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COVID-19: CHALLENGES FOR THE INDIAN FMCG - F&B SECTOR – DREAMS OR DIGITAL ENGAGEMENTS?

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CHAPTER-I

Abstract:P a g e **| 1299**

The Indian FMCG - Food and Beverages (F&B) industry is one of the fastest and largest industries of the world.(1)During the pandemic, since consumers have become more family oriented and health conscious, the focus and challenges for companies in the FMCG sector is to integrate and associate their brands with a key focus on safety and wellness. The modern Indian consumer has nowbecome more conservative and prefer online purchases to a larger extent than social mixing and indulging in family purchases.(2)These changes in the environment due to COVID-19 crisis have forced organizations to change their strategies and approaches. As a result, marketers are looking for new ways and means to reach consumers as digital buying and online purchases have become the order of the day. These digital engagements could lead to brand delight for consumers in Indian FMCG - F&B sector which has to be evaluated in a COVID-19 context. The digital engagement strategy is highly influenced by brand communication, brand personality and brand image.

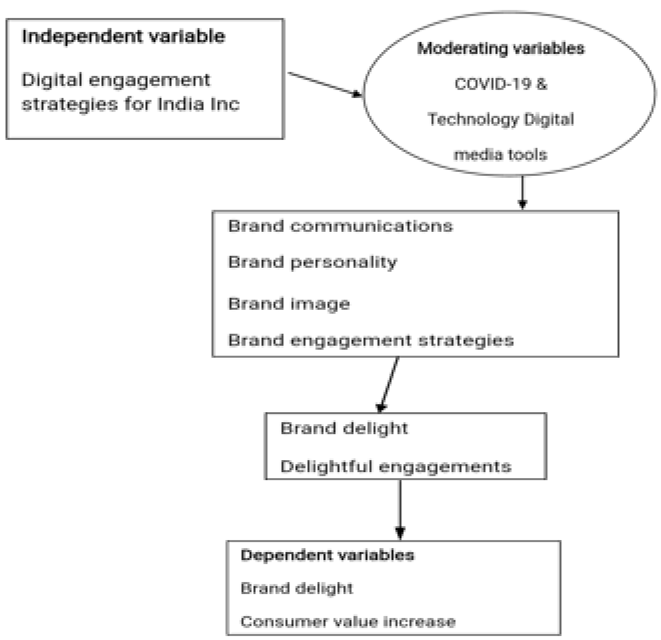
New ways of consumer and product engagements and promotions have emerged as we move in to digital marketing amidst the COVID-19 crisis. Will this create new challenges/ opportunities for brands and how can they capitalize these situations and convert them into opportunities for their company's growth and development? We could find that research has already been conducted in the areas of branding, brand engagement, perceptions and attitudes, digital engagements, consumer brand relationships, brand loyalty,

brand identity, brand image, brand experience and brand extensions. However, research gaps do exist on the domains of digital engagement strategies and its relationship with brand communication and brand personality that leads to digital delight. As these dimensions of the study have not been explored with reference to the Indian FMCG - F&B sector, this research is conducted for the first time in India.

Research Orientations:

In this research, objectivity has been maintained and no personal assumptions or interpretations are a part of the research. The purpose of this research is to present the facts obtained from the research objectively without any bias or prejudices.This research would use ontological research philosophical perspective, as it would focus on scientific, interpretative and critical dimensions of this philosophy. From the study, new solutions and strategies have been provided to the Indian FMCG - F&B sector on digital engagement strategies, while ensuring quality and maintenance of highest standards of ethics in writing and in providing interpretations.

Conceptual Framework for the Study:



(Source: Author Contribution)

The independent variable for the study is digital engagement strategy for Indian organizations. This is influenced by COVID-19, technology and digital media tools, which are the moderating variables in the study. These digital tools lead to brand communication, brand personality and brand engagement. When brand engagement happens, it leads to brand delight and delightful engagements. These digital delightful engagements result in brand delight and increase in consumer value for companies. All these factors are considered as dependent variables in this study.

