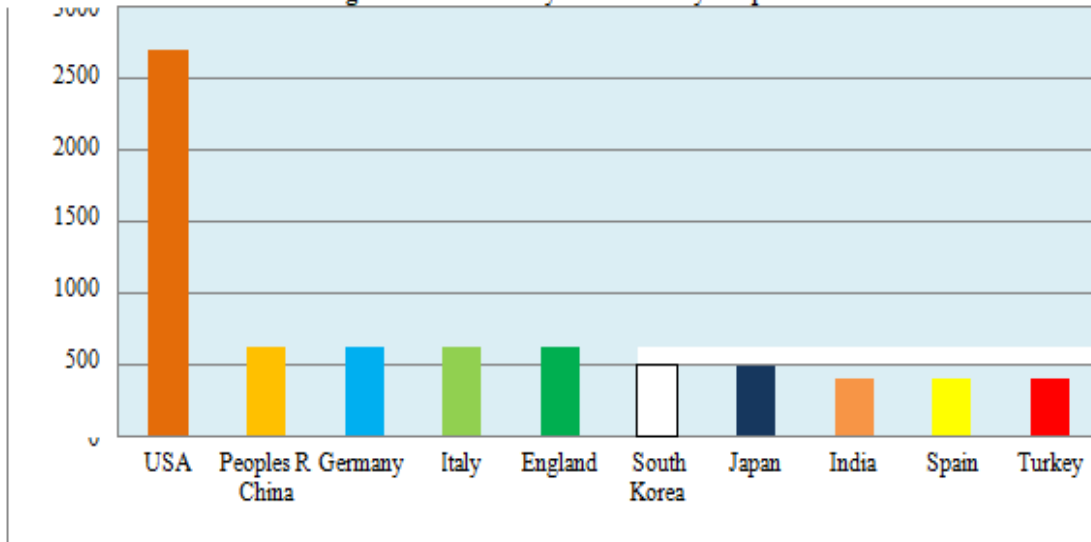
Table and fig no. 3 presents the publication output of the top ten countries by presenting the number of papers in the field of Alopecia studies and USA stood at the top level out of top ten countries under consideration with its total global citation score 105850. In all the contributed countries under consideration in the research process during the year 2012-2021. The countries ranked between second to tenth positions were people R China, Germany, Italy, England, South Korea, Japan, India, Spain and Turkey. It could be noticed and identified from the following table that USA was the dominant one among the other countries followed by China, Germany and Italy respectively.

LANGUAGE WISE DISTRIBUTION OF ALOPECIA LITERATURE

Table No - 4 Language Wise Distributions of Items

S. No.	Language	Records	Percentage	Cumulative Percentage
1	English	8360	96.60	96.60
2	German	118	1.36	97.96
3	French	71	0.82	98.78
4	Portuguese	33	0.38	99.16
5	Turkish	30	0.35	99.51
6	Spanish	25	0.29	99.80
7	Dutch	4	0.05	99.85
8	Korean	3	0.04	99.89
9	Hungarian	2	0.02	99.91
10	Polish	2	0.02	99.93
11	Russian	2	0.02	99.95
12	Chinese	1	0.01	99.96
13	Croatian	1	0.01	99.97
14	Greek	1	0.01	99.98
15	Italian	1	0.01	99.99
Total		**8654**		**100**

Figure No - 4 Language Wise Distributions of Items

The main purpose of this study is to find out the most dominant language in which the literature on a particular subject is being produced. Language plays a major and vital role in the communication of information. Table and fig no. 4 shows that the total no of items 8654were published in 10 different languages. Out of which English was found to be the most dominant language as 8360 items constituting (96.60%) were reported to be published in that language. The second position occupied by German language in which 118 (1.36%). The third, fourth and fifth positions occupied by French, Portuguese and Turkish language with 71(0.82%), 33(0.38%) and 30(0.35%) respectively.

ANALYSIS OF THE PUBLICATION OUTPUT OF TOP 10 AUTHORS

Table No - 5 Top 10 Prolific Authors of Alopecia Research

S. No.	Author	Records	Percentage	TLCS	TGCS
1	Paus R	115	1.33	187	1928
2	Tosti A	107	1.24	36	1472
3	Christiano AM	99	1.14	46	1155
4	Shapiro J	93	1.08	37	1018
5	Vano-galvan S	82	0.95	235	418
6	Sinclair R	80	0.92	26	1008
7	Rossi A	63	0.73	40	1080
8	Lee WS	60	0.69	17	1412
9	Clynes R	57	0.66	20	1013
10	Jabbari A	57	0.66	13	542
S. No.	**Author**	**Records**	**Percentage**	**TLCS**	**TGCS**

Figure No - 5 Top 10 Prolific Authors
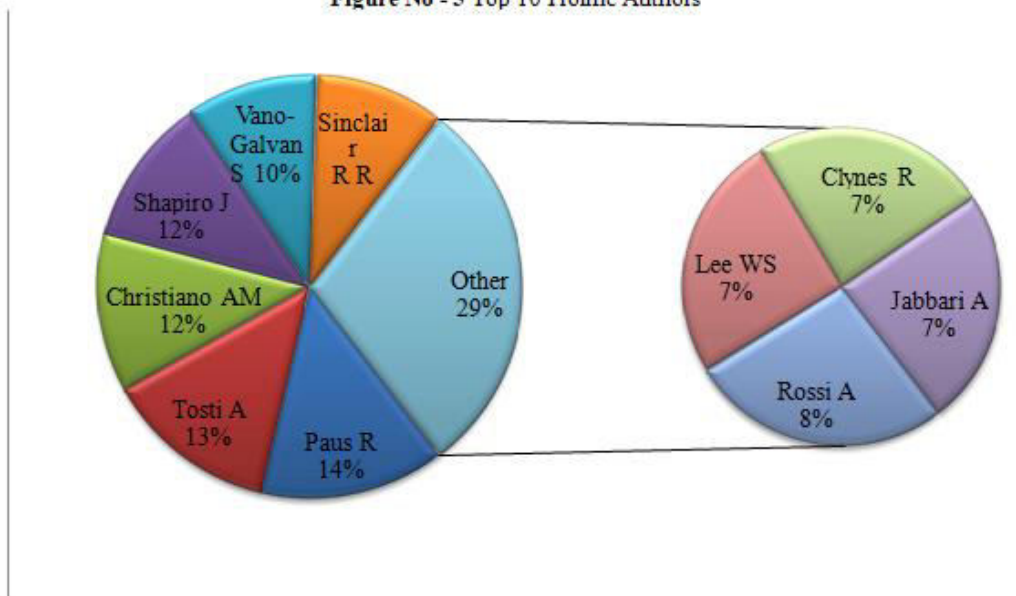
The author wise distribution on the Alopecia disease research has been tabulated and graphically represented in the table no. and fig no. 5 the authors are the key writers in the process of research. From the table it has been found out the author at the top most position are Paus R, with 115 records (1.33%), Tosti A with 107 records (1.24%) and Christiano AM with 99 (1.14%). The total of ten author distribution has been tabulated and graphically represented for the better understanding of the research process.

RELATIVE GROWTH RATE AND DOUBLING TIME ANALYSIS

Table No - 6 Relative Growth Rate and Doubling Time of Publication

Years	Articles	Cumulative No. of Articles	W1	W2	R(a) W2-W1	Mean R(a) (1-2)	Doubling Time Dt (a)	Mean Dt (a) (1-2)
2012	589	589	6.38	6.38	0.00			
2013	775	1364	6.65	7.22	0.57		1.216	
2014	711	2075	6.57	7.64	1.07		0.648	
2015	699	2774	6.55	7.93	1.38		0.502	
2016	731	3505	6.59	8.16	1.57	0.92	0.441	0.56
2017	831	4336	6.72	8.37	1.65		0.420	
2018	912	5248	6.82	8.57	1.75		0.396	
2019	1082	6330	6.99	8.75	1.76	1.80	0.394	0.39
2020	1093	7423	7.00	8.91	1.91		0.363	
2021	1231	8654	7.12	9.07	1.95		0.355	
Total	**8654**	42298				**1.36**		**0.70**

It is evident from the table 6 that the relative growth rate of total literature outputs published has been progressively improved. The growth rate is showing an increasing trend from 0.57 in 2012 to 1.95 in 2021. The mean relative growth within the time span of ten years is 0.92 from the year 2012 to 2016 and 1.80 from the period of 2017 to 2021. Generally, the relative growth rate of publications of all sources in the data shows an increasing trend. The mean doubling time is 0.56 during the period 2012-2016 and 0.39 from the period of 2017-2021. In general, the doubling time of scholarly publications of all the sources in the research of Alopecia shows a decreasing trend.

V. FINDINGS AND CONCLUSIONS

Bibliometrics is the branch of study which helps to find certain parameters in the field of library and information science. From the above study it is to be concluded from the above tables on Alopecia disease research that the annual output of the publications of 2021 has attained the top position during the ten years data it shows an increasing trend, it is to be concluded from the table of annual output of the research that it shows an increasing trend.

From the journal wise publications output of the Alopecia disease research it was found out that Journal of the American Academy of Dermatology occupied the first rank followed by Journal of Investigative Dermatology and then by British Journal of Dermatology.

Different countries are doing their extensive research on Alopecia disease research as it an important and needful study of the hour, from the ten most occurring countries in doing research it was concluded that USA stood at the first position in conduction research, followed by People R China and then by Germany it is important to mention that India stood at the eighth rank and in the upcoming years tries to improve its position.

Language is the way people communicate their research purposes, language makes two countries united and updated so from the above tables and figures it was concluded that most of the literature published in English language as it is the highly spoken and stood as medium of communication in all the countries it is followed by German and then by French language

Relative growth rate and doubling time are the two terms which tell about the growth rate and its intensity of doubling it was noted from the above representation that that relative growth rate shows an increasing trend while doubling time shows a decreasing trend in the data of the ten years

It was concluded that there are different no of authors participated in conducting research and the most prominent authors are Paus R with highest no of records followed by Tosti A, Christiano AM and Shapiro J are thekey authors in the Alopecia disease research.

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LSTM METHOD INTEGRATION FOR SENSOR-BASED HUMAN ACTIVITY RECOGNITION SYSTEM USING MODIFIED DEEP LEARNING TECHNIQUE

Bina Shah

ABSTRACT

Mobile phones and smartphones are quickly replacing landlines as the primary means of communication for most individuals today. Research on human activity recognition has gained popularity in various industries, including healthcare, surveillance, and education. We can utilize cell phones for various purposes thanks to their sensors. The application of human activity recognition in healthcare is significant. This study has built a human activity identification system that can recognise six activities of daily living (ADL) and human falls. A human fall happens as a result of an accident that may result in severe injuries and, if the problem is not adequately managed, may result in serious medical problems. The suggested system employs a deep learning approach to recognize human activity and falls. Compared to earlier data, the accuracy has risen by over 4%.

Keywords: Activities of Daily Life; Mobile sensors; Accelerometer; Gyroscope; Monitoring; Healthcare; Medicare

1. INTRODUCTION

Smartphones have recently evolved into an essential component of modern human existence. Smartphones may be used to record a person's everyday activities. The accelerometer and gyroscope are the two most often used sensors. Smartphones' built-in sensors allow us to record a person's movement. This data may identify various common daily actions, including standing, walking, lying, sitting, and even moving stairs [2]. The same information is also used to identify human falls. Data from daily living may be utilized to analyze a person's manner of life and the sequence of their regular physical functions. It is important to closely monitor daily activities to prevent the majority of chronic illnesses caused by inactivity. Additionally, detecting human falls can provide prompt assistance to those in need. Numerous industries, including aged care, patient monitoring, education, the military, and rehabilitation, use HAR [2][3][8].

Systems that assist in monitoring human activities and instantly notify in the event of a tragedy are called fall detection systems [3]. The primary goals of fall detection systems are to distinguish between activities of daily living (ADL) and fall events (warning during their occurrence). To guarantee that timely treatment can be provided, these technologies help to send an immediate notification to medical entities, caregivers, and family members.

A modified Bidirectional Recurrent Neural Network (BRNN) that incorporates Long Short-Term Memory (LSTM), a method of Deep Learning (DL), is proposed as an improved human activity identification model for fall detection in this research. BRNN stands for Bidirectional Recurrent Neural Network. LSTM is a method of Deep Learning. To begin, the data required for the proposed system is gathered using the accelerometer and gyroscope in modern smartphones. In the subsequent stage, the data is preprocessed and separated into categories. The system is then trained for six human activities and a fall and evaluated for each. The Mobi fall dataset, which includes sensor data from 66 people carrying out twelve distinct ADLs and four separate falls, is used. Finally, system performance is evaluated using measures including accuracy, f-measure, precision, and confusion matrix [2][3][8].

The following outline constitutes the paper's structure: The second section provides a list of previous works, including a pertinent handful. In Section 3, you'll find an explanation of the proposal for the modernized BRNN-LSTM system. In Section 4, you will see a report detailing the model's testing and evaluation outcomes. The outcome is presented in Section 5. In the sixth section, the conclusion and the attempts for the future direction are discussed.

2. BACKGROUND AND RELATED WORK

The essential phases in a human activity recognition system are as follows: data collection, pre-processing, feature extraction, categorization of activities, and outcome analysis (see Figure 1).

