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IMPACT OF COVID-19 ON ONLINE LEARNING, MENTAL HEALTH AND FOOD CHOICES OF PARAMEDICAL DEGREE STUDENTS

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Abstract:
Many universities and institutions worldwide suspended classroom teaching due to the COVID 19 pandemic and switched to online teaching. The present cross-sectional study das carried out to analyze the effect if COVID-19 lockdown on the academic performance of paramedical students. Paramedical students were invited to answers on google form questionnaire. Online E-learning is the educational usage of electronical device, tools and internet means et al.2009. In the current research study higher than 90 % of the students shifted to traditional foods with least use of junk foods. Online learning education can be improved by making it more interactive, giving concise knowledge, and providing 3D virtual tools to mimic the real situation.

Keywords: *COVID-19, E-Learning, Mental health, Food choices.*

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INTRODUCTION:

Coronavirus disease 2019 (COVID -19) is firstly identified in Wuhan city , china in month of December 2019 (1) , later the ICTV identifies the causative agent of covid-9 as a novel coronavirus, SARs-COV-2 (severe acute respiratory syndrome coronavirus-2. Coronavirus disease 2019 outbreak spreads rapidly not only in china, but worldwide therefore, the who has announced it as pandemic on March 12, 2020. Covid-19 pandemic has disrupted the entire human population in term health, education and livelihood. In many countries, including India, typical face to face classes had to be suspended to ensure the student safety, lectures and patients. To decrease the impact of lockdown, medical and paramedical college had to fine another approach to teach medical and paramedical students, current technology enabled e-learning to be the core method of teaching the curriculum during the covid-19 pandemic. On line learning has been enabled by various online modes by causing application such as zoom, google meet, google classroom, webinars, you tube videos, etc. are playing pivotal role in the knowledge sharing process, even though the teachers in the institutions are the teachers in the institutions are covering the syllabus through e-learning applications.

The success of e-learning depends on many factors, including accessibility course content and assessment criteria. E- Learning, like any mode of teaching, has its advantage and disadvantage for both teachers and students. The epidemiological benefits of e-learning during the covid 19 pandemic, other benefits worth mentioning include access to resources regardless of fine and location , increase convenience and reduction of costs. E-learning classes also have limitations, including problems with internet access, poor internet connection quality and inadequate digital skills of the respondents.

Apart from education, covid-19 has serious issue on mental health of the people in general and students in particular. About 51.00 per cent of adults perceived the COVID-19 negatively affected their mental health. The COVID- 19 has direct and considerable effect on students through the execution of lockdown orders. Research studies demonstrated that the psychological stress following strict social confinement was moderated by the levels of the pre pandemic stress hormone cortisol. The most common diagnoses after Covid-19 were anxiety disorders (occurring in 17.00 %of patients), mood disorders (14.00 %), substance misuse disorders (7.00 %), and insomnia (5.00 %). The incidence of neurological results was lower, including 0.6 per cent for brain hemorrhage, 2.1 per cent for ischemic stroke, and 0.7 per cent for dementia (Anuradha, M. 2021).

As sound mind in a sound body, food in totally linked to immunity and in turn good health. COVID -19 pandemic has altered the menu burden of people. The massive importance has been given to home cooked & traditional foods and maintain hygienic aspects. The current study was conducted to analyze the impact of covid -19 pandemic on the academic showing of paramedical degree students and researches during lockdown.

METHODOLOGY:

Participants:

The study was to carried out during 2020-2021 in the medical college students pursuing bachelor of pharmacy (B.Pharm), bachelor of physiotherapy (BPT) Medical lab technician (MLT), Medical Record science (MRS) degree students were selected 25 in each in the four degree students. The total sample size was 100. The students who attended online classes during post covid-19 period were purposively selected to gather their experiences. The experimental research design was selected as an appropriate research design for the present research study. Online google questionnaire was created and sent to the students individually. Six-month duration was given to the students. Through telephonic conversations and in the classroom, questionnaire was clarified to the students. Then the responses in the form of data was collected. The collected data was analyzed by using statistical tools frequency and percentage.

