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STUDY ON RAPID DEPENDENCE UPON TECHNOLOGICAL MEANS OF COMMUNICATION AT TIMES OF SOCIAL DISTANCING

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Abstract- The primary purpose of this survey is to analyze the level of rapid increase upon dependence on technological means of communication during the lockdown period due to critical distress situation of the pandemic – COVID19.This paper attempts to access and examine the utilization of technological means of communication and compare the dependency level on technology by different age group to analyze at what extent increase in usage of technology has been marked up in comparison to regular days with the situation of social distancing in acute distress of COVID -19. Hence, the study's outcome has shown an increase in dependency over technology in social distancing times. The survey results obtained by the 90 questionnaires completed by people of different age groups reported that each group had contributed an equal profile increase in dependency level.

Key Words: - Pandemic, technology, communication, Adults

I. INTRODUCTION

Social distancing or physical distancing is a means to prevent widespread distress from disease COVID 19. It limits the people to keep a distance of at least 6 feet from another body, puts an end to public gatherings and avoidance to crowded places and mass gatherings. The massive layout of pandemic disease COVID 19 crashed people's lifestyle results in unfortunate and substandard conditions.

It not only impacted the physical health but also influenced the disturbance of mental health. People have no other option but have adopted online mode to do their office work including work of different professions

According to studies, technology has played a crucial role in surviving with this COVID 19 lockdown (Dr S. Chand, 2020). Technology as a commercial source turns out that with this spread of COVID-19 disease and a social distancing position in lockdown, people start depending upon technology using technical gadgets like cell phones, laptops etc. It has given sustenance to people with the feeling of being connected in such a situation. A sense of relief and dependency has emerged from technology. It helped people slash down the rope of social distancing and turning in to be more active and connected via technology. It allowed people to bridge and attach through the web from their work, offices, relative, friends, colleague and people from far.
According to studies, India manifested the exceeding growth of internet usage (GIN journal 2019) "The Internet is not applied as a tool anymore but as a daily order component, almost like oxygen. The regulation goes a long way in protecting our rationality." (JOURNAL, 2019)"Indians used an aggregate of 307,964 TB or 306 petabytes (PB) of data (department of telecommunications 22 March and 28 March). The shift revealed how people employed more streaming content and logged on to work from residence, which demanded data from residences more than commercial areas. A 32% hike in traffic with most of it from people streaming videos."

"With the rise of social distancing, we seek new ways to connect, mostly through video chat**.**
It has led to a renewed interest in Next-door, the social media site focused on connecting local neighborhoods. Prolonged utilization of smart phones further leads to psychic wellness obstacles, such as developing depression and anxiety.

Problem Statement
Relying on technology which brings out ease now may have even more adverse effects in future. Excessive dependence on technological means of communication EMW affects human health and effects are different at a different level of dependence on technological means of communication in the lockdown due to pandemic COVID-19.The study aims to access the level of dependence of people of different age groups on technological means of communication.

Objective of Study
- This study aims to define which group according to age results in a rapid increase in technological communication.
- The purpose of this study is to define that which age group among (Youth- below 21, Adults age from 21-45 and Seniors- above 45) has resulted in the maximum increase use of technological means of communication.
- To analyze how many dependencies over technological means of communication have increased social distancing than normal working days/ lifestyle.
- To determine that people will continue to depend on technological means after lockdown/ social distancing and to determine that up to what extent does the technology has impacted people's lives in social distancing.

II. REVIEW OF LITERATURE

Mary Ann Liebert Inc., November 2020 in her study states that a rapid spread of pandemic disease COVID 19 has positively affected mental health. In recent days, "Verizon marked a sharp increase of 20% in web traffic between March 8 and 15, 2020" (Wiederhold, 2020). The information shared on media gained not only attention but also widespread misinformation. According to WHO, Infodemic is considered an overabundance of information that has accurate and inaccurate information. People must analyze and check whether the information shared is accurate. Asli technology can be used to balance mental health by connecting to relatives, friends, family, but it should not be used unkindly.

Robert Connor Chick, "Using technology to maintain the education of residents during covid 19 pandemics, Journal of surgical education" (www.researchsquare.com)**, San Francisco, 2020**
As a result of covid 19 diseases, academic activities are impacted at a very high rate. It has affected the lives of surgical residents, educators, trainees etc. New and innovative solutions have to be implemented that are portals for video conferencing, online platforms, and meetings to exchange knowledge and information. Over the web, flexibility is required by learners and educators to adapt to changes in such time of crisis.