The input data is gathered using a variety of sensors. The following phase is pre-processing, which employs data-cleansing techniques to remove noise and deal with incorrect numbers. Data that has been cleaned is then divided into windows. Windows can be segmented in various ways, including sliding windows, event-based windows, and energy windows. After segmentation and pre-processing are finished, feature extraction is carried out to improve the effectiveness of classification algorithms. Deep learning techniques are applied to complete

this assignment [2][3]. The activities are categorized using the collected characteristics using a variety of classification methods, and the system's performance is evaluated using metrics including accuracy, F1-score, precision, and confusion matrix [1][2][3].
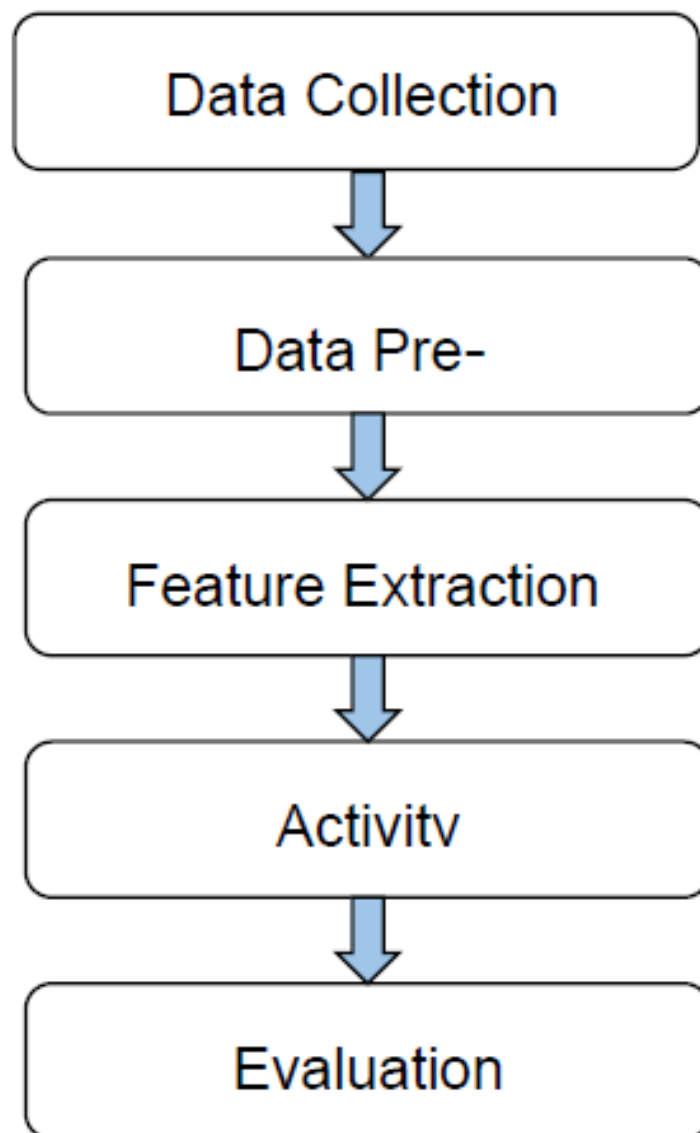
Fig. 1. Stages involved in Human Activity Recognition

One of the primary factors influencing the recent popularity of deep learning techniques is their capacity for autonomous feature extraction. As indicated in Table 1, several Deep Learning (DL) Techniques, including CNN [1][3], RNN, and RNN-LSTM [2][4], are used in the existing works to perform Human Activity Recognition (HAR). High processing power is the present study's key problem, making real-time forecasts challenging because most systems can't manage them.

Human Activity Recognition is a time series issue, where the sequence of sensor readings is in time T. LSTM [2] cells may recognize relationships in time-dependent data without combining the timesteps, as would be the case with a 1D convolutional neural network (CNN) [3]. LSTM architecture can now deliver superior results in various unmet applications as "big data" arises. Even though scientists have worked hard in recent years to advance HAR research, there is still some promise for further improvement. To make an accurate prediction of the current state, the LSTM cells use the data from the state before this one.

We can see that continuous human pathways exist in the actual world. As a result, the memory cells could not effectively collect the needed information by moving in a single direction. In the system that has been proposed, a one-of-a-kind method that combines long-term memory cells with bidirectional recurrent neural networks has been developed. This method aims to ensure that the existing model is accurate and that the data given to the various layers of neural networks is accurate.

Table 1. Comparison of existing deep learning techniques

Sl. No.	NAME OF THE JOURNAL, YEAR	TITLE OF THE PAPER	TECHNIQUES USED	METRICS	ADVANTAGES AND DISADVANTAGES
1.	XXVI Brazilian Congress on Biomedical Engineering, Springer 2019.	Human Activity Recognition Based on Convolutional Neural Network	Convolutional Neural Network	Accuracy, precision	- Lower computational cost. - Information loss.
2.	International Conference on Computational Intelligence and Data Science (ICCIDS), Elsevier 2019.	A Lightweight Deep Learning Model for Human Activity Recognition on Edge Devices	Deep learning approach using Recurrent Neural Network and Long Short Term Memory	Accuracy, precision, recall, F1-score	- Reduces communication latency, cost and network traffic. - Does not support multi-sensor data.
3.	Robotics and Automation Letter, IEEE 2019.	HMFP-BRNN: Real Time Hand Motion Filtering and Prediction via Deep Bidirectional RNN	Deep bidirectional recurrent neural network approach	Accuracy, F1-score	- Produces precise outputs. - Overfitting of data occurs.
4.	Sensors Journal, 2019.	Deep Learning to Predict Falls in Older Adults Based on Daily-Life Trunk Accelerometry	Deep learning architecture using Convolutional Neural Network and Long Short Term Memory	F1-score	- Proven to learn sequential data. - Information loss.
5.	Sensors Journal, IEEE Access 2019.	Advanced Sensing and Human Activity Recognition in Early Intervention and Rehabilitation of Elderly People	Supervised machine learning approach	Accuracy	- Provides accurate results. - More sensors are required.

3. ILLUSTRATION OF THE PROPOSED MODEL

BRNN and LSTM are used to develop the suggested system. It has 30 neurons, and two buried layers. The following explains each system module.

3.1. Recurrent Neural Network (RNN)

To tackle issues involving continuous data, the RNN method is introduced. The input is in sequential form because HAR is a time series problem. It consists of i/p, hidden, and o/p, with hidden layers containing several nodes. A RNN node is represented visually in Figure 2. The generating function of each hidden node produces the output value o_t and the currently hidden state value ht. Using this formula, t is calculated:

$$ht \ = \varepsilon \ (w_{hh}h_{t-1} + w_{ih}x_t + b_h) \tag{1}$$

$$yt \ = \ \varepsilon \ (w_{ho}h_t + b_o) \tag{2}$$

"Where, x_t = new input state, h_{t-1} = old hidden state, h_t = new hidden value, w_{hh} =hidden-hidden state weight, w_{ih} = input-hidden state weight, w_{ho} = hidden-output state weight, b_h= hidden state bias, b_o = output state bias, o_t = new output state, ε = activation function. ε is called an activation function."
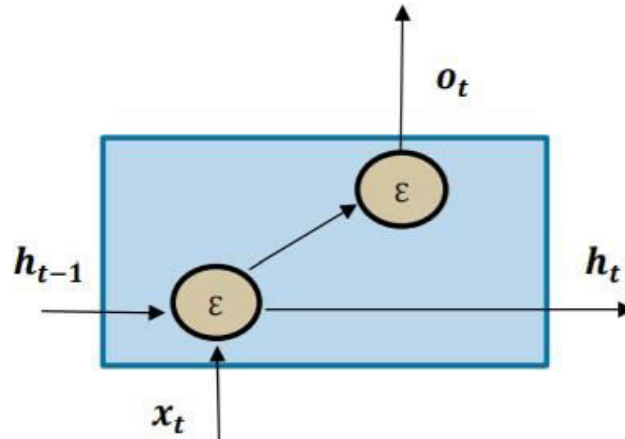
Fig. 2. Sample Node of Recurrent Neural Network (RNN)

3.2. Long Short-Term Memory (LSTM)

The biggest disadvantage of employing RNN is that it cannot handle exploding and disappearing gradients, which reduces the network model's performance in various temporal correlations between inputs and human behaviors. By employing LSTM memory cells rather than RNN nodes, we can get around RNN's flaw. In Figure 3, LSTM memory cells are displayed. The gates of LSTM cells control the properties of each memory cell. The activation processes of gates regulate each cell's state. The input values are passed into the input gate, forget gate, and output gate. The symbol ε represents an activation function.

The following equations show each timestep(t) calculation of the hidden state value.

$$i_t = \varepsilon_i \left(w_{xi}x_t + w_{hi}h_{t-1} + w_{ci}c_{t-1} + b_i \right) \tag{3}$$

$$f_t = \varepsilon_f \left(w_x f_{xt} + w_h f h_{t-1} + w_{cf}c_{t-1} + b_f \right) \tag{4}$$

$$c_t = f_t c_{t-1} + i_t \varepsilon_c \left(w_{xc}x_t + w_{hc}h_{t-1} + b_c \right) \tag{5}$$

$$o_t = \varepsilon_o \left(w_{xo}x_t + w_{ho}h_{t-1} + w_{co}c_t + b_o \right) \tag{6}$$

$$h_t = o_t \varepsilon_h(c_t) \tag{7}$$

W_{xi}, w_{hi}, w_{ci}, w_{xf}, w_{hf}, w_{cf}, w_{xc}, w_{hc}, w_{xo}, and w_{co}, are weights (w_{xi} = input to input weight, w_{hi} = hidden input weight), b_i, b_o, b_c, and b_f bias weights.
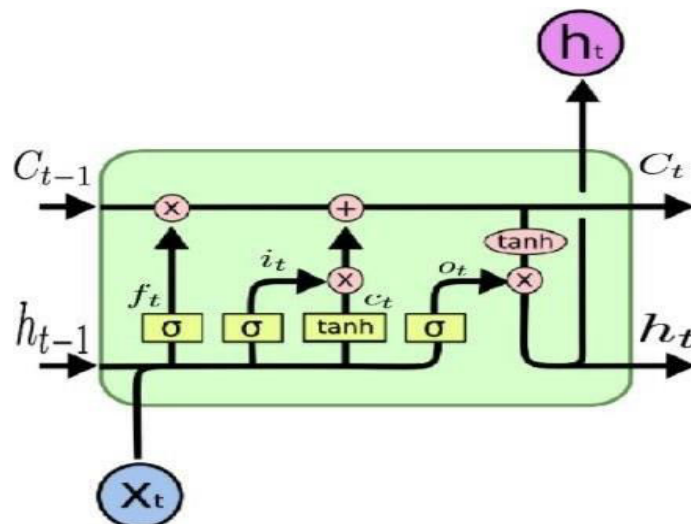
Fig. 3. Long-Short-Term Memory (LSTM) Cell

3.3. Proposed modified BRNN-LSTM Model

Readings from the gyroscope and accelerometer are divided into fixed-size windows T with 128 timesteps. The neural network input consists of reading (y1, y2, y3, ..., yT-1, yT) obtained at time T, where yT is the reading obtained at any time instance t. The redesigned BRNN-LSTM network is then fed the readings from the segmented windows. Rectified Linear Unit aggregates the output from several states into a single final output (ReLU).
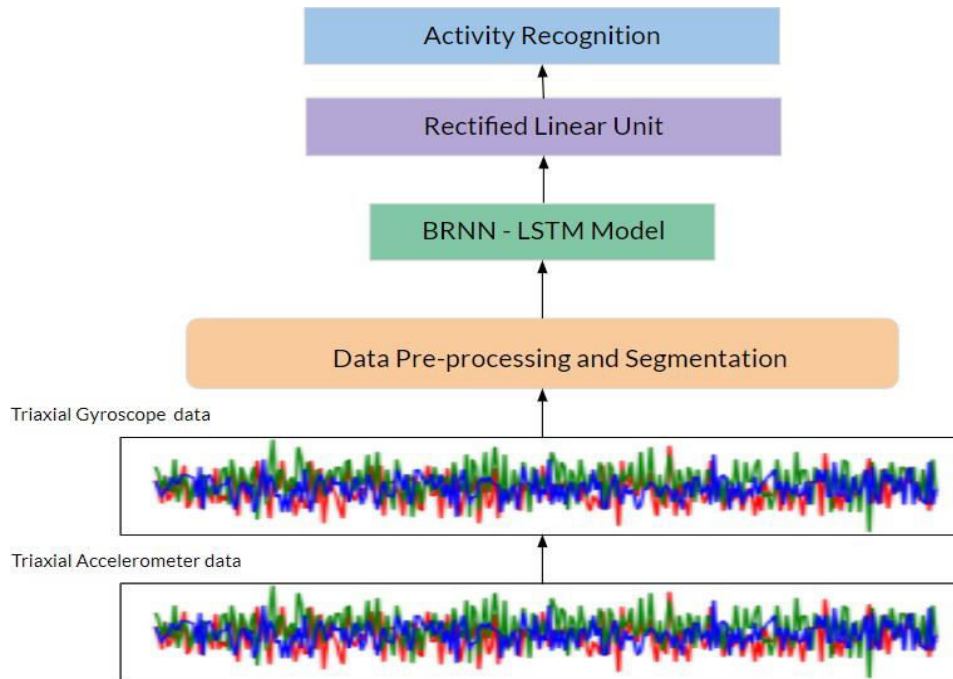
Fig. 4. Proposed System Design