Questionaire:

Online google questionnaire was developed by the authors for this study and sent to the students with different pharmacy groups in social media platform (WhatsApp groups) 6 month duration was given to the students.

This questionnaire consisted of 4 parts:

In the first part of the survey students were asked to enter their demographic detail (age, gender, year of study) and previously participated any online course.

In the second part, respondents were given 8 sets of options regarding the advantage & disadvantage of online learning.

The third part evaluated the effect of Covid 19 pandemic on the study, and the online learning during the lockdown, the effect of lockdown on academic performance electronic devices used to study online and virtual learning tool of online learning both in the

theoretical or practical common problems encountered in the online learning and suggestion to improve the online learning.

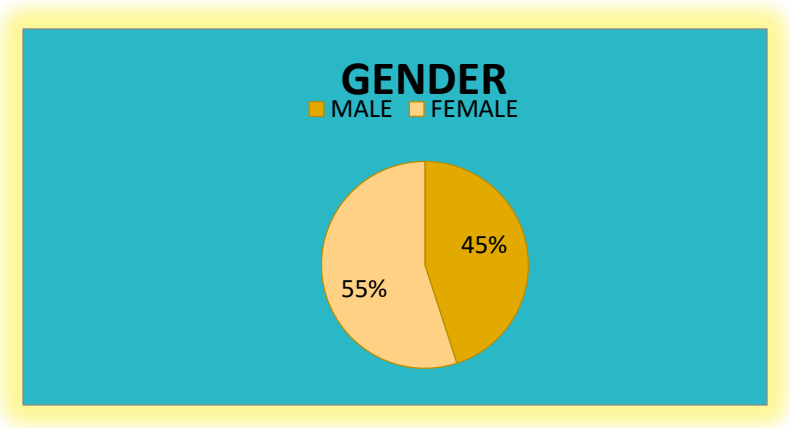
In fourth part students were asked to rate at level of acceptance online classes finally assessment of mental health disturbances suffered by students, and food choices and eating habit adopted by students.

RESULTS AND DISCUSSIONS:

Table no: 1 Gender wish distribution of participants

S.NO	GENDER	NO.OF STUDENTS	PERCENTAGE
1	MALE	45	45%
2	FEMALE	55	55%

Figure no: 1 Gender dish distribution of participants

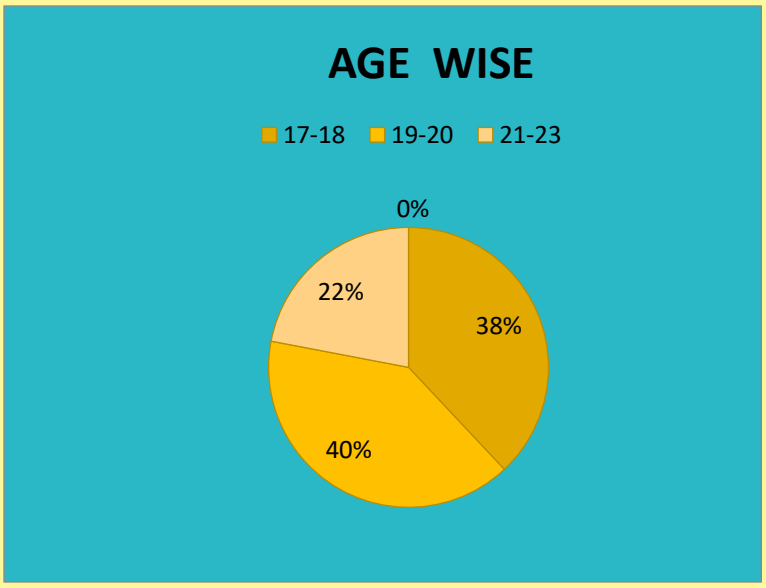


The participants which includes both male and females, the no of male students 45 (45%), female students55 (55%). The data's were presented in table.1 and figure no.1