Internet admittance and gender difference, safe graph, 2020 found that people of the high-income group are usually involved in outside activities, and after social distancing, there has been a digital divide among the higher and lower-income group, as people in higher-income resides in the region with enhanced networks.

Hatice Odachi, Does the internet affect modern people's psycho-social situation? Interfamilial and human relations, impulse command, coping capacity and body image, Computers in Individual behaviour (Odachi, 2020), Elsmere, Turkey, 2020 determines that 42.3% of the world's population internet users have increased to 74% between 2000 and 2014. Due to most young people in Turkey, there is a spread of internet use at a higher rate. At the age of adolescence when the development begins, people are found to be more dependent

upon the Internet as a result affecting the mental health and mental peace for which measures and centres need to be enforced to remove such dependency on the Internet.

Brenda K. Wiederhold, Social media use during social distancing, Mary Ann libert Inc., November 2020 states that a rapid spread of pandemic disease COVID 19 has highly affected the mental health. In the recent days Verizon marked a sharp increase of 20% in web traffic between March 8 and 15, 2020. The information shared on media not only gained attention but also widespread misinformation. According to WHO Information is considered as an overabundance of information that has accurate as well as inaccurate information. People must analyze and check whether the information shared is accurate. As technology can be used to balance mental health by connecting to relatives, friends, family but it should not be used unkindly.
Robort Connor Chick, Using technology to maintain the education of residents during covid 19 pandemic , Journal of surgical education, San Francisco, 2020 found that Covid 19 disease, academic activities are impacted at a very high rates. This has affected the life of surgical residents, educators, trainees etc. New and innovative ways of solution have to be implemented that are portals for video conferencing, online platforms, meetings to exchange knowledge and information. Over the web flexibility is required by learners and educators to adopt with changes in such time of crisis.

Dave et al. (2020b) find that counties in Texas that adopted shelter-in-place orders earlier than the statewide shelter-in-place order experienced a 19 to 26 percent fall in COVID-19 case growths two weeks after implementation of such orders. Andersen et al. (2020) find that temporary paid sick leave, a federal mandate enacted in the US, which allowed private and public employees two weeks of paid leave, led to increased compliance with stay-at-home orders. On a more global scale, Hsiang et al. (2020) show that social distancing interventions prevented or delayed around 62 million confirmed cases, corresponding to averting roughly 530 million total infections in China, South Korea, Italy, Iran, France, and USA.

"Charity, The science of extravagant cellular phone usage, Delhi Psychiatry Journal (Taneja, October 2014) states that with the multipurpose use of cell phones, many more useful factors enhance the relatedness and connectedness among society; there are also many more drawbacks than affect psychological health. Personal health, insecurities, anxiety, sleep disturbance, dry eyes, radiation effects, Nomophobia, SMS addiction etc. It comes with the impact of cellular phone anxiety, delusions and hallucinations.

Michelle Drown, Mobile phone dominion what is all the hum of, John Wiley and Sons Ltd, 2015
states that very first inquires to check mobile phone obsession led in Australia by Binachi and Philips (2005) to measure mobile use. MPPUS - mobile phone problem use scale. Study of Binachi and Phillips (2005) with sample 195 Australian grown-ups aged (18-35, M=36.07) measured by MPPUS -correlates the dependency based on modern age, extraversion and high self-esteem with a sample of aged (18-32, M=21.6) by COS, correlates female gender, physical complaints, wakefulness, familiar dysfunction,anxiety.No vital connections with substance abuse, unhealthy speculation or health management"

Salman SH, How India's internet users spent their time during the lockdown, live mint, May 2020 Kala Gato states that Daily active users (DAU) base across online streaming platforms shot by 122% and 72% month on month. Apart from this video, conferencing platforms registered the highest increase of 185% in DAU's. E-commerce and hyper-local platforms tools a massive hit due to lockdown, whereas there was slowdown decrease in delivery platforms that showed a 48% and 52% drop-down in monthly users. E- Grocers and video streaming, online learning platforms increased daily users and session time. Online math learning, Topper's, Online Skilling startup, Coursera, Nonprofit education portal, Khan academy showed an increase by 47%,28%, and 33% month on month in daily active users.