The signals from the accelerometer and gyroscope are provided as input in the proposed system design seen in Figure 4. A high pass butter worth filter is used to reduce noise from the raw sensor data and enhance fine details, and highlight edges. Data segmentation is done using a sliding window technique after preprocessing. The data that has been preprocessed and segmented is now forwarded to the BRNN-LSTM layers.
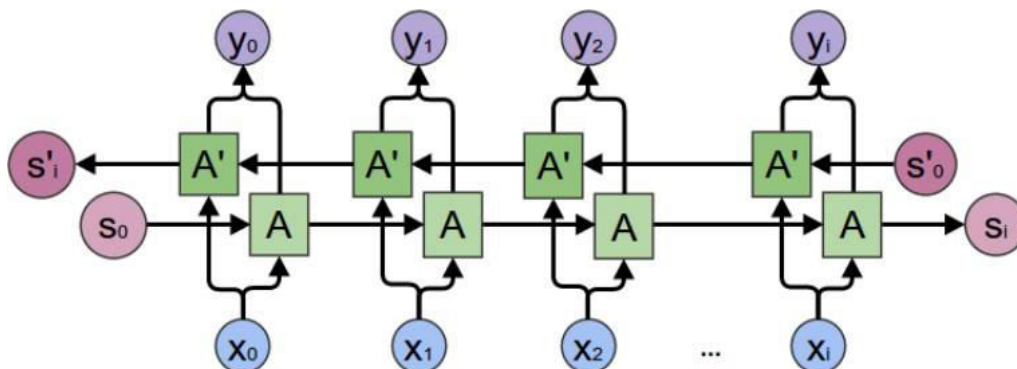
Fig. 5. "Bidirectional Recurrent Neural Network-Long Short-Term Memory (BRNN-LSTM) Diagram"

```
def lstm_network(feature_matrix,conf_net):
#get input for the LSTM
#Stack two LSTM layers, both layer has same shape
with tf.variable_scope('forward_pass'):
    lstm_layers_forward = rnn.MultiRNNCell([rnn.BasicLSTMCell(conf_net.hidden_unit) for _ in range
        (conf_net.layer_size)])
with tf.variable_scope('backward_pass'):
    lstm_layers_backward = rnn.MultiRNNCell([rnn.BasicLSTMCell(conf_net.hidden_unit) for _ in range
        (conf_net.layer_size)])
#get LSTM outputs
outputs,_,_= rnn.static_bidirectional_rnn(lstm_layers,lstm_layers_backward,inputs,dtype=tf.float32)
# Get last time step's output feature for a "many-to-one" style classifier,
lstm_last_output = outputs[-1]
```

Fig. 6. Pseudo code for the modified BRNN-LSTM method

Improvement in the suggested system demonstrates that, as shown in Figure 5, future information is also considered in addition to the previously considered data to produce the current result. A traditional RNN's neurons are divided into two directions, one for forward states (positive time direction) and the other for backward states, as the basic strategy of BRNN. This aids in precisely predicting human activities, particularly sitting and standing, which are less accurately predicted by the current methods.

4. EXPERIMENT AND EVALUATION

Using Python 3.5 and TensorFlow 1.7, the improved human activity recognition system for fall detection is implemented.

4.1. Dataset Description

A smartphone's accelerometer and gyroscope sensors captured data. Mobifall is an open-source dataset of information acquired from participants' smartphones when engaging in various activities and falls. The data set includes four different fall types and twelve different ADLs from 66 participants. Figure 7 below shows a tabular description of the actions that were recorded. As seen in Figure 7, the ADLs are separated into three portions. The data set is taken from URL https://bmi.hmu.gr/the-mobifall-and-mobiact-datasets-2.

Dataset	Simple Movements	Standard Normal Life Movements	Sporting Activities	Falls
MobiFall & MobiAct	- Sitting on a chair - Stepping in a car - Stepping out of a car - Standing	- Normal walking - Going downstairs - Going upstairs	- Jogging - Jumping	- Forwards (use of hands to dampen fall) - Forwards (first impact on knees) - Sideward bending legs - Backward (while trying to sit down)

Fig. 7. ADLs and falls executed by the experimental subjects

Distinct activities need different x, y, and z coordinates. Maximum spikes may be seen on the plot when walking, but maximum spikes can be seen when jogging in the x and y directions. A neuron's output is defined by its activation function in terms of its input. The BRNN-LSTM layer trains using 70% of the MobiFall data, then tests with the remaining 30%.

4.2. Performance Metrics

Three popular metrics, such as accuracy, precision, and f-measure, are used to evaluate the system's performance.

Table 2. Performance Metrics

Metrics	Formula
Accuracy: Number of correct predictions over total number of predictions.	$Accuracy = \dfrac{TP+TN}{TP+TN+FP+FN}$ where, TP = true positives, TN = true negatives, FP = false positives, FN = false negatives.
Precision: Number of actual true predictions over total true predictions.	$Precision = \dfrac{1}{C}\left(\sum\limits_{C=1}^{C} \dfrac{tp_c}{tp_c+fp_c}\right)$ where, C = total no.of classes, tp_c = true positives for class c, fp_c = false positive for class c.
F-measure: Harmonic mean of precision and recall.	$f\text{-}measure = \sum\limits_{C=1}^{C} 2\left(\dfrac{n_c}{N}\right) * \dfrac{precision_c * recall_c}{precision_c + recall_c}$ where, N = total no.of inputs, n_c = no.of inputs in class c, $precision_c$ = precision value for certain class c, $recall_c$ = recall value for certain class c.

5. CONCLUSION

This study created a modified BRNN-LSTM-based enhanced HAR system for fall detection. The system effectively detects falls and can forecast six distinct actions. By removing the most representative characteristics from the data, the proposed system is anticipated to deliver results with greater accuracy than many other machine learning and deep learning techniques now in use. It will be able to distinguish between sitting and standing, something that many other models have struggled to do well.

Future approaches might include more complicated recognition operations and be expanded to accommodate data from several sensors.

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JOB SATISFACTION, ORGANIZATIONAL CLIMATE AND MENTAL HEALTH: A COMPARATIVE STUDY OF PRIVATE AND GOVERNMENT SCHOOLS SCHOOL TEACHER IN RAMPUR, U.P

[1]Tasveer Khan, [2]Prof. Mohd. Tahseen Burney and [3]Dr. Abid Hussain
[1]Research Scholar, Al Falah University
[2]Al Falah Univerdity, Dhauj, Faridabad
[3]Assistant Professor, Department of Psychology, Jamia Millia Islamia

ABSTRACT
This study aims at investigating the job satisfaction, organizational climate and mental health among school teachers at private schools and government schools. The idea behind the study is to know and analyze the difference between the variables that are faced by the teachers at private and government schools. There is a significant impact of job satisfaction, organizational climate and mental health on teachers outcome in schools, their teaching skills are greatly affected by all of these variables. The effect of all these variables needs to be studied because it has a direct effect on the academic outcome of students. Highly satisfied teachers are capable of delivering their highest potential to students and helping them to achieve better in life whereas teachers who are not satisfied or not committed to their organization are incapable of showing their full potential that adversely affect the academic outcome of students. The present study would compare the level of job satisfaction of teachers, the effect of organizational climate and mental health of teachers working in private and government schools in Rampur (U.P).

Keywords: Job satisfaction, Organizational Climate, Mental Health, Private School Teachers and Government School Teachers.

INTRODUCTION
In India, teachers are produced from teacher education institutions, who are supposed to be the assets of the institutions and the nation. But it is seen that some teachers are looked upon with suspicion with respect to their satisfaction with job, and the university climate can be produced in the verification of this suspicion. Today's schools have failed to provide a wholesome atmosphere essential for teaching learning process. This is true in case of government as well as private schools. There is a feeling of uneasiness in the minds of both teachers and the management. We notice that the ever increasing unrest among the teacher community due to the impact of politics and bad organizational climate, influences not only the school's management but teachers and students and also the entire education system. Teachers' responsibility is limited only to delivering occasional lectures and in majority of cases, dictating notes.

The role of teacher has been confined to the transfer of knowledge from books to students' notebooks without touching their minds. In Rampur, a very small city in Uttar Pradesh it's also seen that teachers are not committed to their job they change their school within a minimum of 2-5 years of spam. Very few schools can retain their teachers for a long time, what are the reasons behind this non-commitment of teachers. Organizational climate, job satisfaction and mental health play a vital role in teacher's commitment or relocation of job. It is extremely difficult for those teachers who are not content with their jobs to give their best. This certainly affects organizational climate adversely and ultimately leads to lower the level of mental health as well as job satisfaction among school teachers. This study aims at finding the relationship between these three variables highly affecting teacher's role and performance and it will be compared between teachers of private schools and government schools, that which kind of schools provides better organizational climate and better job satisfaction and mental health.

ORGANIZATIONAL CLIMATE
Organizational climate is a very important factor to be considered in studying and analyzing organization and its employees because it has profound influence on the outlook, wellbeing and attitudes of organizational members and thus, on their total performance. It affects the behavior of the people in their ways as, defining the stimuli that confront the individual, placing constraints upon the individual's freedom of choice and providing source of reward and punishment.

MENTAL HEALTH
Mental health talks about the well-being, perceived self-potency, autonomy, competence, generational dependence and recognition of the ability to realize one's cognitive and emotional potential. It has also been defined as a state of well-being by which individuals recognize their abilities, are able to endure with the normal

stresses of life, work productively and fruitfully, and make a contribution to their communities. Mental health is about enhancing capabilities of individuals and communities and enabling them to achieve their self-determined goals. Mental health should be a concern for all of us, rather than only for those who suffer from a mental disorder. Mental health problems affect society as a whole, and not just a small, isolated segment. They are therefore a major challenge to global development. As our understanding of this mutually dependent relationship grows, it becomes ever more evident that mental health is vital to the overall well-being of individuals, societies and countries. Unfortunately, in most parts of the world, mental health and mental disorders are not taken care of anywhere the same importance as physical health. Rather, they have been hugely ignored or neglected.

JOB SATISFACTION

Job satisfaction is the feeling and view point one has towards his or her job. Employee is the back bone of every organization, without employee no work could be accomplished. So employee's satisfaction and motivation is very important. Employees will be more contended if they get what they expected, job satisfaction relates to inner happy feelings of workers. If a worker is not satisfied with work then both the quantity and quality of his output will suffer. Job-satisfaction gives happiness, proficiency and reward in one's professional-activity. A worker who is satisfied with his work is characterized by his spirit of devotion and determination for the fulfillment of the set goal.

LITERATURE REVIEW

As part of her research, Geeta (2011) compared work satisfaction in the public and private sectors. When positive beliefs and affective experiences are salient and so predominate, individuals with high or low job ambivalence may perform better on the job than those with low job ambivalence.[1]

According to a study by Ghafoor (2012), the link between demographic factors and work satisfaction among Pakistani academic staff at public and private institutions has been investigated. In this study, all public and private universities in Punjab Province, Pakistan, were investigated. Few questions to evaluate demographic factors were added to the Minnesota satisfaction questionnaire developed by Weiss and colleagues. Professors, Assistant Professors, Associate Professors, and Lecturers were included in the study. A total of 310 academic staff members were surveyed. On the basis of demographic factors, work satisfaction did not differ much. In contrast, male academic staff members were somewhat more happy. Permanent academic employees were more happy than contractual academic workers, according to a survey. A higher percentage of PhD holders reported being happier in their jobs than M.Phil., Master, and Bachelor (Hons) degree holders did.[2]

When it comes to teacher effectiveness, Babu & Kumari (2013) conducted study on organisational climate. Teachers' efficacy was examined as a result of the organization's atmosphere. There was also a look at the different sorts of environments seen in different types of educational institutions. In Koderma District of Jharkhand, a study was performed on elementary school teachers. The study included a sample of 100 instructors, 50 of whom were from private schools and the other half from public schools. Motilal Sharma's School Organizational Climate Descriptive Questionnaire (SOCDQ) was utilised to collect the data. As a result of the study, the efficacy of instructors was significantly affected by the organisational environment of the school.[3]

A study conducted by Zhang (2014) evaluated the mental health and burnout of graduating class instructors in remote mountain locations, as well as the effect of moderating variables on these outcomes. Five hundred and ninety-nine graduating teachers from elementary and secondary schools in remote mountain districts of Guangdong province in the People's Republic of China were analysed on many levels. Primary and secondary school teachers' mental health was assessed using the Symptom Checklist-90 (SCL-90), and burnout was assessed using the Chinese Maslach Burnout Inventory. The respondents' mental health and burnout levels were substantially worse than the national average used as a benchmark. There was a strong link between burnout and each of the factors in the SCL-90. For each dimension of bum out, the regression equation included all SCL-90 variables. Anxiety was the most important element in causing emotional fatigue and depersonalization.[4]

Organizational environment perception was investigated by researchers Roghaiyeh and coworkers (2015). To determine the link between gender and teachers' impression of organisational climate, as well as the influence of type of school on teachers' opinion of organisational climate, this study was undertaken. Cluster sampling was used to choose a sample of 822 instructors. The organisational climate was studied using Halpin and Croft's OCDQ (1963). Teachers' perceptions of their school's environment were significantly influenced by gender and kind of school, according to the findings.[5]

Students of Jawahar Navodaya Vidhyalaya in Haryana were studied by Kumari (2018). For the study, she utilised a descriptive survey. Teachers from 10 Haryana Nayodaya schools were selected as a sample. A questionnaire developed by M. L. Sharma, called the School Organizational Climate Description Questionnaire (SOCDQ), was used to assess the organisational climate of students at Jawahar Navodaya Vidhyalaya in Haryana State. Female and male teachers at Haryana's Jawahar Navodaya Vidhyalaya did not have significantly different organisational climates.[6]

When it comes to their perception of the school's climate and job satisfaction, Khun- inkeeree and others (2021) identify both positive and negative feedback from teachers. Using a variety of methods, including a survey method (220 instructors) and semi-structured interviews with 20 teachers, the study was conducted to find out more. Questionnaires aimed at gauging teacher work satisfaction were used. All dimensions of organisational climate (student-teacher relationships, collaboration, decision-making, educational innovation and school resources) and job satisfaction were found to be significantly related. Positive and negative feedback on organisational climate themes impacting employees' work satisfaction also revealed these aspects in the content analysis of interviews. In addition, the authors make recommendations for further research.[7]