Table no: 2 Age wish distribution of participants

S.NO	AGE	NO.OF STUDENTS	PERCENTAGE
1	17-18	38	38%
2	19-20	40	40%
3	21-23	22	22%

Figure no: 2 Age wish distribution of participants

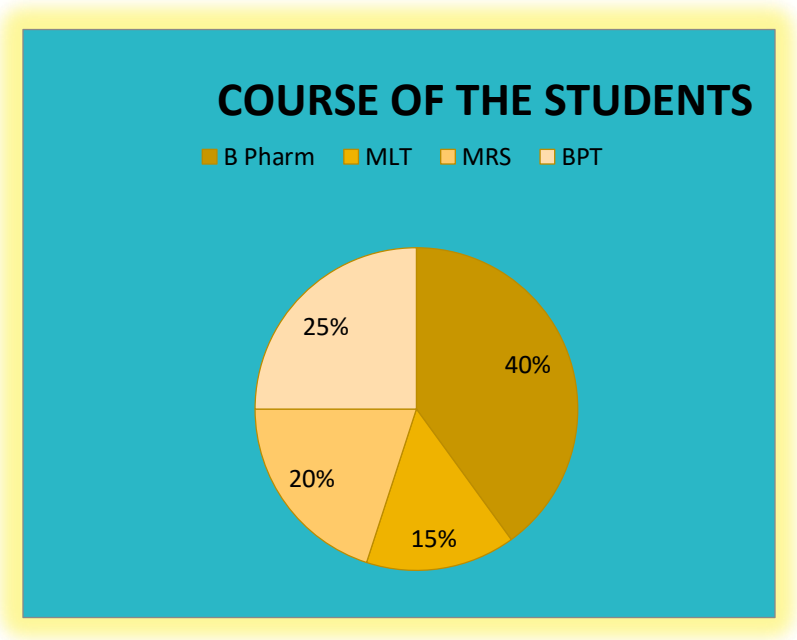


The age wise distribution das made for the participants with different age group such as 17-18, 19-20 and 21-23. About 38% of the participants were aged 17-18 years, 40% were aged 19-20 years, and 22% were aged 21-23 years.The data's were presented in table.2 and figure no.2

Table no: 3 Course wish distribution of participants

S.NO	COURSE	NO. OF STUDENTS	PERCENTAGE
1	B PHARM	40	40%
2	MLT	15	15%
3	MRS	20	20%
4	BPT	25	25%

Figure no: 3 Course wish distribution of participants

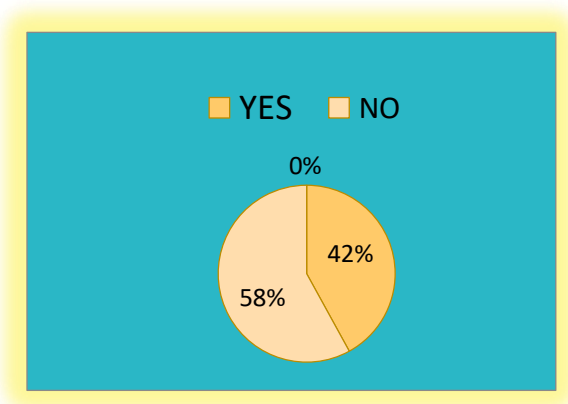


In this study the participants are different course 100 students were participated it includes B.Pharm 40(40%), MLT 15(15%), MRS 20(20%), BPT 25(25%). The data's were presented in table.3 and figure no.3

Table no: 4 Distribution of participants with previous experience in online learning

S.NO	PERVIOUS EXPERIENCE	NO .OF STUDENTS	PERCENTAGE
1	YES	42	42%
2	NO	58	58%

Figure no: 4 Distribution of participants with previous experience in online learning