Dr K. Prabakaran(2020) presents the awareness of digital stress in situation of COVID-19 among people. Social media applications like email, Facebook, Instagram, WhatsApp, and others are causing digital stress. Social media helps the human being, but it usually is bad for health as mentally and physically as it encourages the youth for anti-social behaviour. The fake news and other irrelevant information sharing behaviour are cyber-harassment .social media will promote individuals to negative digital stresses. The

author creates awareness that describes the impact of digital stress that will distress the community in destructions of human health in the long term that may be incurable easily. The digital stress is too high during the COVID-19 among the people who afraid of this disease. However, most of the people in India are not aware of the seriousness of the disease.

Limitation of study

In completing this research project, every effort has been made to keep the errors out, yet there are limitations of the study. A few of the limitations may be cited as under:—

The study is based on primary and secondary data; therefore, the inferences may have affected the various contributors' opinions. Research is confined to limited geographic regions.

As the study requires comprehensive coverage, it is impossible to collect data accurately from the remote and some other areas where network and technology are not up to date.

The colleagues may influence responses, or some respondents may not disclose the truth.

The other limiting factor is that the data available is from 90 respondents, and this number of respondents does not indicate the idol way to generalize to the wholesome population. Therefore it is difficult to determine the exact figure of the level of dependency on technological means of communication.

III. RESEARCH METHODOLOGY

Research Design:

The study focuses on an analysis of people's level of dependence. The primary objective is to determine that people of which age group are more addicted or dependent on technological means of communication at times of social distancing in distress situation of pandemic COVID-19.

Source of Data:

Primary data have been used in the research and secondary information has been taken from weblings, research paper. Descriptive research approach was used in designing and implementing the study. The sample was pooled from a group of people those were easy to contact or to reach. Almost 90 questionnaires were filled by respondents of three strata based on three different age groups, i.e., age below 21, age from 21-45, and age above 45. The questionnaire was filled online. The study has been initiated with relevant ratios, percentages, graphs, charts etc. The appropriate statistical and financial tools and techniques have also been used to finalize the project study's conclusion. Several journals, magazines, annual reports and websites have also been studied for finalizing the study.

RESEARCH HYPOTHESIS:

NULL HYPOTHESIS

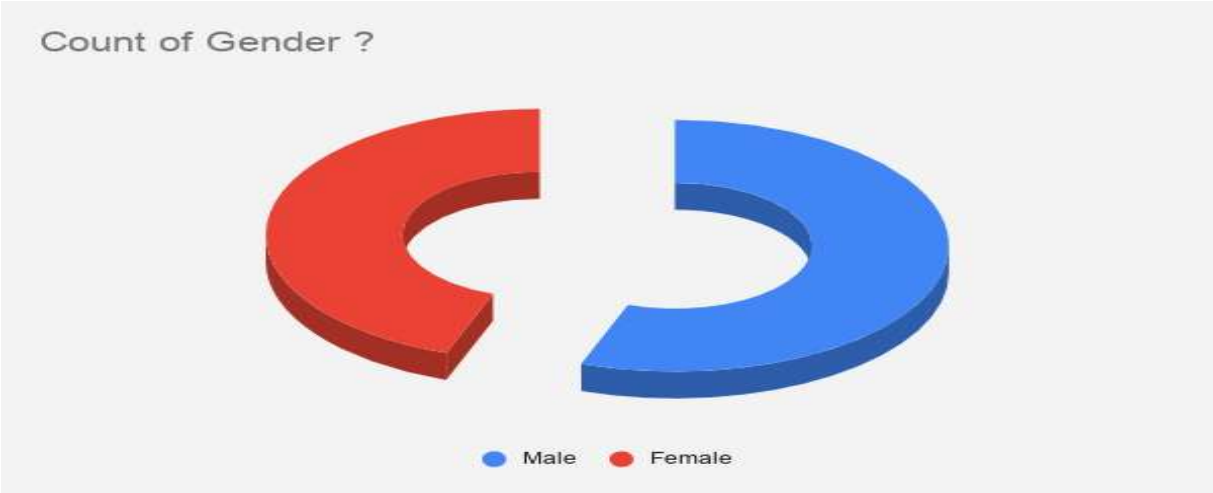
H_O: There is no significant relationship of dependence between people of different age group and Technological means of communication.

ALTERNATE HYPOTHESIS

H_a:- : There is a significant relationship of dependence between people of different age group and Technological means of communication.