Yahya Don and others (2021) study primary school teachers' perceptions of their happiness with their jobs and the environment in which they work. Mix-method research including quantitative and semi-structured interviews (qualitative approach). On Alor Janggus, Kedah, a sample of 220 teachers from 23 primary schools was used for this research project. Twenty teachers were interviewed in order to discover characteristics that would contribute to teacher satisfaction at work and a positive organisational climate. The semi-structured interview was analysed for themes using content analysis. Students' connections, decision-making, school infrastructure, cooperation, and instructional innovation were among the topics that arose from the semi-structured interviews. Further research suggestions are given in depth.[8]

There is an attempt to measure job satisfaction under telework settings by Petcu, M.A. and others (2021) by looking at particular factors. We constructed an opinion questionnaire and used correlation analysis and regression analysis to analyse the data. Job satisfaction in telework is related with greater skills, autonomy, and a good organisational environment, but also with a higher level of emotional weariness caused by continual access to work, as well as the lack of connections and mentorship, according to the study. In our study, we observed a statistically significant positive relationship between skills, autonomy, organisational environment, and employee job satisfaction. There were significant variations in the sense of work satisfaction based on gender and age.[9]

There is a link between perceived organisational support in schools and perceived diversity management as well as work satisfaction and organisational commitment, which Ateş,

A. & Ünal A. (2021) examined. Diverse management and work satisfaction were found to have a partly mediating effect when it came to commitment to the company. The theoretical model wasn't thrown out the window. A high-level positive direct link between variables was also reduced in significance and slowed down in magnitude. Teaching variety strengthens teachers' sense of organisational support, and a more favourable view of organisational support impacts teachers' high-level job satisfaction and commitment to the organisation. Rather than disregarding differences amongst instructors, school administrators should make an effort to manage them and use them to achieve the school's goals.[10]

SCOPE AND AIM OF THE STUDY
The scope of the present research study extends to the comparative study of teachers in schools at private and government level. To see at which level teachers are more satisfied, gets good organizational climate and are more committed to their organization. Rampur is a small city with few schools and very limited colleges availability to students. The study is primarily conducted to know the difference in job satisfaction, organizational culture and mental health among teachers at both the levels (private and government).

The idea behind the study is to know and analyze the difference between the variables that are faced by the teachers at private and government schools. There is a significant impact of job satisfaction, mental health and organizational climate on teachers outcome in schools, their teaching skills are greatly affected by all of these variables. The effect of all these variables needs to be studied because it has a direct effect on the academic outcome of students. Highly satisfied teachers are capable of delivering their highest potential to students and helping them to achieve better in life whereas teachers who are not satisfied or under stress are incapable of showing their full potential that adversely affect the academic outcome of students. Rampur is a small city with low literacy rate; students after passing their 12th find few opportunities for further studies. This study will also help understand the effect of all the above variables on teacher's performance that in return affects the academic result of students and their overall growth.

Furthermore, the perceptions of teachers regarding organizational climate and the attitude of teachers towards their mental health will also be studied. The present study would compare the level of work stress, mental health and job satisfaction of teachers working in private and government schools in Rampur (U.P).

HYPOTHESIS OF THE STUDY

- There will be a significant difference in the organizational climate among schools in private and government sector.

- There will be a significant difference in the overall mental health among teachers working in private and government schools.

- There will be significant difference in the job satisfaction among teachers working in private and government schools.

RESEARCH METHODOLOGY

For the present study descriptive method and both quantitative and qualitative approach will be used. All teachers of private and government schools of Rampur (U.P) will constitute the population of the study for the present investigation. The sample is drawn from teachers of private and government schools of Rampur (U.P). The sample of 300 teachers i.e. 150 (75 male and 75 female) from private schools and 150 (75 male and 75 female) from government were drawn using systematic sampling procedure. Only the teachers having minimum 2 years of experience in the same institute is included in the study. An individual teacher is the sample unit. The data will be collected in two ways i.e. primary data and secondary data.

DATA ANALYSIS

To make the study fruitful according to the objectives of the research, the data was collected to do the comparative analysis and to study the relationship among the variables under the study. For making the analysis easy, the researcher first organized the raw data into separate tables. Then the statistical techniques were applied to it. It is to be noted that most of the analysis was done on Excel and SPSS, whereas some of the calculations were done manually as well.

Table 1: Mean and standard deviation of the scores on Organizational Climate of the two groups of private and government school teachers and t-value for the test of the reliability of difference between the two groups

Variables	Group	N	Mean	SD	t	P
Organizational Climate	**Private School Teachers**	150	19.54	.23	-5.824	.000
	Government School Teachers	150	17.63	.23		

From table 1, it was obvious that the mean of the overall scores on Organizational Climate among the private school teachers was higher than the government school teachers. The mean score for the private school teachers was 19.54 whereas the mean score for the government school teachers was 17.63. Similarly, the standard deviation value for the private school teachers was .23 which is as same as the standard deviation value for the government school teachers. The difference in the mean scores for the two groups was 1.91 and it was found statistically significant (t = -5.824) at $p < .05$ level.

Table 2: Mean and standard deviation of the scores on Mental Health of the two groups of private and government school teachers and t-value for the test of the reliability of difference between the two groups

Variables	Group	N	Mean	SD	t	P
Mental Health	**Private School Teachers**	150	48.14	6.86	.083	.934
	Government School Teachers	150	48.21	8.55		

From table 2, it was obvious that the mean of the overall scores on Mental Health among the government school teachers was slightly higher than the private school teachers. The mean score for the private school teachers was 48.14 whereas the mean score for the government school teachers was 48.21. Similarly, the standard deviation value for the private school teachers was 6.86 and the standard deviation value for the government school teachers was 8.55. The difference in the mean scores for the two groups was very small and could not found to be statistically significant (t = .083).

Table 3: Mean and standard deviation of the scores on Job Satisfaction of the two groups of private and government school teachers and t-value for the test of the reliability of difference between the two groups

Variables	Group	N	Mean	SD	t	P
Job Satisfaction	Private School Teachers	150	90.34	7.07	-.854	.394
	Government School Teachers	150	89.66	6.70		

From table 3, it was obvious that the mean of the overall scores on Job Satisfaction among the private school teachers was slightly higher than the government school teachers. The mean score for the private school teachers was 90.34 whereas the mean score for the government school teachers was 89.66. Similarly, the standard deviation value for the private school teachers was 7.07 and the standard deviation value for the government school teachers was 6.70. The difference in the mean scores for the two groups was very small and could not found to be statistically significant (t = -.854).

Table 2: Respondents on the Basis Of Age

Age (Years)	Govt. School Teacher	Private School Teacher	Total
20-30	4	54	58
31-40	67	50	117
41-50	46	37	83
51-60	33	9	42
TOTAL	150	150	300

Figure 2.1: Gender distribution of teachers (N=300)
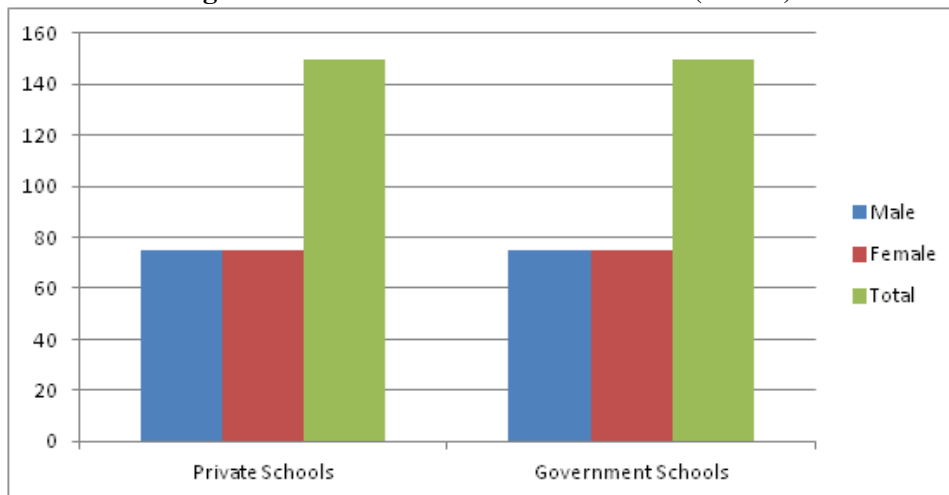
The age range of 18 years to 65 years was determined on the criteria of young adulthood (18-33), early middle adulthood (34-50), and late middle adulthood (51-65). The number of participants in the young adulthood group was 114 (38.0%). The number of middle adulthood group was 178 (59.3%). The number of participants in the late middle adulthood group was 8 (2.7%).

Figure 2.2: Age classifications of Teachers (N=300)
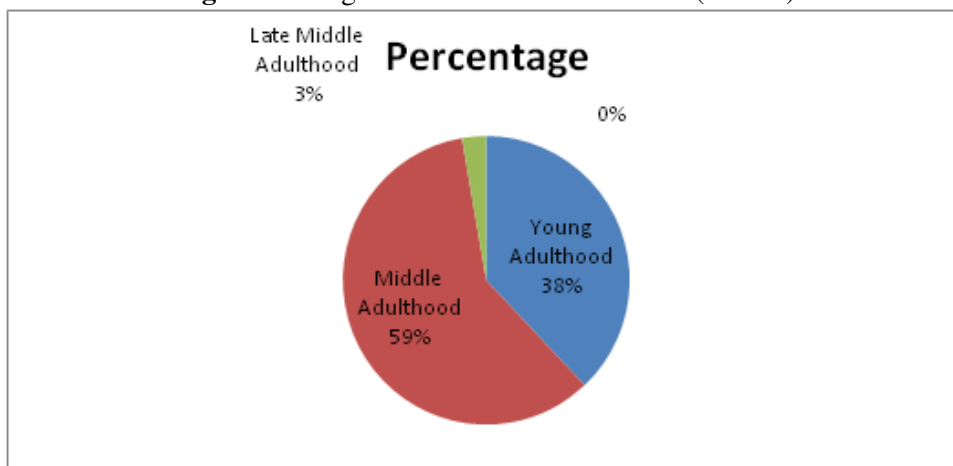
On the basis of marital status, there were 148 (49.3%) participants who were married whereas there were 152 (50.7%) participants who were unmarried. 85 male teachers were married whereas 65 male teachers were unmarried. 63 female teachers were married whereas 87 female teachers were unmarried.

Figure 2.3: Marital Status of Teachers (N=300)
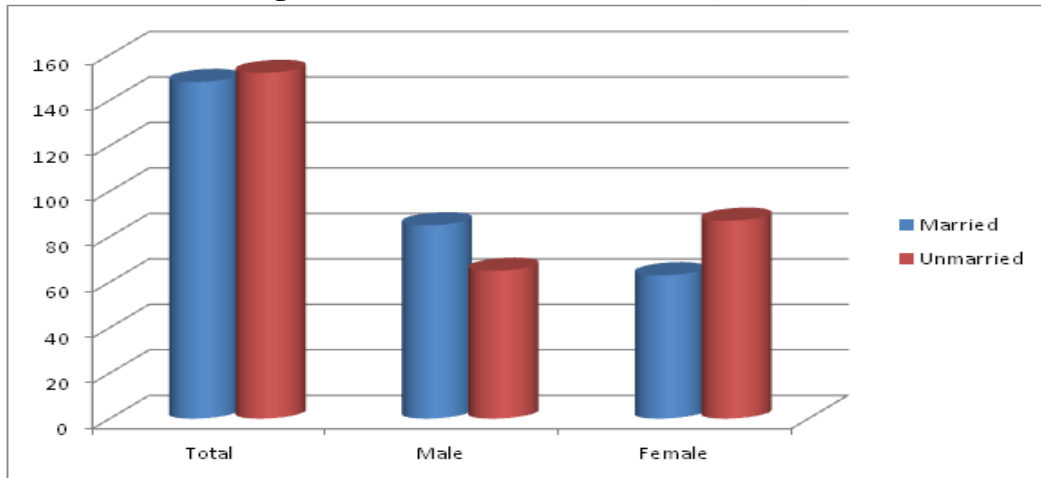
The participants were divided into five groups according to their designation, namely Head Master (53; 17.7%), PGT (57; 19.0%), TGT (29; 9.7%), Teacher (60; 20.0%), and Assistant Teacher (101; 33.7%).

Figure 2.4: Designation of Teachers (N=300)
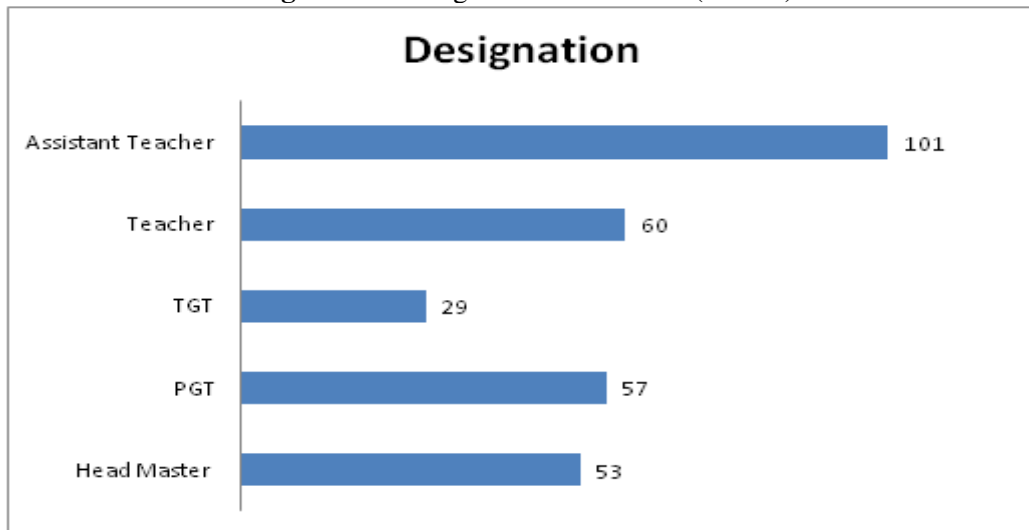
On the basis of qualification, the participants were divided into five groups: M.A./M.Ed. (116; 38.7%), M.A./B.Ed. (93; 31.0%), B.A./B.Ed. (29; 9.7%), M.A. (35; 11.7%), and B.A. (27; 9.0%).