Aim of the Study:

The study aims to find the impact of digital media tools on brand communications for Indian FMCG **-** F&B sector in a COVID-19environment.

CHAPTER-II

LITERATURE REVIEW:

This literature review is purposive and pertinent as it deals with digital engagement strategies for Indian FMCG **-** F&Bsector. The review would also provide a critical analysis on various moderating variables like COVID-19, technology and digital media tools. Digital media tools would have an impact on brand communication, brand personality, brand image and brand engagement strategies. These brand engagement strategies would lead to brand delight and delightful engagement practices. All these variables would be dealt with discussions and commentaries for each review from Scopus publications only.

This literature review focuses on 10 major dimensions. All these dimensions have been analyzed with critical perspective with industry insights, reviews and opinions. 30 studies have been provided for this study directly pertaining to these 10dimensions.

1. Perceptions, Attitudes and the Consumer Buying Process:

Consumers are influenced by their own perceptions, attitudes and experiences towards products and services. The consumer buying decision process is very complex and it varies due to various factors. The external environment plays an important role in the entire buying process and it has a huge impact on the nature and type of purchases. The pandemic has hit hard on the consumers with their nature and type of buying process has changed to a greater and larger extent. (Jonathan Knowles, et,al 2020) have provided perspectives, opinions and have commented on the cognitive and perceptual changes that has changed and influenced the thinking and actions since consumers are making judgmental errors as they use shortcuts in purchase decision-making process.

This research is very purposive and contemporary in nature as it captures the moods and behavior of complex consumers during COVID-19crisis. The consumers have transformed into judgmental entities rather than impulsive human beings. Rational decision-making persuades their buying process and emotions are kept away. Family, safety and health have taken top priorities in buying and family buying process and patterns are given sweet bye byes. Traditional shopping behavior has been replaced by online shopping behavior and consumer prefer for safety and health.

2. Value Dimension and Organizational Implications:

(IpKin Anthony Wong, Catherine Prentice & Matthew Tingchi Liu 2020) has provided valuable contributions to consumer behavior by explaining how consumer values have changed due to the pandemic.This study focuses on the individual factors and aspects, which induce consumer behavior and purchases as it has highlighted the most important factors with a framework. This framework has its focus on the aspects of relationships and orientations and has emphasized that there is a need for providing innovative strategies and approaches for increasing behavior loyalties and impulsive engagement practices. In this study, it is also empirically proven that behavioral and attitudinal loyalty increases the nature and frequency of purchases, which leads to brand loyalty. It was concluded from this study that individual and organizational factors have to be effectively synthesized and which would lead to better understanding of consumer engagement practices.

3. Brand Loyalty Factors and Brand Engagement Strategies:

The purpose of purposive engagement strategies, which are done by brands all over the world, is to create and retain consumers through brand loyalty. Therefore, we could say that brand engagement leads to brand loyalty and this increases over a period of time with effective engagement strategies. Brands are the sources and potential for growth, development and profits of organizations. So these potential opportunities must be effectively used by effective brand engagement and brand communication emphasized by (Kakkos et al.2015 Chatzipanagiotou et al., 2018 Ganesh et al., 2018). They have also stated that brands are factors, which lead to long-term profits and customer delight. The specific and effective role of brand communication on brand loyalty has not been researched which has to be done in Indian FMCG, in particular the F&B sector. The potential of brands and its importance, value additions and scope can be known only by conducting systematic and periodical assessments. These assessments have to be continuous as it benefits and increases the long time value of the brands, which is an important strategy for organizations as put forth by (Hunt 2019).