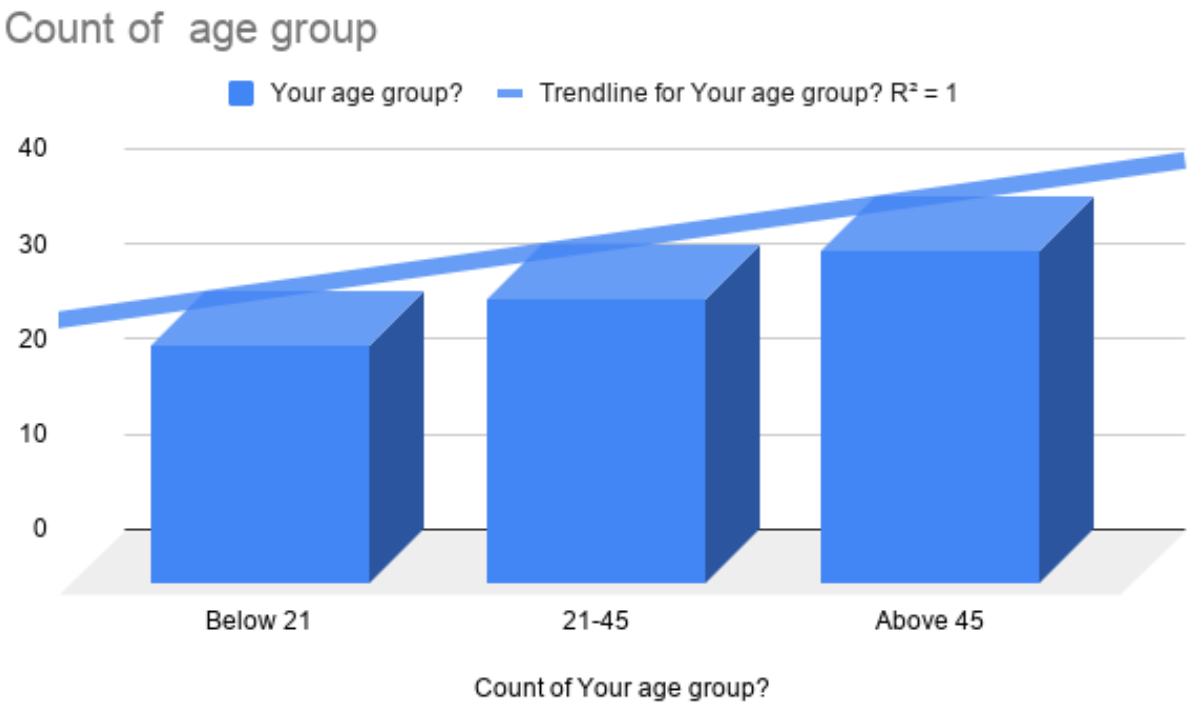
DATA ANALYSIS:

CHART A



Interpretation:-The study aimed to identify the level of dependence on technological means of communication among three different age groups. The research shows that 55.6% of respondents were male, and 44.4% were female respondents. There is the highest positive involvement towards technological means of communication in male against the female.

CHART B



Interpretation:-It has been Interpretated from the study that Constant use of technological means of communication (cellphone) causes premature ageing due to remittance of low-level radiations from the

phone. There are 38.9% of seniors; youth comprises of 33.3% and the remaining 27.8% consist of children and seniors have taken an active part in responding, which shows they are more threatening their lives.