Figure 2.5: Qualification of Teachers (N=300)
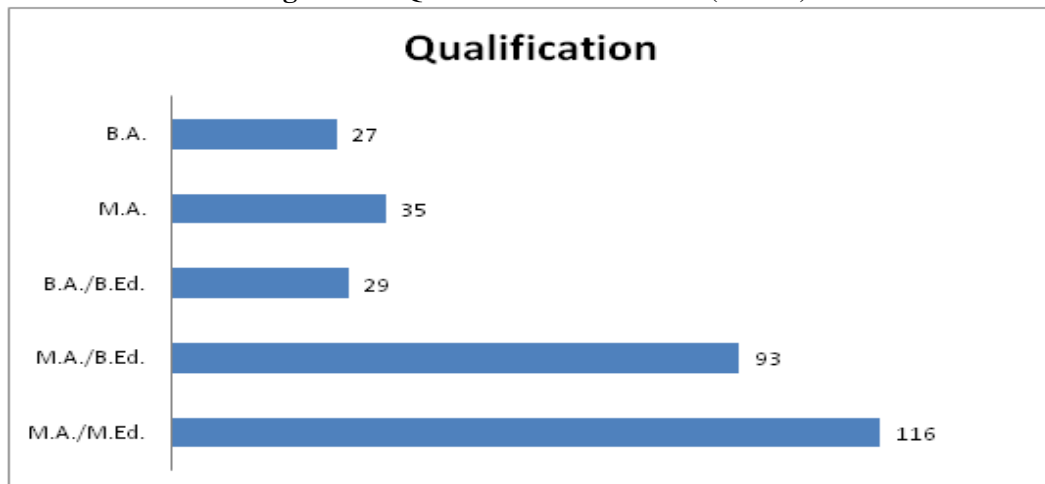
DISCUSSION

When the teachers of Government and Private school were compared on organization climate scale, it was observed that there was a significant difference between them. The teachers of private school were more satisfied with the climate of their organization than the teachers of government school. Climate of the workplace plays an important role in our professional lives. If the climate of the school is favorable teachers enjoy doing their work and they prove to be more productive. Hence, hypothesis H01 is accepted.

When the mental health of Government and Private school teachers was compared, it was found that there was not a significant difference between them. The mean score for the private school teachers was 48.14 whereas the mean score for the government school teachers was 48.21. Similarly, the standard deviation value for the private school teachers was 6.86 and the standard deviation value for the government school teachers was 8.55. The difference in the mean scores for the two groups was very small and could not found to be statistically significant (t = .083). The findings of the study revealed that the teachers of the government school and teachers of the private school were equally happy in being a part of their organization. Thus, H02 is not accepted.

When the job satisfaction level of government and private school teachers was compared, it was found that it was obvious that the mean of the overall scores on Job Satisfaction among the private school teachers was slightly higher than the government school teachers. The mean score for the private school teachers was 90.34 whereas the mean score for the government school teachers was 89.66. Similarly, the standard deviation value for the private school teachers was 7.07 and the standard deviation value for the government school teachers was 6.70. The difference in the mean scores for the two groups was very small and could not found to be statistically significant (t = -.854). The findings of the study revealed that the teachers of the government school and teachers of the private school were equally satisfied in being a part of their organization. Thus, H02 is not accepted.

CONCLUSION

There was a difference between the climate of government and private school. Private school teachers were happier with the climate of their schools as compared to the Government school teachers. Both Government school teachers and the private school teachers were found mentally happy and stable with their jobs. Both Government school teachers and Private school teachers were found satisfied with their jobs. Organizational climate and mental health of teachers were positively related to each other. There was positive correlation between organizational climate and job satisfaction of school teachers. Mental health and job satisfaction had positive relationship with each other. The study indicates that there is positive and significant relationship among organizational climate, teachers' mental health and job satisfaction. If the climate/ environment of the organization is good teachers would be more satisfied with their jobs. So the schools should try to create Congenial environment so that the teachers can work freely and happily and give their best to the school. The mental health and job satisfaction of teachers is directly related to the performance and academic achievement of the students. Therefore, Private school should take care of salary packages and incentives with long term work agreement with the Private Teachers so that they find their future secured and work freely.

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ASSAM, INDIA AND A FORGOTTEN THAI CONNECT

Banasree Phukan

Assistant Professor of History, Pandu College, Guwahati- 781012, Assam

ABSTRACT

A long standing grievance of the people of Assam has been its felt exclusion from historical narratives originating outside Assam. Even after half a century of the Indian republic, the history of Assam finds only token mention in India's academic curriculum, especially higher education. Despite Assam's manifold importance, generations in India have come and gone without knowing this part of the country. This ignorance is blamed for perceived bias and discrimination against the people of Assam when they travel to other parts of India.

It has taken a certain historical period, and collective consciousness, and even unsavoury events as the starting point for rectifying this anomaly. This paper aims to reviews ongoing efforts to address the issue. It includes the views of government, educational authorities, recent collaborative initiatives, and recognition.

Keywords: Assam, History, India, Education, North East India

INTRODUCTION

A long standing grievance of the people of Assam has been its felt exclusion from the National narrative of the History of India (Baruah 3). Even after half a century of the Indian republic, the history of Assam finds only token mention in India's academic curriculum, especially higher education, and, until quite recently, schools. Despite Assam's manifold importance, generations in India have come and gone without knowing this part of the country. In our times of ever increasing interaction, this ignorance has been identified as a major cause of perceived bias and discrimination against the people of Assam when they travel to other parts of India.

Contemporary Assam is grappling with issues of identity, rights of indigenous peoples, migration, economy, and so forth that have bred insurgency and conflicts, often violent. Issues of identity were starkly reflected in the ethnic conflict in Assam in 2012, and the subsequent exodus of young working people of Assam from cities like Bangalore, Pune, Mumbai and Delhi. In large swathes of India, the Northeast in general, Assam included, is looked at as the 'other'. Overall, negative connotations abound. It has taken a certain historical period, and collective consciousness, and even unsavoury events as the starting point for rectifying this anomaly. In order to overcome such barriers to National integration, it is important to understand Assam and its place in modern India.

AIM

1. To briefly outline the historical relationship of Assam and India
2. To study the representation of Assam History in the Academic curriculum of India
3. To review ongoing efforts to address perceived shortcomings

METHODOLOGY

1. Review of the syllabus for History as per the Official websites of the select Boards and organizations responsible for the Academic curriculum of India at School (upto Class XII), Undergraduate and Post graduate levels:

a) Central Board of Secondary Education (CBSE, www.cbse.nic.in)

b) National Council of Education Research and Training (NCERT, www.ncert.nic.in)

c) Delhi University (www.du.ac*)*

d) Gauhati University (www.gauhati.ac.in) as representative of 8 Universities from Assam, viz., including two central universities, one open, and two private.

e) Indian Council of Historical Research (ICHR, ichr.ac.in)

f) Union Ministry of Human Resource Development (HRD, mhrd.gov.in*)*

g) University Grants Commission (www.ugc.ac.in*)*

h) Board of Secondary Education Assam (www.seba.net.in)

2. Review the literature on the relations of Assam and India, based on secondary sources such as books, journals and websites, internet discussion fora, social media

3. Views of stakeholders in the Academic curriculum, namely, the Government educational authorities, educationists, and stakeholders including civil society

OBSERVATIONS

In respect of the academic curriculum, the following observations are pertinent:

1. The Human Resource Development ministry is responsible for the syllabus making in India.

2. As a matter of policy, educational bodies of India agree that Northeast India be properly represented in the academic curriculum.

3. The Shri S.P Shukla Commission Report (1997) titled "Transforming: The Northeast" is an often quoted Government report. It states, "The Indian Council of Social Science Research (ICSSR) and Indian Council of Historical Research (ICHR) should support, undertake, expedite or strengthen research into and the writing of Northeast history texts for different levels of learning and scholarship." However, implementation in the National Curriculum is still awaited.

4. In the UPSC CSE Mains History Syllabus for 2014-15, the only mention is 'Ahom Kingdom' in the context of Mughal Empire in the Seventeenth century (Paper-I, Point No. 21).

5. The ICHR is an autonomous body created in 1972. For the first time, it acknowledged the study of oral history (Imphal, 2012). It has started work on documenting the history of Northeast India, including oral (Vansina 10).

6. In Delhi, a student studying History for five years at the BA and MA levels would not find a single chapter on the history of Assam.

7. The NCERT/CBSE textbooks on History for Classes X, XI, XII, where several chapters on Assam and its peoples (e.g. Ahom etc.) have been incorporated in the edition of 2013.

8. Gauhati University (www.gauhati.ac.in) is one of 8 Universities from Assam. Its history syllabus has chapters on 'History of Assam' and 'History of India', both at undergraduate and postgraduate levels.

9. Formation of The North East India Resource group

10. Most recently, the celebration of 400th anniversary of Ahom general Lachit Borphukan in Delhi in November 2022.

A brief contextual overview of Assam is constructed from primary and secondary sources. Assam covers 2.4% of the country's total geographical area. As per Census 2011 (censusindia.gov.in), it is home to 2.57% of India's 1.2 billion population. Its literacy rate (73.18 %) is at par with the National average of 74.04 %. Its rural population at 87 % of the total population is much higher than the All-India average (72 %). It is listed as the 7th most backward state as per the Raghuram Panel, 2013.

The history of Assam prior to 12 century AD (Pre-Ahom) is sketchy, but the earliest historical records of Assam date back to about the 4th century AD. Its former names, Pragjyotishpura and Kamarupa, find mention in the Epics and Puranas, the works of Kalidasa, Banabhatta, the great Chinese traveler, Hiuen Tsang, who visited Assam in the 7th century; and the Allahabad inscription dated to the 7th century AD. Ongoing archaeological works have unearthened more inscriptions and remains of architecture and sculpture of Hindu Gods and Goddesses at Doyang Dhansiri and Ambari, datable to the Pre Ahom period (Lahiri 8).

The etymology of 'Assam' itself is recent and traced to the Ahoms. The Ahom period (1228-1826) is remarkable for several reasons, notably, its sheer duration, record keeping, and political unification of Assam (Gait 7). The Ahoms ruled medieval Assam for six long uninterrupted centuries from 1228-1826 AD. Its record keeping, in the form of royal chronicles, called *Buranjis,* stands unique in medieval Indian history. They record the reigns of the Ahom kings, including foreign relations with Tripura, Manipur, and also the Mughals and the British. They are several in number and compiled over several centuries. In several instances, they corroborate alternate, such as Persian, versions of contemporary affairs (Barpujari 2). Buranjis are among the most important *Primary references* for historical studies today.

Written on sachipat, some of the Buranjis were lost, damaged or destroyed, while others were preserved in the Assam State Archives, Guwahati, some at the National Archives, Delhi, and some still remain in the archives of private individuals.

From ancient times, Assam has seen migration and fusion of races and cultures, including Mongoloids, Aryans, Dravidians, etc. thus making up the greater Assamese people. Over centuries, there evolved in Assam new forms of beliefs and customs unlike any orthodoxy. The Kamakhya temple has drawn the faithful from across India for over a millennium. The Neo-Vaishnavite religious revival in fifteenth and sixteenth century Assam

provided the cultural unification of medieval Assam. It laid the foundations of modern Assamese society, culture, language and literature. Its founder, Mahapurusha Sri Sankaradeva made two pilgrimages to Puri. Various 'Charit-Puthis' (biographies of religious leaders) and accounts of religious institutions like the Suttras provide insight into the political and social conditions of the times. Neo-Vaishnavism continues to flourish today.

The Persian chronicle, The 'Baharistan-i-Ghaybi' of Alauddin Isfahani, alias Mirza Nathan, a Mughal General (1605-1636) is a early eyewitness account of an outsider. But arguably the most important comprehensive account of an outsider on the conditions of medieval Assam is the Tarikh-e-Asham (1662-63), since translated into several languages, including English and French. The first European impression, in the form of a map, is credited to Glanius, a Dutch Mercenary (1662-63) with the Mughal forces.

It was also during this period of Ahom-Mughal conflicts, some 350 years back, that the psyche of regarding as 'Others', on part of both Indians and Assamese is on record (Acharya 1). The 'Tarikh-e-Asham' makes disparaging references on the people of 'Asham' (Talesh 12). The Ahoms referred to the Mughal invaders as 'Bangalis. It must be noted that the Ahom kingdom repeatedly repelled Mughal invasions, setting the territorial limit to the East of the Mughal empire, a fact that has only recently been belatedly recognized in mainstream Indian history. Assam's potential as a strategic frontier, and gateway to Tibet and China is on record in Mughal chronicles (1663), and also the initial years of colonial rule (1835).