Moreover, the brand value increases over a period of time with continuous and constant engagement with purposeful promotions and usage of social media tools which is emphasized by (Severi & Ling, 2013). Moreover, the attitudes, perceptions and brand purchase intensions of consumers changes totally and dynamically with brand value increase. As the brand value increases, (Abril dan Rodriguez-Cánovas, 2016) have clearly mentioned that these brand value increasing strategies would lead to overall increase of loyalty, satisfaction and delight of consumers. Features of the brand like attributes, name, logo design and packaging, color of packaging all add to a total intensive transformation in the minds of consumers, which is called as brand value. This significant attribute called brand value, (Aladdin, 2015 Alavinasab et al., 2017) have indicated that it must focus on each aspect of brand, which leads to holistic branding, holistic brand value and holistic perspective on organizations.

4. Consumer Brand Relationships:

The brand communication and brand retention activities create an effective association and relationship between consumers and brands, which has to be pursued by having clear strategies, methods and approaches. There is a need for transformative and engaging strategies, (Noor Hasmini Abd Ghani & Kashedul Wahab Tuhin 2018) which have an impact on brand transformations and increase in brand equity. As men have life cycle and products were assumed to have life cycles, in this study, (Ghani & Tuhin 2016) have created new entities of brand with life orientations. As brands have life, there is a need for constant attention, nurture and support to manage them. This would bring in diabolic changes in the brand and it would have continued and consistent attention of companies. Brand relationships can be managed only when a large number of factors are taken in to consideration and (Fetscherin & Heinrich, 2015) considerate support and monitoring is done on a regular day-to-day basis. Moreover, passion is an emotion that has to be inculcated in consumers mind when brand communications are done which leads to establishment of brand relationships. This emotion, passion would lead individuals, groups and communities (Hudson et al.2015)to go to any extent for that emotion. These passionate and intensive engagements and transformations help to establish a unique personal association with the brand called bonding. Emotional bonding carries a long-term value and relationships that can add future benefits and ensure profits for organizations.

5. Brand Experiences - Consumer Retention and Brand Value

Brand experiences lead to happy and delightful experiences with consumers. Trust and security is reinforced with consumers due to these brands. Consumer engagement and involvement with brands (Imran khan and Zillur khan 2015) ensure effective associations are ensured due to wonderful brand engagements. As brand experiences change brand orientations and it also ensures continuous engagement with consumers. Positive brand experiences convert in to brand loyalty, brand attitude and brand equity. This also ensured through brand advertisements, event marketing and storytelling. Brand related stimuli for effective engagement is very important and crucial in this regard.

6. Brand Identity and Brand Development:

Brand identity is ensured with brand communication that is done with social media in the modern context. The mental brand identity carried by consumers also has a significant impact on brand communication strategies and management. Mental images of consumers (Sabin Mindrut,et,al 2015) are detrimental in designing brand association strategies for them. These images are also critical for brand sustainability and development that has to be reoriented with new perspectives and thinking. The study has enabled new thinking and impetus by providing new framework of thinking and approach.

7. Brand Image and Social Media:

Social media helps in socializing and engaging with friends, relatives and helps to build professional relationships and in branding. Social transformations and engagements, brand transformations, (Zembik 2015) with brand engagement practices are a reality with social media. These social media promotions and engagements lead to brand image and brand equity. Research scholars and professionals must take adequate care and attention in establishing these relationships and contribute to empirical studies in this context. This is a powerful tool, which can modify and alter the perceptions, attitudes and mental barriers and make them effectively engage with the brands.

8. Digital Engagement Practices and its Impact on Branding:

Digital engagement practices are tools, which are related with digital marketing, used and implemented across brands as it leads to an increase in brand value, brand worth and social worth. The most prominent tools are SEO, digital promotions that are done regularly to make it in to digital engagement practices. However, we could find studies, which pertain to digital engagement and strategies. (Bowen, 2013) has stressed the need for connecting it with branding. Branding strategies for future would involve new landscapes and innovative practices using digital engagement. As this space is used less, there is a lot scope and application in this spectrum that has to be viewed. There is a need to explore (Tiago and Veríssimo 2014) the nature and extent of impact of branding strategies and its influences on brand associations and brand communications.