CHART C

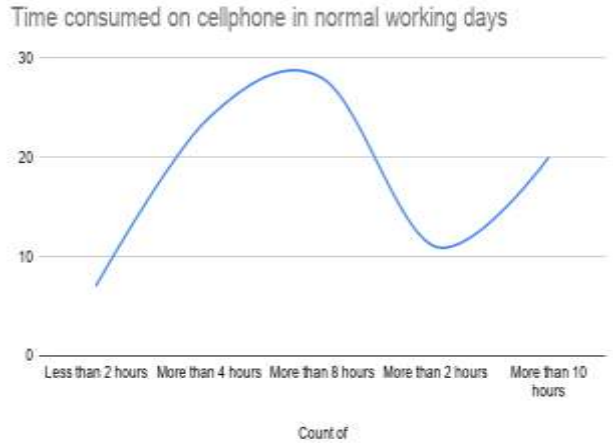
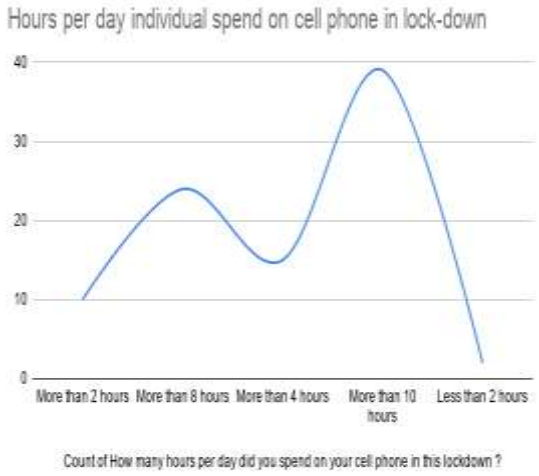
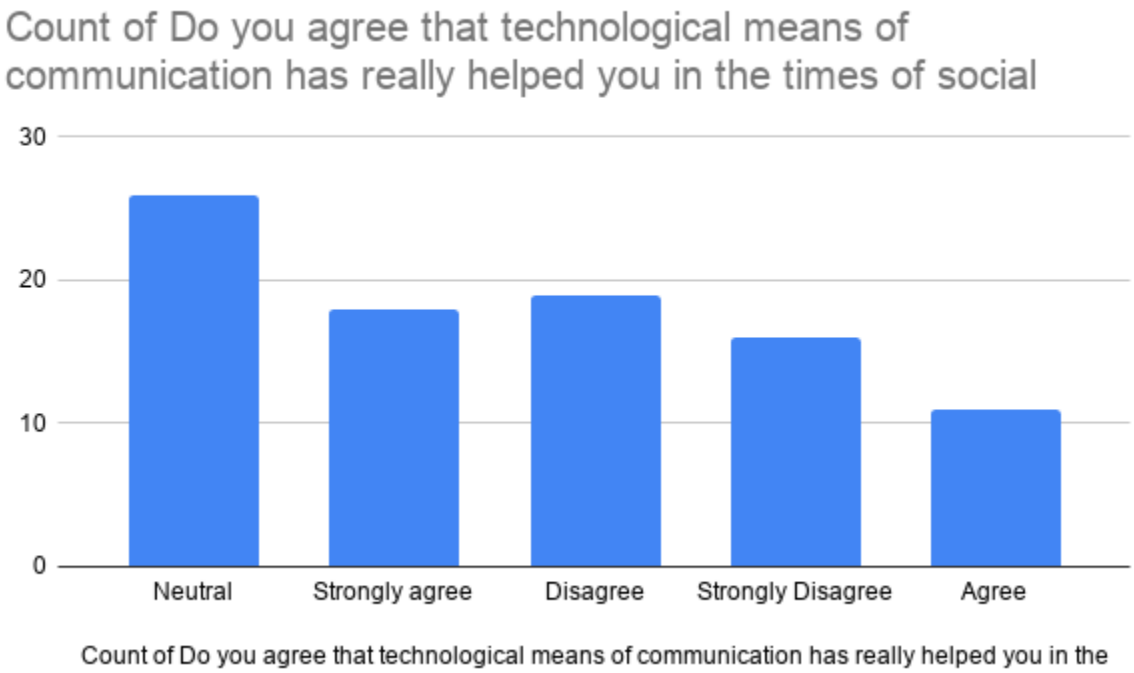


CHART D



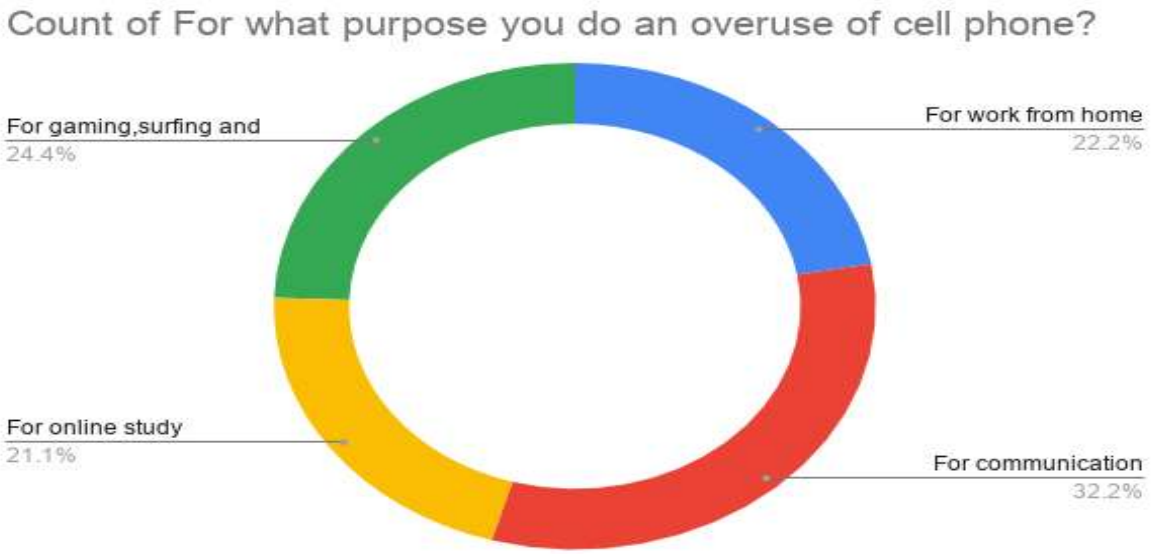
Interpretation:-It has been Interpretated from the study that People of different age group started spending more time on their smartphone more than 43.3% of the population spend more time on their smartphone in this lockdown. Earlier in average working days, 22.8% of the population spends rarely 2hrs on a smartphone but in this lockdown no. of people using their .There is a drastic increase in attachment /dependency on technology, around 26.7% increase in smartphone users' average time consumed.