The Colonial period (1826-1947) saw the transition from the Medieval to the Modern. Nearly all spheres comprising education, healthcare, industry, communication, administration, commerce, growth of vernacular language, religion, migration, demographic shift etc. underwent far reaching transformation. Anthropology and historical studies made strides with the establishment of The Department of Ethnography in 1894 (Verrier 10). Edward Gait is credited for 'History of Assam'. First published in 1906, it remains a standard textbook of History in Higher Education of Assam. The Kamarupa Anusandhan Samity (Assam Research Society) was established at Gauhati in 1912. In 1928, the Department of Historical and Antiquarian Studies (DHAS) was set up; it continues to function from its Guwahati office today.

Thus Assam's history is not isolated; historically, it has maintained important links with the rest of India in terms of language, religion, culture, and architecture (Saikia 11). As a province, pre-colonial Assam, i.e. prior to 1826, was independent of the rest of India. During the freedom movement, and thereafter, Assam became inextricably associated with India as a nation, separatist voices in the post independence period notwithstanding (Bhaumik 5).

In the 17th Century CE, Ahom scholars had made a trip to Thailand. In 2009, Princess of Thailand Maha Chakri Sirindhorn paid a three day visit to Assam. She visited Namphake village of the Tai Phake community in Dibrugarh district and interacted with villagers in Tai language. She also visited Patsako village of the Tai-Ahom community and the Ahom ere monuments in Sivasagar district.

Most recently, in November 2022, the 400th anniversary of Ahom general Lachit Borphukan was celebrated with a three day program in Delhi, thus marking an important milestone in the recognition of Assam in India's identity.

Current views on writing History for the Academic curriculum
In 2012, the Chairman, ICHR, had cautioned '"History is not a battle-field where people say his history is right and others are wrong". The aim of ICHR is not to solve current problems but to seek an understanding that needs basic requirements such as "Evidence".'

NCERT laid guidelines for syllabus from Class VII to Class XII. Its view is to project every state of India in the national curriculum, and admits that inclusion of Northeast is insufficient and more content may be included. There can be local variations and usually this amounts to less than 30 percent teaching of history in so called "Social Sciences". However, the National curriculum was just an advisory curriculum, its development is continuous, and aims to connect life outside the school with the syllabus to develop a critical understanding of society through debate and discussion. Textbooks were a resource and that the teacher was the agent for each learner. The National Book Trust (NBT), which has one of its two centers in the Northeast India at Guwahati, Assam has offered to publish more books on Northeast India (Nepram 9).

The Central Board of Secondary Education deals with the evaluation of the students upto Standard XII. Its views were summed up by Shri Vineet Joshi, Chairman, CBSE in 2013. To quote, 'the local environment influences the children's education and that environment changes from region to region and also the learning experience was influenced by how much the teacher and curriculum were able to connect with the local

community. Through CCE (Continuous and Comprehensive Evaluation), CBSE tries to give flexibility to the local schools to use local means to teach a basic foundation of education.' However, the question papers set for evaluation were the same to ensure a common benchmark for the nation.

History that is taught in a formal syllabus should have passed critical scrutiny, surveillance and supervision. Ideally, history writing has to be accurate, not manipulated, falsified or misleading. In practice, history writing is never free from omission, mistranslation, misinterpretation and misrepresentation. It can be contested for authenticity.

In Assam, SEBA is responsible for the syllabi for Classes IX and X. In 2010, SEBA decided to implement a redesigned version of NCERT syllabus for Assam, while emphasizing Assam's culture, heritage and history. Concern was voiced that it would introduce an alien culture in school education, and that future generation in Assam would be totally in the dark about the culture and history of Assam. The Cotton College Retired Teachers' Forum had even threatened to move Gauhati High Court on this count. Another instance is the efforts of the NDA government to alter the narrative on the Nation's history in 1999-2004, and the subsequent 'detoxification' moves of UPA-I (2004).

CURRENT INITIATIVES

Assam's quest for recognition in Academic curriculum is echoed around the North East. In the most recent initiative in May 2013, the collective efforts of civil society groups and Government bodies brought to fruition a conference on the theme "Weaving History of Northeast India Conclave Series-3: Including Histories of Northeast India in National Curriculum" at Delhi. Among the resolutions adopted was the Formation of a Northeast India Resource Group… to continue work on the issue of ensuring inclusion of Northeast India history in National Curriculum. To this end, Government bodies including NCERT, CBSE, NBT, ICHR have pledged collaboration in ensuring proper representation of those who are not documented at all (Nepram 9).

However, several issues arise. What are the requirements of writing history? Who will narrate, reliably? What will be included? How will contestations be addressed?

Documentation is the key. Proper collaborations are needed to provide the required balance, content, and sustainability. The usual practice is to constitute an expert group of qualified people, having due representation, to ensure credibility.

The history of modern Assam includes 'outsiders' too, including illegal migrants, with their own histories, at times in positions to influence decision making such as through the legislative assembly. An interesting anecdote suffices. The question on 'Nationality' was asked in 1872 census and after that it appeared only in 1951 and 1961 Censuses. The major criterion of nationality was ethnic origin and not citizenship. In 1971 the question was dropped and has not been raised since. The dates 1951 and 1971 are vitally important in writing modern Assam history; one of them would be the cut-off date to detect and deport illegal migrants from Assam, an issue with International ramifications with a Supreme Court of India ruling of 2005.

Oddly, in contrast to the extensive record keeping of the Ahoms, the numerous other ethnic groups of Assam, many of whom predate the Ahoms, did not, and still do not, have a written script, and instead relied on oral history that was handed down in the form of traditions, stories and lullabies. For example, the Deori Scheduled Tribe of Assam could conceptualize the first historical writing on the Deori community only in June 2013. To do this, Deoris have adopted the Assamese script. The subaltern perspective was summed up thus 'We shall trace our own history in our own indigenous ways.' Considering that it takes time to understand the local language and transliterate, a preponderance of oral history can be a major barrier to a narrative. Especially a "grand narrative" for the Northeastern region, as articulated at a meeting in New Delhi in 2013, by Shri B.G. Verghese, Renowned Magsaysay Awardee. Even in academia, ignorant is discernable, as gleamed from personal experience, that the history of the Northeast is meant for the people of the Northeast only. However, the current research environ in Assam is better than before when Assam had been a sensitive area, files were marked classified, and to access files after 1920s needed permission of Home Department.

DISCUSSION

In the United States of America, it is permitted to have informed, dispassionate infusion of different and antagonistic perspectives in classrooms on difficult historical topics such as the near extermination of original inhabitants by people of European origin, slave trade, slavery, racism etc. It is held that such interactions have gradually led to greater integration of different sections of society. A requirement is that teachers should have access to multiple perspectives strategy of curriculum and instruction (Fisher 6).

For India's 'Look East' policy to materialize, the north east must be understood and incorporated (Bhalla and Verma 4). As it stands, a University history student in the National capital remains unacquainted with an entire region comprising 7 states, whereas for the same University student from the said region, the curriculum is more inclusive. Does it qualify as subaltern or 4th world ? It is necessary to correct any such anomaly; the discernable shift at the School level is welcome.

CONCLUSION

The case of Assam shows how perspectives have struggled to find expression. Given the importance of education, the academic curriculum in India should be inclusive and egalitarian, so that feelings of exclusion or misrepresentation are addressed. It is hoped that the beginning made in 2013 will be sustained with the collective efforts of all stakeholders.

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FOOT NOTES

1. Fragmented Memories, Yasmin Saikia

2. The Tai-Ahoms are a Mongolian race who entered Assam from the north-east in the thirteenth century. Presently, they are a numerically small group, some of whom are mobilising for autonomy and Scheduled Tribe status.

3. Gait lists 6 buranjis in Ahom and 11 in Assamese.

THE GENESIS OF STARTUPS IN INDIA

Mrs. Usha Philemon Oomman[1] and Dr. Aarti Sukheja[2]
[1]Research Scholar, Pillai College of Arts, Commerce & Science, New Panvel- 410 206
[2]Associate Professor & Research Guide, Pillai College of Arts, Commerce & Science, New Panvel- 410 206

ABSTRACT
Entrepreneurship is as old as India's tradition and culture. Indian Startups, have received international recognition in recent times. The number of startups has gone up and are important drivers of growth and employment. Through creative and advance technology, startups provide practical methods, and thereby are considered as engines of socio-economic development and change. Startups have been established rapidly during the last twenty years in the country. Startups were established by the turn of this century, and the startup environment was in its infant stage back then, as there were hardly any financers and the number of support schemes and policies were almost non-existent. Though, several startups have failed since then, the last ten years has seen an extraordinary rise in startups as more support has become available from all quarters. This paper titled "The Genesis of Startups in India" is an attempt to trace the history of the origins of startups in the country and also track the path of change leading to the current scenario in the startup ecosystem in the economy.

Keywords: Startups, entrepreneurs, scalable, innovation, investment technology.

1. INTRODUCTION
The present work culture is changing to becoming less systematic. "Casual Fridays" have re-modelled into "relaxed days " in various offices, a trend that started in the startup environment. A startup is any organization with a casual, fun and agreeable work environment. The startup-culture frame of mind has gone a long way past Silicon Valley tech firms and into large companies. Today, companies like Amazon and MasterCard offer their staff packages like informal clothing regulations, stress free workplaces, recreational facilities, and the like. Employers like these believe that the "cool office" concept enhances productivity and efficiency as the staff can concentrate on performance rather than on rules, regulations and customs.

Startup refers to a business in the initial phase of doing business. Startups are established solely or in partnership to produce goods or services that challenge the market. These companies start with rising costs and falling revenues, which is the reason they seek capital from a variety of sources. Startup founders try to raise money by selling ideas even before the company is founded. The main funding sources are through family, friends, venture capitalists, crowdfunding and loans. Startups are formed with an exit strategy. They are prepared well in advance with the goal of selling the company to larger corporations. Some startup founders are serial entrepreneurs. They come up with a startup idea, work diligently to make it happen and then let someone else to manage it so that they can focus on establishing new startup projects.

2. OBJECTIVES
The objectives are:

(a) To define startups

(b) To discuss the types of startups

(c) To discuss in brief the origins of startups in India

(d) To throw light on the future of startups in India.

3. DEFINITION OF STARTUPS
According to Adam D' Augelli, a company remains a startup till it has the right product/market fit and starts to grow.

Eric Ries defines a startup as a group of individuals trying to produce and distribute a new good or servicein the midst of adversities.

According to Forbes, Startups are new businesses established to create a specific good or service and foster a permanent clientele for it. These are businesses involved in continuous research, introduce modifications or the manufacture of a new one to change the perspective of doing business and be named as a disruptor.

According to Katariina Helaniemi, Annaleena Kuronen and Venla Väkeväinen: "a young company that is still searching for their business model and is aiming for high growth. Startups are usually creating a new type of service or product, aimed at solving a problem."

Steve Blank states "temporary organization designed to search for a repeatable and scalable business model", based on an existing model.

According to the US Startup Companies Law and Legal Definition, A startup is a new business with no previous history. Startups are companies involved in experimenting with markets and may include life-style companies. A startup in its initial years are marked by risk, uncertainity and poor funding. Large startups attract funds, achieve faster growth and purchse options.

The GOI defines Startup as:

- A company in its first ten years of incorporation/ registration in India.

- The company's turnover for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees.

- The business is involved in research, development or modernization or if it is a scalable business model with the capability of employment generation or asset formation.

A company created from an already existing business will not be considered as a startup.

A company will not be considered as a startup after ten years of its registration or if its turnover for any previous year exceeds one hundred crore rupees.

4. Types of startups

A detailed review of available literature has discussed six main types of startups for different types of entrepreneurs based on their abilities, goals and desires.

(a) Lifestyle Startups: are companies that grow out of the interests and passions of its establishers. This type of startup permits the founders to undertake activities they like and earn an income.

(b) Small Business Startups: these are companies founded with intense passion to do something on their own with no strategy for future growth and scalability. The main goal of the founders of such startups is to become financially sound.

(c) Scalable startups: these are growth-oriented companies that adopt ideas and concepts to grow their business rapidly and maximise profits as quickly as possible. This category of startup involves in rigorous market research to capitalize on market opportunities.

(d) Social Startups: these are companies established to influence the environment their work in. These startups other than, non-profit organisations, make revenue by selling their concept of bringing positive change in society.

(e) Large Company Startups: these are set up by large corporations to launch a new product or reach new audiences with the financial backing of these large corporations.

(f) Buyable startups: are startups founded with the sole aim of being sold or purchased in future and with no plans of establishing themselves in the market for a long time.

5. History of Startups

Startups are the most intriguing kind of businesses because they provide an outstanding chance for international impact and development—an opportunity that many people may fantasise about for a very long time. One of the best methods to implement ideas quickly and globally is through startups. Before delving deeply into startup entrepreneurship in India, it seems important to talk about the history of the startup industry as a whole. If a startup is defined as a highly scalable tech company that aims for quick expansion, then Edison General Electric Company (now GE), could be viewed as one of the earliest startups when considering business growth history. That company's growth and arduous road to success is comparable to a typical startup experience. Even a company like Nokia may be considered as a startup in their initial years of existence.

Startups are frequently linked to Silicon Valley of the 1970s.In a magazine called Electronic News in 1971, the term "Silicon Valley" was first used to describe semiconductor manufacturing units of that area (silicon was the primary component). In the 1980s, Palo Alto, Cupertino, Sunnyvale, and Mountain View were all included in the region known as Silicon Valley.

The dot.com revolution began towards the end of the 90's. Unmatched levels of trust in technology and the internet's ability to alter global perspectives emerged. Netscape and Amazon reiterated that domain registration expertise was necessary for success. This revolution too collapsed in the recent decades worldwide. However, the faith in technology and the internet persisted.