9. Brand Experience and Consumer Engagement Behavior:

Both are correlative andinfluenceeach other. They have a significant impact on brand contributions towards organizational goals and profits. Both these factors influence (Naeem 2019) as they lead to long term brand value and brand retentions. Studies have been conducted on brand experience and how it affects brand engagement and vice versa, but the contributing role of both the factors and their influences has been little known. This dimensional thinking and approach must evolve as it contributes the field of branding knowledge today.

Social media leads to brand transformations and brand delight. These brand delights and engagement practices must be implemented for organizational growth that has been argued by(Aslam,et, al 2018). Social media engagement is an important feature as it has occupied 30% of the total budget of organizations, which is very significant. New tools, new forms of engagement (Valos, et,al 2016) would continue to dominate and influence the branding decisions in future. This is the one significant tool, which would affect the entire marketing landscape and modify its outlooks.

Purchase experiences, post purchase experiences and the behavioral response of consumers is very important in determining these brand related experiences. Positive experiences of a brand are related to positive and engaging promotions, which are provided by organizations to market its brands. Experiences are vital (Cheng, et,al 2017) as they are providing the future oriented strategies for a brand. Consumer experiences have to be monitored on a regular basis with scientific and empirical research focusing on these dimensions.

10. Brand Extension, Brand Image and Brand Trust

Brand extensions by nature add value and worth of the brands. These extensions could be in the same line of products or it could focus on some other segment also. These brand extensions lead to longer mental associations and brand engagements with consumers. It leads to happy purchases in volume and in nature as it satisfies diversified needs of consumers. Through brand extensions and various engagement activities like promotions, digital marketing and data driven engagements companies transform in the process to provide delight to consumers. As the brand value and brand image increases in the mind of consumers through effective engagement practices, it leads to brand trust. The nature and intensity, extent and focus, significance and importance of these three variables brand extension, brand image and brand trust has been captured nicely in the study conducted by (SlametPoerwadi, et,al 2019).

CHAPTER-III

RESEARCH METHODOLOGY:

Sampling Process:

For the purpose of this research, a structured questionnaire was prepared and circulated through emails and social media. The questionnaire involved multiple-choice questions and Likert’s five-point scale questions. The study involved 253 consumers who use various brands in Indian FMCG - F&B sector. Stratified random sampling method was used for selection of sample. The sample was stratified based on income, age, gender and type of residence in Bengaluru, Hyderabad, Chennai, Mumbai and Delhi. The data collected from the respondents was analyzed using MS Excel. Secondary data was collected from articles, publications, periodicals, magazines that relate to practices around the globe and in India from 2015 till date. PhD works in the field and related domains were alsostudied in depth

Data Analysis and Interpretations:

Table 1: Age Details of the Consumers

Age	Frequency	Percent
15-24	32	12.6
25-34	61	24.1
35-44	31	12.3
45-54	47	18.6
55 and above	82	32.4
Total	**253**	**100.0**

Inference: By analyzing the cumulative percentage, 67% of consumers are middle age and youngsters. (1) According to MOFPI (Ministry of food processing Industry) highlighted the importance of age group and the working age population of India towards 2026. Around 64% of the India's population is expected to be in the age group of 15-59 in the year of 2026. India is dominated by middle class people with disposable income who are willing to experiment with variety of food and beverages and they are willing to spend for different varieties.

Table 2: Regular Purchasing Details of theConsumers

Regularly Purchased Product	Frequency	Percent
Food Items	182	71.9
Family Oriented Purchases	42	16.6
Personal Purchases	16	6.3
Health and Wellness Related Items	12	4.7
Entertainment Items	1	.4
Total	**253**	**100.0**

Inference: From Table 2, it is inferred that 72% of the consumers regularly purchase food items.17% of the consumers engage in family oriented purchases and 7% of the consumers engage in personal purchases. While 5% of the consumers buy Health and wellness related items, only 0.4% of the consumers purchase entertainment items.(Kemp, 2013)insist that the customer preference is important for the development of innovative new products.