CHART F



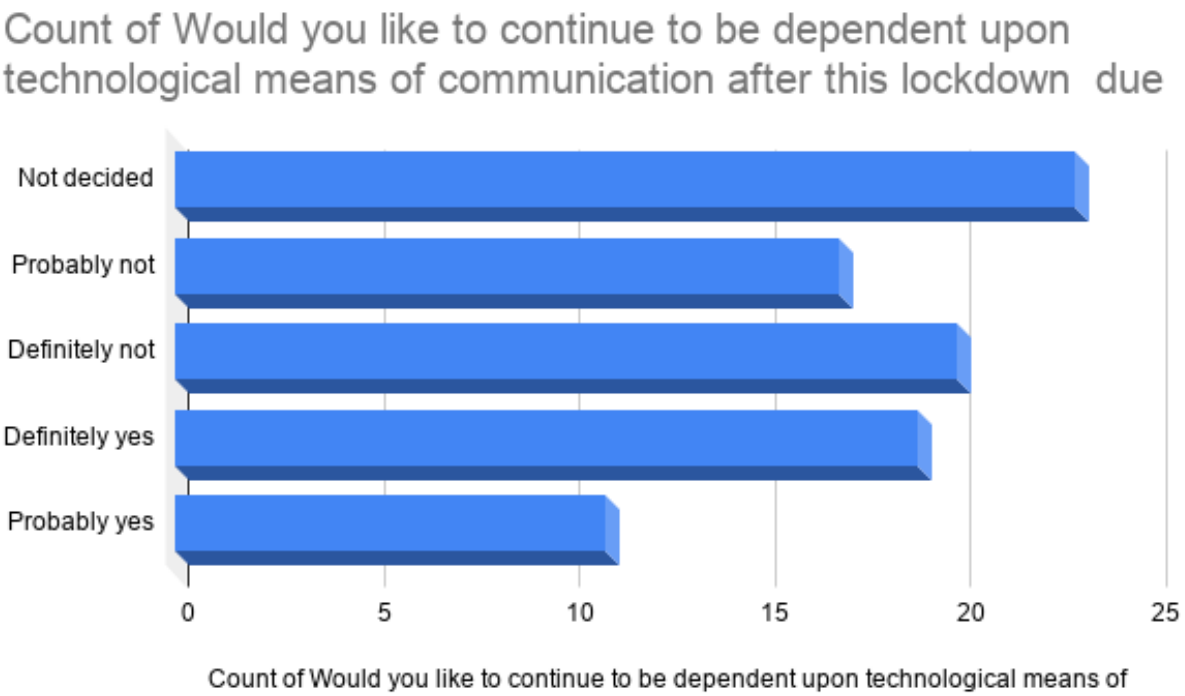
Interpretation:- It has been Interpretated that 32% of people agreed that they passed their lockdown happily due to their dependency on technological means of communication. Otherwise, it would be big trouble and which may lead to anxiety among them.

CHART G



Interpretation:- It has been Interpretated that To pass the time and get relief from boredom people keep engage themselves in Smartphone and other gadgets only 21% of the population use technology for online study and only 22.2% of population use it as work from home rest more than half of the population use it just for communication as well as gaming surfing, entertainment purpose.