The startup community grew, improved, and even sped up their pace of growth after the burst of the dot.com bubble. Twenty years ago, there were no major organisations like Facebook, Uber, Airbnb, Tesla, LinkedIn, or Dropbox. Google too is just 21 years old. The internet and today's technologies have opened up enormous scope and provided businesses with the opportunity for swift expansion. Most of the above companies have grown in terms of capital and revenue in a a very short span of time. These businesses have brought significant changes globally. Facebook, the largest social media company in the world, does not employ content creators. Airbnb does not possess hotels. Uber, do not have their own taxis. Technology companies have restructured and revolutionized traditional businesses.

The Indian Story

Entrepreneurship and trade in India are centuries old. The nation's startup atmosphere is based on three eras of business progression – Information Technology (IT), consumerism and innovation.

Information Technology Era: this era was able to function to some extent only from the eighties. Most of the owners of these companies had been to the best business schools in America and returned only to set up IT companies which served as incubators for entrepreneurs. Most of these companies were self-funded and specialized on IT services in this era. Due to better incomes the Indian middle class could afford a better standard of living and demand better services in the market.

The Consumerism Era: This period raised the purchasing power of the common man in the country. The last decade led to the development of various business models. The New Economic Policy of the government and the accessibility to funds increased consumption home appliances, smartphones and the use of internet. This period also led to the emergence of e-commerce, retailing through super-markets and hyper-markets, marketplaces, tech guided delivery systems and management of the most difficult aspects of business. Many domestic unicorn companies (like Ola, Zomato, Swiggy, PayTM and many more) came into existence during this phase of entrepreneurship in India.

The Innovation era: The current era in the country has two strong features — B2B models and deep-tech, IP-driven innovation. The accelaration of IT businesses and the demand-driven startups, along with the desire for existing businesses to participate has generated scope for new products and solutions. The rise for B2B models from international traders has become a point of inflection for these new startups and leading the way for other new B2B startups. The advantages from the earlier two periods have given results. Other than the existing successful companies, the upcoming startups in the country are varied, robust and much more. Some of these startups include Grey Orange Robotics, Medgenome, Blackbuck, Bankbazaar, Uniphore, etc. The environment in the country is moving towards B2B models that have deep-tech and IP-driven innovation.

6. THE PATH FOREWARD

India now boasts of having more than 300 incubators and accelerators and approximately 30,000 active startups, based on the accomplishments of the previous three eras and the Government's commitment to digitization. Even though there are numerous obstacles, many startups today are following the Israeli technique of focussing on establishing international connection and large clientele for scaling up after developing, testing, and achieving sufficient market share, which is cheaper in India than in other countries. In 2018, India's tech startups received around 4 billion U. S. dollars in venture capital funding, indicating the growth that is anticipated in the near future. The ecosystem's expansion is further accelerated by more than 50 policies implemented by the federal and state governments, as well as the recent emphasis placed on improving business accessibility and technological infrastructure.

At the moment, it is evident that startups employ AI and machine learning to develop sector-spanning solutions. The IndiaStack, IoT, and blockchain are also finding new applications. It may be noted that startups are of international origin, create global solutions, and employ cutting-edge technology to attend India's deep and intricate issues of financial inclusion and employment. The global path for startups is positive and India is taking advantage of this scenario.

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REBUILDING THE WORLD THROUGH WORLD BANK AND IMF

Haya Fayaz, Abirami Narendrakumar, Nandana Surendran, Ananya B and Annadi Lekya
Students, Department of Commerce, Faculty of Science & Humanities, SRM Institute of Science & Technology, Kattankulathur

ABSTRACT
Almost in the mid-20th century, came into Global existence the 2 establishments that indeed proved that saviors do exist on Earth, literally. This paper drives insight into how each of these: the World Bank and International Monetary Fund(or IMF) have played a fundamental role in helping countries to fight the pandemic and come out stronger and likewise provide protection to millions of women and children who had lost the ability to take care of themselves. It also gives an overview of the quota system of the IMF, and some of the emergency credit solutions that the IMF aids through, for both the post-pandemic economic situation and the Ukraine-Russia War.

Keywords: World Bank, IMF, post-pandemic

WORLD BANK
As always known, World Bank is an internationally funded organization, that finances capital projects supporting mainly global causes, for example, one of the important roles that it took at the time of saving the Indian Economy back in 1991. After a series of heated negotiations at the Bretton Woods Conference, between the US treasury representative, i.e, Herry Dexter White, and Keynes who was the UK representative, International Bank for Reconstruction and Development a.k.a the World Bank and International Monetary Fund was formulated. Both fundamentally important institutions are just across the street, from each other, in Washington, while also having a different set of responsibilities. While World Bank has mainly concentrated on poverty reductions and developing the economy of developing countries, the IMF has always maintained its stance in context to stabilizing the economy and rather focusing on their member countries' economic policies, even providing "assistance" for the low-income countries who have cleared the threshold of being classified as "low income" as per International Development Associations' limit. Lately, both of the organizations have contributed to the post-COVID-19 pandemic economic situation and the Ukraine war, details of which will be discussed below. World Bank consists of 189 member countries, with each country having its finance minister or the head of their Central Bank as part of its Board of Governors.

Divisions and Their Contributions during the COVID-19 Pandemic
World Bank is not just summed up to one organization alone, it initially started with 2 divisions-1 being International Bank for Reconstruction and Development (IBRD), and the second International Development Association. Thereafter, International Finance Corporation(IFC,1956), Multilateral Investment Guarantee Agency (MIGA,1988), and International Centre for Settlement Disputes(ICSID,1966) were formulated, thus leading to a World Bank "Group" of Organizations.

International Finance Corporation's responsibilities are all associated with the private sector development in underdeveloped, partially developed, and developing countries. Right from eradicating inaccessibility to various International Financial markets and competitive markets, to removing the problems of unemployment and providing microfinance for the MSMEs. They have been established as an autonomous organization legally and financially. Lately, post-COVID-19 pandemic effects, this organization has contributed about $8 Billion out of the $14 Billion package available from the World Bank Group for the revival of small and medium-sized enterprises along with the restoration of jobs for many in the private sector. These are basically for the countries which are vulnerable and thus have a risky economic environment like that of Nigeria, Bangladesh, Cerba Lancet Africa, and more like these which lacked facilities to tackle the pandemic.

The Multilateral Investment Guarantee Agency (MIGA) was formulated for the purpose of providing insurance for the protection of those investments which are affected by political or non-commercial risks. And in such a scenario like the pandemic where obviously, the investments in vulnerable countries are not safe, the MIGA is there to provide guarantees in the form of fast-track financing where $ 5 billion and $6.5 billion have been allotted for emerging and developing economies and for the protection of investors and lenders respectively. The other risks for which it also provides insurance are the outbreak of war, political conflicts between 2 countries, foreign exchange restrictions, and the restriction on the company's assets and spending.

In Uganda, the IFC ensured accessibility for all patients throughout the public by providing a $ 4 million loan to the largest private hospital and 17 other clinics, referred to as the International Medical Group collectively. For

the Sub-Saharan Africa region, with the help of other investors, it enabled the availability of qualitative diagnostic centers to the public for the earliest possible detection of COVID-19 in highly fragile areas during the pandemic.

Right from the funding provided through IFC, to the smooth supply chain and manufacturing facilities for the vaccines to ensuring that all the developing countries gain access to at least about 1 billion vaccine doses right from 2021, the Task Force as part of the World Bank has contributed through all of it. At the same time, this organization also ensures that all of the advocacy part, right from signing off contractual bilateral and multilateral agreements to smooth coordination of the entire supply chain process on a timely basis, takes place. Not to forget, the Task Force manages to keep updated data about the delivery of diagnostics and therapeutics services along with provisions of vaccines to people across countries.

Contribution to Women's Empowerment during the COVID-19 Pandemic

World Bank has over the years always been providing assistance for women's empowerment in various countries like that in Africa, India, Bangladesh, and more, where gender biases have been high. World Bank has previously provided funding for initiatives that were applied in Africa, like that of online mobile services provision so that women can easily gain access to mobile transfers or cash transfers, thereby getting control of cash in their hands, access to mobile phones for every female in the agricultural household in order to directly receive the communication about any trade activity, provided the messaging services are at a reasonable cost, having workshops and action plans signed by husbands to ensure the wives are having the autonomy of decision making in most of the trading contracts. These are the initiatives that the World Bank has contributed to once again for the rest of the world, especially after the higher reported cases of domestic violence.

World Bank and IMF's Support towards Ukraine

Before the war took place, Ukraine had a developing economy that had hardly around 2 % of poverty, and a high amount of debt sustainability for which it was considered worthy enough to provide financial assistance by both the World Bank and IMF. It kept taking a series of measures: right from formulating government policies to eradicating corruption to ensuring Central Bank independence and coverage of the costs of resolutions of failed banks, and finally, maintaining a stabilized foreign exchange rate. Just as it was recovering from the post-COVID-19 situation successfully with the help of IMF's Standby Arrangements, approved back in 2018, the Russian invasion took place. Now World Bank, which had financed over 90 capital projects in Ukraine right since it joined its organization back in 1992, has helped raise funds through Bilateral agreements with countries like the Netherlands, Sweden, the UK, Denmark, Iceland, Austria, the US, Latvia, and more and help raised 12.479 billion to date out of which 11.4 billion dollars have been respectively forwarded to Ukraine. Components of these bilateral arrangements include guarantees, parallel budget support from Japan, grant financing to PEACE and FREE fund respectively, and World bank loans amounting to $686 million.

The IMF also has been closely working with Ukraine over their economic policies including the 2023 Budget, besides the existing "Extended Credit Facility" provided as part of COVID-19 assistance. In addition, it has disbursed 1.4 Billion dollars as part of emergency financing at the start of the war itself, simultaneously also having managed to mobilize about $2.2 billion from Canada and Germany respectively through their "administered account" for donor countries.

International Monetary Fund

Of course, when talking about the World Bank, there also has to be a mention of the International Monetary Fund organization which just lies across the street from it. That being said, the main objectives for which it was formulated were to oversee the foreign exchange rates and stabilize the global foreign exchange rate systems to ensure that the economies are not adversely affected by the volatility of these systems. As a result, initially, it was decided that the US dollar should be plugged against the price of the commodities like gold, but gradually the then US President, Nixon, decided to do it otherwise, which meant that there was a change in the responsibilities that the World Bank and IMF would be performing. The World Bank then went on to develop into several more divisions as named above and not just limited its responsibilities to providing assistance to the European countries hit severely by the Economic depression caused by World War II but also spread out help to the private sector in many ways. In the context of COVID-19 and other disasters, it has provided emergency financing to various countries based on the impact that the pandemic had on them.

The Quota System- In Brief

In order to be a member of the IMF, the countries must pay a subscription which will be determined based on their economic size and position proportionate to the world economy, 25 % of which must be in foreign currencies which are acceptable to IMF, namely the US $, the Japanese Yen, the euro, UK sterling, Chinese

Renminbi so that reserves of "foreign currency" are also maintained. These countries have voting rights in matters where the Executive Board of the IMF wants to take up a formal approach- and each of the voting rights consists of basic voting share and quota-based votes. For countries that are poverty-driven and are categorized as low-income according to International Development Association's threshold, the IMF has provided triple the basic voting shares that they previously had, in order to voice their opinion and hand over to them the voting power just like other member countries. The reforms of quota subscriptions keep taking place almost every 2 years at a minimum in order to address changes in the economic size and position of the member countries. The quota subscriptions determine the amount of funding each of the countries can gain access to from the IMF.

IMF quota formula

$$(0.50 * GDP + 0.30 * Openness + 0.15 * Variability + 0.05 * Reserves)^{COMPRESSION\ FACTOR}$$

Compression Factor: used for compressing the member countries' quotas so they are aligned with each other.

Type of Emergency Financing for Various Countries during the COVID-19 Pandemic
As we know, countries all over the world have been provided with various kinds of emergency financing and debt service relief funded using Catastrophe Containment and Relief Trust. This trust is mainly for providing for unexpected changes in the Balance of Payments caused by disasters, one of them being pandemics. It cannot be provided for financing debt needs of the IMF's low-income countries caused by reasons other than disasters. Provided, to secure funding from this trust, the member countries must take actions to ensure resources to deal with COVID-19 are available to all and information about this is transparent enough to be known to all. At the same time, the main criteria behind the funding are "debt sustainability", i.e, only if IMF receives evidence that the member country is taking sufficient measures to repay or restructure the debt, then loans will be provided from the Relief Trust.

The Rapid Credit Facility is one such fund that provides Low-income countries(LICs) with credit for rather a short-term fiscal deficit at times of emergencies, with concessional interest rates (i.e 0 % rate). A member country must qualify for the Poverty Reduction and Growth Facility (PRGF) first. Many Asian, African, and European countries like Ghana, Kenya, Nigeria, Uganda, Bangladesh, Nepal, and Albania have gained access to this facility since April 2020. Ukraine has been provided US $2.1 billion under extended Standby Arrangements post-COVID, which basically provides access for mostly the medium-developed countries, that are taking measures to stabilize macroeconomically and are emerging as developed economies.

Then there is the Rapid Financing Instrument similar to RCF but more flexible because a member country does not have to qualify for Poverty reduction and growth facilities. This has been accessible by countries like Uzbekistan, Jordan, Egypt, and Tunisia to fulfill their urgent, balance of payment and fiscal needs and beat the recession period off.