Table 3: F&B Product Purchasing Details of the Consumers

Product Purchase in the F&B Section	Frequency	Percent
All types of food items	8	3.2
Both vegetarian and non-vegetarian items	6	2.4

Cereals, Pulses, Vegetables, Meat & Fish & Snacks	1	.4
Healthy Foods and Drinks	42	16.6
Non-vegetarian Items	46	18.2
Vegetarian Items	150	59.3
Total	**253**	**100.0**

Inference: From Table 3, it is inferred that 60% of the consumers wish to purchase vegetarian items and 19% of the consumers prefer non-vegetarian foods from the F&B sector. While 17% of the consumers are looking for healthy foods and drinks.(Dhakal, 2014)highlighted the importance of Indian spicy vegetarian food and about its goodness. Most of the consumers seem to prefer vegetarian for reasons like, lower risk of heart diseases and cancer, health issues like obesity, non-violent principles diabetes etc.

Table 4: Changes in Frequency of Product Purchase Details of the Consumers

Changes in Frequency of Product Purchase	**Frequency**	**Percent**
Yes	159	62.8
No	66	26.1
Maybe	28	11.1
Total	**253**	**100.0**

Inference:From Table 4 it is inferred that 63% of the consumers accept that the COVID-19 pandemic changed the product purchasing frequency of consumers while 26% of the consumers do not agree that the pandemic changed their product purchasing frequency and 11% of the consumers are doubtful about the changes in the product purchasing frequency due to the COVID-19 pandemic. The frequent product purchase of consumers may have changed due to maintaining social distancing because of which consumers now consider online purchases a safer bet.

Table 5: Are Digital Advertisementsmore engaging than other forms of advertisements

Are Digital Advertisements more engaging than other forms of advertisements	**Frequency**	**Percent**
Strongly Disagree	5	2.0
Disagree	12	4.7
Neither Agree nor Disagree	51	20.2
Agree	105	41.5
Strongly Agree	80	31.6
Total	**253**	**100.0**

Inference: From Table 5 it is inferred that majority of the consumers opined that the digital advertisements are more transforming and engaging than other forms of advertisements. Only 20% of the consumers fall in the category of neither agreenor disagree. (10)stated that business owners are interested in online ads. Most of the consumers experienced better results with digital advertising.

Table 6: Preference to Shift towards Other F&B Brands

Preference to Shift towards Other F&B Brands	**Frequency**	**Percent**
Strongly Disagree	15	5.9
Disagree	66	26.1
Neither Agree nor Disagree	75	29.6
Agree	69	27.3
Strongly Agree	28	11.1
Total	**253**	**100.0**

Inference: From table 6 it is inferred that 49% of the consumers positively agree to shift towards other F&B brands. However, 30% of the consumers are not certain about their preference and 32% of the consumers have no idea whether to shift towards other F&B brands or not. This result shows that 50% of the consumers are interested in experiencing the new brands in this pandemic situation.

Table 7: Willingness to stickwith the current F&B Brand

Willingness to stick with the current F&B Brand	**Frequency**	**Percent**
Strongly Disagree	14	5.5
Disagree	24	9.5
Neither Agree nor Disagree	58	22.9
Agree	113	44.7
Strongly Agree	44	17.4
Total	**253**	**100.0**

Inference: From Table 7 it is inferred that 62% of the consumers are willing to stick with their current F&B brand while 23% of the consumers neither agree nor disagree to stick with their current F&B brands and 15% of the consumers were not ready to stick with their current F&B brands.

CHAPTER-IV

SUGGESTIONS AND RECOMMENDATIONS:

1. **Younger Working Population**
   Most of the consumer's age group was 55 and above and their total household income was 11+Lakh per annum. 52% of the consumers were fully employed. India's population is expected to be in the age group of 15-59 in the year of 2026.Therefore, the Indian FMCG - F&B sector has a good scope in the near future with younger working population interested in a variety of food items.