CHART H



Interpretation:- It has been found that people are aware of health issues caused by excessive technology use in our everyday daily routine life. They agreed that only 12.2% of the population want to be dependent on technology even after the end of this lockdown/pandemic and a vast portion has not decided yet if we make them aware about various pros and cons about the excessive dependency or use chances are there they might not threaten their lives and live healthily.

TABLE 1: IT HAS BEEN FOUND THAT ASSOCIATION of age group and level of satisfaction on 5 point Likert scale in assessment of level of dependence of age group on technological means of communication at time of social distancing in the critical distress situation- pandemic covid19.

Table 1

LEVEL OF DEPENDENCE	**Age Below 21 yrs.**	**Age From 21-45 yrs.**	**Age above 45 yrs.**
Extremely Dependent	02	03	04
Moderately Dependent	04	05	06
Neutral	06	07	08
Rarely Dependent	07	07	11
Never Dependent	06	08	06
TOTAL	**25**	**30**	**35**

- $\bar{X}_j$ = sample mean of the j[th] treatment (or group),
- $\bar{X}$

TABLE 2:- It shows the Sample size, Sample Mean and Standard Deviation of different age group

	Group 1	Group 2	Group 3
Sample Size	n_1	n_2	n_3
Sample Mean	$\bar{X}_1$	$\bar{X}_2$	$\bar{X}_3$
Sample Standard Deviation	s_1	s_2	s_3

From the above result it has been found that H_0=Increase in dependency of three different age group, i.e. below age 21 yrs., age from 21-45 yrs., age above 45 yrs. on technological means of communication is the same as social distancing in critical distress situation pandemic COVID-19.

H_a=Increase in dependency on technological means of communication among three different age group, i.e. below age 21 yrs., age from 21-45 yrs., age above 45 yrs. is not same at the time of social distancing in critical distress situation pandemic COVID-19.

Calculation of mean of sample of three different age group

$$\text{Mean } (\bar{x}) = \frac{\sum x}{n}$$

TABLE C

AGE GROUP	MEAN (X)
Below 21 yrs.	05
Age from 21-45 yrs.	06
Age above 45 yrs.	07

CALCULATION OF GRAND AVERAGE OF MEANS:

$\underline{X}$ = _____

=_____

GRAND MEAN = 06

Table 3: Shows the deviations from mean of age group from 21-45 yrs.

	( )^2
6-6= 0	00
6-6= 0	00
6-6= 0	00
6-6= 0	00
6-6=0	00
Σ $_a$ - $\bar{X}$(grand mean)	00

The above table shows the deviations from mean of age group of 21-45 years

Table4 shows deviations from mean of age group below 21

	( )^2
5-6= -1	01
5-6= -1	01
5-6= -1	01
5-6= -1	01

5-6= -1	01
$\sum$ $_a$ - $\bar{X}$(grand mean)	05

Table 5: deviations from mean of age group above 45

	( )^2
7-6= -1	01
7-6= -1	01
7-6= -1	01
7-6= -1	01
7-6= -1	01
$\sum$ $_a$ - $\bar{X}$(grand mean)	05

SUM OF SQUARE BETWEEN SAMPLES

SSC = $\Sigma n_j (\bar{X}_j - \bar{X})^2$

= 5+0+5

= 10.

Table 6:-Calculation variance within sample

AGE GROUP	**MEAN (X)**
Below 21 yrs.	05
Age from 21-45 yrs.	06
Age above 45 yrs.	07

Table 7:- Deviation of different items in a representation from mean values of respective sample and square age group: below 21 yrs

$X_a - \bar{X}_a$	$(X_a - \bar{X}_a)^2$
2-5 = -3	09
4-5 = -1	01
6-5 = 01	01
7-5 = 02	04

6-5 = 01	01
$(\sum X_a - \bar{X}_a)^2$	16

Table 8:-Deviation of different age group: from 21-45 yrs

$X_b - \bar{X}_b$	$(X_b - \bar{X}_b)^2$
3-6 = -3	09
5-6 = -1	01
7-6 = 01	01
7-6 = 01	01
8-6 = 02	04
$(\sum X_b - \bar{X}_b)^2$	16

Table 9:- It is showing Standard deviation of age group: above 45 yrs.