CONCLUSION
If it was not for these international financial institutions, for saving in times of disasters and major economic losses, not just the country governments but also the general public would realize how painful and difficult an entire lot of trading activities and policy formations could get. No imports, huge cost-cutting strategies, high import quotas, and tax barriers to protect domestic industries, sometimes recession periods lasting for long because of the fiscal and monetary policies, and whatnot. Although at times, these globally proclaimed organizations do face a high amount of criticism for failing to consider their own eligibility criteria for providing finances, the fact that they are trying up to a large extent to save economies even post-pandemic and during the Ukraine-Russia war is commendable and global cooperation must be ensured.

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- Supporting Women through the COVID-19 pandemic

CRYPTOCURRENCY IN SAARC COUNTRIES

Momna Gul
Gomal University D.I. Khan, Pakistan

ABSTRACT
Cryptocurrency, also referred to as virtual currency, is one of the most important innovations made possible by digitalization. Particularly as a new investment alternative for investors, cryptocurrencies have received a lot of interest recently. The most well-known of these decentralised, dependable cryptographic systems is Bitcoin, which has the highest amount of both. Outside of the market discipline, researchers investigate the connection between cryptocurrency and macroeconomic factors. From January 2016 to December 2021, macroeconomic variables (GDP, INF, Exchange, and Gold) were tracked on a quarterly basis. Multiple tests on secondary data and the E.view programme were used in this study. Multiple tests on secondary data and the E.view programme were employed in this investigation. Additionally, there are daily variations in Bitcoin value as well as the influence of other macro variables on the cryptocurrency. This study looked into how macro-level issues affected cryptocurrencies in SAARC nations. Three SAARC nations Pakistan, India, and Bhutan were looked at. In Pakistan and Bhutan, there is no long-term association, but in India, there is. The short-term connections between Bitcoin and Pakistan's GDP, INF, ER, and Gold. Bitcoin and the exchange rate are connected in the near run. In India and Bhutan, there is no short-term association between Bitcoin and the GDP, INF, ER, or gold. study of cryptocurrencies in SAARC nations. Cryptocurrencies' impact on COVID 19 can also be studied. The findings of the same study might be useful in both developed and developing nations.

Keywords: Cryptocurrency, SAARC, Bitcoin, Gold rate, Exchange rate, Inflation, Gross domestic product

1. INTRODUCTION
In the present day, cryptocurrency is a brand-new revolution. A method of purchasing and selling goods and services is described by the terms cryptocurrency and currency, respectively. A cryptocurrency system's transactions are all preprogrammed. Bitcoin may be freely exchanged in any nation because, like gold, it is decentralised. As a private digital currency that lacks a physical form, cryptocurrency is also known as digital currency. News, business, and investor plans all have an impact on cryptocurrency values. The most well-known cryptocurrencies, in addition to Bitcoin, include Ethereum, EOS, Ripple, Bitcoin Cash, Dogecoin, Tether, Litecoin, Binance coin, Bitcoin SV, Stellar, Cardano, XRP, USD coin, and others.

Timothy May, a retired Intel physicist, invented the cryptocurrency in 1992. Timothy May sought out a different strategy to protect data because he observed a lack of privacy in the banking sector. B-money, which is required for cryptocurrencies, wasn't created until Wei Dai arrived in 1998. Nick Szabo invented Bit Gold in 1998. The issue of converting cryptography into valuable cash was resolved by Bit Gold. A person or group of people using the alias Satoshi Nakamoto created the cryptocurrency in 2008. Bitcoin was the first cryptocurrency, created in 2009 by a person or group using the alias Satoshi Nakamoto. When it became open-source software in 2009, the currency's implementation was used (Fauzi et al., 2020).

Blockchain is a decentralised, unchangeable ledger. All transactions are fed into the public ledger where cryptocurrency is validating with software. The peer-to-peer network, which is the public ledger maintained by numerous computers. Blockchain functions as a network of connected blocks, each of which contains a record of a transaction. All transactions are linked together in a chain with their predecessors. The process of validating the public ledger and maintaining transactions is known as mining. Those who maintain and are responsible for the public ledger are known as miners. A device, an app, or a website can all be used to create a digital wallet. The password for digital wallets or bitcoin wallets is protected by various security features, like encryption and two-factor authentication. Bitcoin wallets come in two flavors: hot storage and cold storage. In order to access a bitcoin wallet, you need both a private key and a public key. A public key can be distributed to everyone, whereas a private key can be used for one's own wallet. The passwords on both keys are extremely long (25-51 characters) (Suratkar., Shirole., and Bhirud, 2020). The use of specialised computers is necessary because cryptocurrency is based on network technology. Trading cryptocurrencies requires a high level of technical expertise and tools.

2. LITERATURE REVIEW
The present era's greatest attraction for investors and investment managers is cryptocurrency. Numerous academics have highlighted concerns about cryptocurrencies and other economic factors. It was shown that macroeconomics and cryptocurrencies are related. Bitcoin is a cryptocurrency, much like other ones.

Macroeconomic factors include GDP, inflation, exchange rates, gold, and other items like Ethereum, tether, and EOS. Changes in macroeconomic pricing have an effect on cryptocurrencies, whose prices alter every day.

The majority of people are still unaware of virtual currencies due to lack of awareness and lack of legal support, but certain exchanges, like Pakcoin, have started operating. Without fully understanding how they operate or the security risks involved, people trade bitcoins. More than 230 people daily make additions, according to a household survey. All digital currencies are prohibited under Pakistani banking regulations and policies, but due to the herd instinct, consumers continue to utilise them (Ikram, F., & Naeem, M 2019). Pakistan's capital and largest city is Islamabad, with Rawalpindi being its largest city. Both cities' inhabitants are well-educated, wealthy, and have access to cutting-edge technology. Researchers can ascertain how well-known bitcoin is among Pakistani customers by correlating bitcoin awareness with a variety of demographic factors like gender, age, education level, employment position, family income, and computer literacy. The stats are displayed in the tables below. 67% of Pakistanis are usually familiar with Bitcoin. Men are more aware than women are. Males are more likely than women to be aware of Bitcoin, with 67.1% of men and only 32.9% of women doing so. Men claimed to own bitcoin 84.3% of the time, whereas women only claimed to do so 15.7% of the time. Bitcoin is not in the possession of 60% of Pakistanis. Even if they own, it still only accounts for about 19% of the total. Pakistanis who own Bitcoin are a rare breed (Kayani, Z. K., Mehmood, R., ul Haq, A., Kayani, J. A., & Rashid, A. 2021).

In their research from 2017, Xin Li and Chong Alexa Wang looked at the connection between the state of the economy and the price of bitcoin. Exchange rates can be used to maintain the balance of payments, assert Arti, Kouki, and Imen Gallali (2021). Li and Wang assert that the fundamentals of the economy are dependent on bitcoin exchange rates (2017). Exchange rates have no impact on cryptocurrencies, as shown by Riska, Nadia, and Li in 2018 and Li & Wang in 2017. Bitcoin works as a particular kind of safe-haven asset, claim Bouri et al. (2017). By Corbet et al. in 2020 and Frias and Freire in 2019, it was discovered that there was no statistically significant relationship between the movement of the Bitcoin price and the measurement of the global GDP or macroeconomic news stories related to the GDP. Mohsin, Naseem, Ziaur-Rehman, Baig, & Salamat, S., Qudah, & Aloulou, and Mikiewicz, R.; Matan, K.; Karnowski, J. (2022) all demonstrate the long-term impact of GDP on bitcoin. When Branch (1974) and Oudet (1973) independently determine the rate of inflation return, the security becomes an inflation hedge.

The amount of money in Indonesia and the rate at which bitcoin is increasing are correlated, claim Naryan et al. (2019). Furthermore, it's a common misconception that national government regulations or inflation-causing actions have no effect on cryptocurrencies like bitcoin (Magro, 2016). Positive relationship between INF and cryptocurrency according to Conlon, Corbet, McGee, and Smales (2021), Blau, Griffith, and Whitby (2021).

Cryptocurrencies have a lot of promise, and Indians have lately resumed talking about them following the presentation of the union budget for 2022–23 on February 1st. It will be fascinating to observe how Indian investors respond to cryptocurrencies with the imposition of a 30% tax. The introduction and characteristics of the RBI's potential future digital currency will also be crucial. Investors have begun to claim that India is copying China by giving the RBI exclusive jurisdiction to establish and promote digital currencies as of the union budget 2022–2023. It will be quite intriguing to see the nature and regulations of cryptocurrencies if the Indian government introduces a new bill on the subject. Aside from all the facts and forecasts, one thing is certain: Blockchain technology and cryptocurrencies will be hot topics in the coming years. This article may be helpful as a reference for further research and studies in the related field (Shukla, V., Misra, M. K., & Chaturvedi, A. (2022). Currently, there are more trades being made using cryptocurrency. With a better legal framework and regulations, cryptocurrencies can bring many benefits to India with their rising popularity. The management of such digital currency by the Indian government is necessary in order to advance profitable business and economic productivity. The "market for digital currencies" has grown by a staggering 500%. However, the money service mentioned that the government does not consider cryptographic forms of money to be fake monetary standards in the 2018 Budget Speech. Given that India has lagged behind in all areas prior to the Digital Revolution, semiconductors, the web, and mobile devices have established themselves and require new consideration and action. These cryptographic payment methods take into account India's entry into a different area of the modern conflict. The enormous growth in the number of online users has sparked the development of virtual world concepts and a replacement industry that uses digital money for trading, buying, and other financial transactions (Thakur, D. S., Varma, R. A., & Hake, D. M. (2022).

Cryptocurrency provides a fresh, practical, and alluring payment method model that can increase business and operator revenue. In addition to real money, it offers various payment methods that make it simple for users to conduct financial transactions like buying, selling, transferring, and exchanging. Although cryptocurrency

platforms offer a variety of channels for online financial trades and offer a new currency with unique mechanisms and procedures, they are not as tightly monitored and regulated as they should be. The study examined bitcoin systems and gleaned numerous issues and difficulties that put such a financial system at danger. The major issue with cryptocurrency systems is thought to be the absence of laws. The cryptocurrency industry offers numerous prospects for study, and numerous studies must be conducted in order to produce scientific information.

The relationship between actual financial regulations and the legal framework for deploying cryptocurrency platforms needs to be further investigated from a number of different angles. In addition, a larger sample size and deeper study of the adoption and acceptance levels are required. When using and trading cryptocurrency, trust and confidence are crucial aspects that require additional research. The scope of the additional research can be expanded to include creating use-cases for cryptocurrency applications in various Indian industries (Jani, S.,2018).

The novel and appealing payment method offered by cryptocurrency can increase business profits. In addition to using real money, virtual money enables users to carry out simple financial transactions including buying, selling, transferring, and exchanging. Virtual currencies like cryptocurrencies are a relatively new topic in the national economy. The Indian government has outlawed the use of this type of virtual currency in India due to its popularity. If a fraud case occurs while using cryptocurrency, the Indian government is unable to help the people in any way (Malik, S., & Rana, A., 2020).

2.1 Theroretical Framework
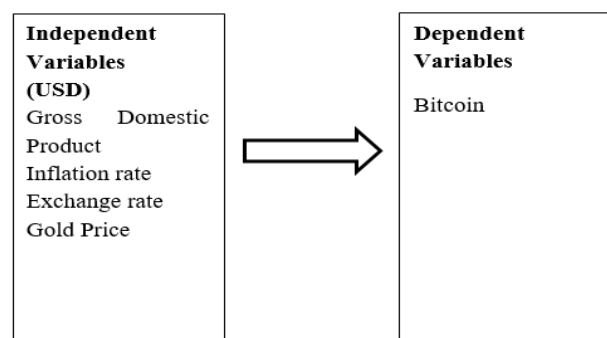
3. RESULTS

Cryptocurrency in SAARC countries is somehow regulated. In SAARC countries including Pakistan, India, Afghanistan, Srilanka, Nepal, Bhutan, Maldives, and Bangladesh. Three nations are chosen for study: Pakistan, India, and Bhutan.The State Bank of Pakistan has maintained a strategic ambiguity about cryptocurrencies since 2018, however given Pakistan's relationship with the FATFs, this should be reassessed. Early in 2018, the Reserve Bank of India (RBI) prohibited businesses it controlled from buying or selling cryptocurrency. This was in reaction to OneCoin's investigation into potentially fraudulent multi-level marketing scheme activity. However, the Internet and Mobile Association of India filed a petition in 2019 asking the Indian Supreme Court to issue a directive or order outlawing the usage of cryptocurrencies, casting doubt on their legality. In a decision that was partially influenced by the FATF Guidelines, the RBI's ban on cryptocurrency trading was declared unlawful by the Supreme Court of India in March 2020. Bangladesh and Nepal have outright bans on bitcoin. According to the MMA, no entity has been given permission to carry out any financial transactions in the Maldives utilising virtual or crypto currency. Any other party issuing lawful cash is also prohibited by the law. Srilanka government ban cryptocurrency. Afghanistan's economy is not stable. In Bhutan six trusted online cryptocurrency exchanges operating in Bhutan including Binance, Kraken, and CEX.io.

The effects of macro factors on cryptocurrencies in SAARC nations were examined in this study. Pakistan, India, and Bhutan were the three SAARC nations that were looked at. While there is no long-term correlation in Pakistan or Bhutan, there is in India. The short-term relationships in Pakistan between Bitcoin and GDP, INF, ER, and Gold. The short-term relationship between Bitcoin and the exchange rate. Bitcoin and the GDP, INF, ER, or gold in India and Bhutan do not correlate over the short term.

RECOMMENDATION:
• Research on Altcoins in Pakistan.

• Impact of cryptocurrency during covid 19 can be also checked.

• Same study research could be useful both in developed and underdeveloped countries.

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