   55% of the consumers are male, 44 % of the consumers are female, and 0.8% of the consumers preferred not to give out their gender details. The taste and food choice of male and female differed. Therefore, the F&B sector must consider the gender based food preferences as a prime factor.

2. **F&B Product Purchases and Consumer Behavior in COVID-19**
   Most of the consumers regularly purchase food items especially vegetarian items. They seem to prefer vegetarian for reasons like, lower risk of heart diseases and cancer, health issues like obesity, non-violent principles diabetes etc.Companiesshould alsodo a proper analysis of the most frequently purchased products so that appropriate arrangements can be made for timely restocking.

   Majority of the consumers accept that the COVID-19pandemic changed their product purchasing frequency and that they have transitioned to online purchases in this pandemic situation.

3. **Performance of F&B Sector during COVID-19**
   Identification of F&B brands in India is easier and F&B products of brands have been consistent in their quality performance and cost during COVID-19 situations. Consumersagreed that F&B product capabilities of brands have increased and their performance is upright during the COVID-19 pandemic. Brands are trying to incorporate more sophistication, style and features in their F&B products since the start of the pandemic.

4. **Digital Advertisement in COVID-19**
   Digital advertisements are more transforming and engaging than other forms of advertisements especially during the COVID-19 pandemic. Most of the customers are happy with the current F&B products they using and prefer to stick with the current F&B product and would alsorecommend the same to others (friends/relatives).

5. **Internet Usage of Consumers and F&B Sector Products during COVID-19**
   Most of the consumers agreed that digital and social media is the best way to advertise and reach out to the customers in the recent COVID-19 situation. Marketing through popular Social Media channels such as WhatsApp, YouTube, Instagram, Netflix and Facebook provides a good reach to consumers.

CHAPTER–V

Conclusion:

India’s population is expected to be in the age group of 15-59 years in the year of 2026. Middle class people with disposable income who are willing to experiment with variety of food and beverages and willingness to spend for different varieties dominate India.As per the periodic Laborforce survey(PLFS) and National statistical office (NSO), India’s working population will increase for the upcoming years and therefore, the opportunity for the F&B sector is wider in India.Most of the Indian consumers seem to prefer vegetarian for reasons like, lower risk of heart diseases and cancer, health issues like obesity, non-violent principles diabetes etc. Therefore, introducing a large variety of vegetarian food items will attract the consumers more.

Most of the consumers continue to buy online rather than venturing into stores for fear of virus spread. Most of the nearest brick-and-mortar shops are still shut due to the liquidity issues.Further, majority of the consumers opined that the digital advertisements are more transforming and engaging than other forms of advertisements. F&B ecommerce salesare expected to grow $22.4 billion in 2020 from $14.9 billion in 2019 due to outbreak of COVID-19. Most of the people are now working from home and they prefer food purchase, beverages and other essential grocery product through online means. Smart phone users are the main online shoppers for the F&B industry. Smart phone users in India are likely to increase further within the next 2 years. This provides a great opportunity for the F&B industry in India.

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References:

1. Http://Foodprocessingindia.Gov.In/Publishing/Publications/9cfdb26d7526817d8d8bhigh-Growth.Pdf
2. Https://Www.Grantthornton.In/Globalassets/1.-Member-Firms/India/Assets/Pdfs/Grant_Thornton-Cii-Food_And_Beverage_Sector-The_New_Wave.Pdf
3. Https://Www.Statista.Com/Outlook/253/119/Food-Beverages/India#Market-Onlinerevenueshare
4. Https://Www.Bcg.Com/En-In/Publications/2019/Ten-Trends-Altering-Consumer-Behavior-India
5. Https://S2.Q4cdn.Com/723557020/Files/Doc_Downloads/Grubhub-Inc-Men-Vs-Women-Eating-Preferences-White-Paper_V001_B3cw14.Pdf
6. Https://Www.Drishtiias.Com/Daily-Updates/Daily-News-Analysis/Periodic-Labour-Force-Survey-2018-19
7. Https://Www.Prnewswire.Com/News-Releases/The-Impact-Of-Covid-19-On-Food--Beverage-E-Commerce-Market-Growth-2020-2030-301078725.Html
8. Https://Retail.Economictimes.Indiatimes.Com/Re-Tales/Impact-Of-Covid-19-On-Online-Shopping-In-India/4115
9. Https://Economictimes.Indiatimes.Com/Industry/Cons-Products/Fmcg/Online-Sales-Doubles-For-Top-Consumer-Brands-In-India-Due-To-Covid-19/Articleshow/76533563.Cms?From=Mdr
10. Https://Www.Vendasta.Com/Blog/The-Impact-Of-Covid-19-On-The-Digital-Advertising-Industry/
11. Ali, J., Kapoor, S. & Moorthy, J. 2010. Buying Behaviour Of Consumers For Food Products In An Emerging Economy. British Food Journal.
12. Dhakal, D. 2014. Feasibility Analysis Of Indian Vegetarian Restaurant In Helsinki.
13. Gupta, K. B. Consumer Behaviour For Food Products In India. 19th Annual World Symposium Of The Indian Institute Of Management, Bombay, India, June, 2009. 20-21.
14. Kemp, S. 2013. Consumers As Part Of Food And Beverage Industry Innovation. Open Innovation In The Food And Beverage Industry. Elsevier.
15. Food & Beverages - India | Statista Market Forecast 2024, Www.Statista.Com › Outlook › Food-Beverages › India
16. Mahendra Dev & Rajeswari Sengupta,(2020)Covid-19: Impact On The Indian Economy
17. Biriowu, C. S., and T. B. Chris-Biriowu. "PROBLEM-REACTION-SOLUTION THESIS AND COVID-19: THE IMPACT OF PUBLIC OPINION FORMATION ON GLOBAL POWER, ECONOMIC AND EMPLOYMENT RELATIONS." IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL) 8.5 (2020): 41-48.
18. Garg, Commodore Vijesh, and Annie Sam. "ENGAGEMENT OF NATIONAL CADET CORPS (NCC) CADETS IN DISASTER RISK MITIGATION UNDER PANDEMIC COVID-19: A CASE

STUDY OF TAMILNADU, PUDUCHERRY AND ANDAMAN & NICOBAR ISLANDS." IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS) 8.6 (2020): 15-24.

19. Khalifa, Amr Moustafa, and Asmaa Yahia Sharfeldin. "PREVALENCE AND SOCIO-BEHAVIOURAL FACTORS ASSOCIATED WITH DEPRESSIVE DISORDERS AMONG PRIMARY HEALTH CARE PHYSICIANS IN SHEBIN EL-KOM DISTRICT, MENOUFIA GOVERONRATE, EGYPT, DURING COVID 19 PANDEMIC." IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL) 8.12 (2020) 79-92
20. Ineji, Patrick Ukim. "POLITICS AND PROPAGANDA IN THE COVID-19 ERA: THE NIGERIAN SITUATION." IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL) 8.12 (2020) 113-120
21. Almetwally, Ehab M., and M. I. Gamal. "Discrete Alpha Power Inverse Lomax Distribution with Application of COVID-19 Data." International Journal of Applied Mathematics & Statistical Sciences (IJAMSS) 9.6 (2020) 11-22.
22. NGUYEN, DONGTHI THAO, and THU CHUNG KIEUTHI. "NEW TRENDS IN TECHNOLOGY APPLICATION IN EDUCATION AND CAPACITIES OF UNIVERSITIES LECTURERS DURING THE COVID-19 PANDEMIC." International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) 10.3 (2020) 1709-1714.