$X_c - \bar{X}_c$	$(X_c - \bar{X}_c)^2$
4-7 = -3	09
6-7 = -1	01
8-7 = 01	01
11-7 = 03	09
6-7 = -1	01
$(\sum X_c - \bar{X}_c)^2$	21

SUM OF SQUARE BETWEEN SAMPLES

SSE = $\Sigma\Sigma\left(X-\bar{X}_j\right)^2$

= 16+16+21
= 53

TABLE 10:- ANOVA Test has been applied in this which gives 'f' Ratio

SOURCE OF VARIATION	**SUM OF SQUARE**	**df**	**MEAN SUM OF SQUARE**	**f RATIO**
BETWEEN SAMPLE	SSC = 10	μ_1 = 2	MSC = 05	
WITHIN SAMPLE	SSE = 53	μ_2 = 12	MSE = 4.41	

$\mu_{1\ =\ No.}$ of column – 1
= 3-1
μ_1 = 02

μ_2 = Total no. (n) – no. of column
= 15-3
μ_2 = 12
SSC: SUM OF SQUARE BETWEEN SAMPLES.
SSE: SUM OF SQUARE WITHIN SAMPLES.
MSC: MEAN SUM OF SQUARE BETWEEN THE SAMPLES.

MSC = $\frac{SSC}{NO.OF\ COLUMN-1}$
= $\frac{10}{2}$
MSC = 05

MSE: MEAN SUM OF SQUARES WITHIN SAMPLES
MSE = $\frac{SSE}{TOTAL\ NO.(N)-NO.OF\ COLUMN\ (C)}$
= $\frac{53}{12}$
MSE = 4.41

Ratio f: = $\frac{MSC}{MSE}$

=$\frac{5}{4.41}$

Ratio f: = 1.133

COMPARISON CALCULATED F VALUE WITH TABULAR F VALUE:

μ_1 = 02
μ_2 = 12

Tabulated f value = 3.89

IV. RESULTS:

Hence tabulated F value is more significant than the calculated f value. There are fewer deviations among three different age groups on technological means of communication through the ANOVA application. In this case, null Hypothesis is accepted. Therefore the level of dependency on technology is increasing equally the same for all the age group at times of social distancing in distress situation of COVID – 19.

V. FINDINGS

● Each group is equally responsible for the massive dependence and hike on technology in social distancing.

● People under the age groups of below 21 compromises on students that rely upon technology for online sessions and learning through online classrooms and video conferencing. Use of apps like zoom, Skype, and classroom has shown an increase in daily active users.

● People among the age group of 21-45 comprise individuals engaged in economic and household activities that resulted in work from home by online portals and conferences. Apart from this, people of this age group were equally active upon updates with news through different social networking sites: Twitter, Facebook, linkdin etc. They are also engaged with online videos, group video calls and other ways to diminish the effect of boredom.

● People in the age group of above 45 are believed to be updated with current happenings on the Internet. They also developed their relations through communicating and interacting with people, friends and relatives.

● There is a more dependency-on technology as it has created an ease of work to the individuals considerably.

VI. CONCLUSION

The extensive pandemic disease COVID 19 came up with consequences that impacted society's socio-economic environment, leading to a degraded level of the surrounding. Social distancing is a restoration solution to avoid exposure to disease affected people's lives with an outcome that disorganized people's physical and mental health. Moreover, it seems that people established social and interpersonal activities over technology. The use of technology in the lockdown has increased with very high rates, making people count more on technology as a communication source. India took a leading expansion in the use of data over the Internet for connecting to people, work from home, streaming videos and shows, online learning and other operations.

The outcomes show a similarity among different age groups of people using technology, as all the age groups are equally responsible for the instant rise in technical use during the social distancing. On the other hand, there is a rapid dependence on technology to conduct and subsist with the situation. People tend to make more use of the Internet in order to penetrate isolation. The use of the Internet for video conferencing, e leading, e-commerce, online sessions, gaming and surfing etc. to eliminate boredom. Based on social distancing results, people have made overuse of technology far more than the use done in regular days.

VII. SUGGESTION

As the more significant dependency increases, there are chances to face the handful effects as well. To move ahead with this situation, people need to break free of their devices and shift over to 'digital detox' to regain a healthy lifestyle. It is a time when a character ceases from automatic devices such as smartphones or computers, regarded as an opportunity to overcome stress or concentrate on social intercommunication in the natural world.

It improves sleep and concentration, reduces stress, improves happiness and even helps with mental health. Moreover, it prevents addiction to tech devices; also, it enhances time to experience nature, get physical exercise and practice mindfulness.

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