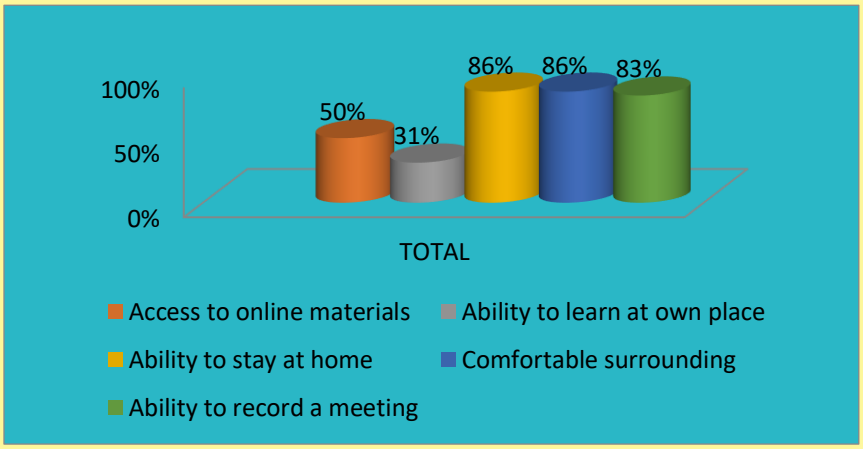


Applying the Technology Acceptance Model (TAM) to the institute medical students showed that the percentage of the respondent's answer on previous experience was 42%, 58% percentage of the respondent's has no previous experience in online learning. This means that users assess online learning systems implemented by being risk to use and operate. The data's were presented in table.4 and figure no.4

Table no: 5 Distribution of participants with advantage of online learning

ADVANTAGES OF ONLINE LEARNING	B.PHARM		MRS		MLT		BPT		TOTAL
Access to online materials	15	60%	13	52%	10	40%	12	48%	50%
Ability to learn at own place	10	40%	9	36%	7	28%	5	20%	31%
Ability to stay at home	23	92%	20	80%	21	84%	22	88%	86%
Comfortable Surrounding	22	88%	20	80%	21	84%	23	92%	86%
Ability to record a meeting	23	92%	21	84%	20	80%	19	76%	83%

Figure no: 5 Distribution of participants with advantage of online learning

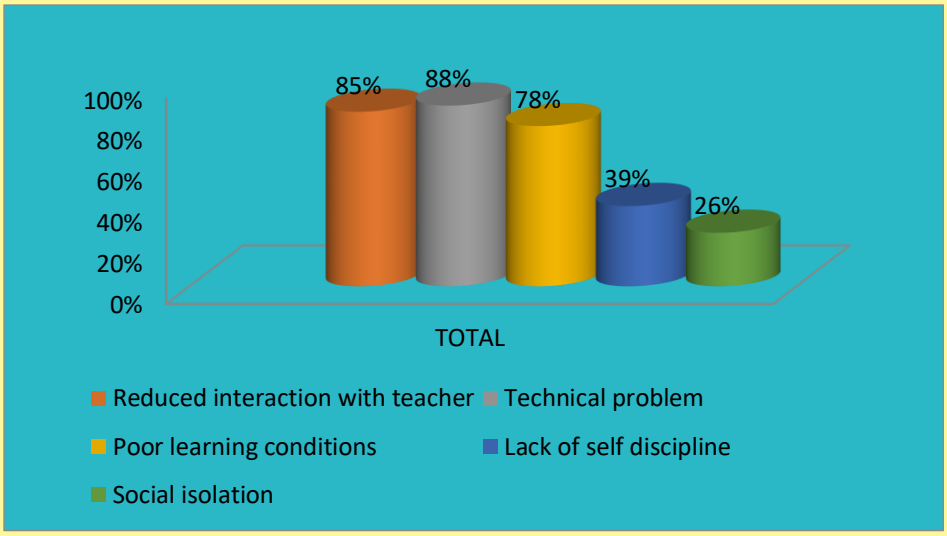


The most frequent advantages of online learning chosen by respondents were the ability to stay at home (86%), continuous access to online materials (50%), the opportunity to learn at your own place (31%), and comfortable surroundings (86%). The majority of respondents ability to record a meeting (83%). The data's were presented in table.5 and figure no.5

Table no: 6 Distribution of participants with disadvantage of online learning

S.NO	VARIABLE	B.PHARM		MRS		MLT		BPT		TOTAL
1	Reduced interaction with teacher	24	96%	23	92%	20	80%	18	72%	85%
2	Technical problem	24	96%	23	92%	20	80%	21	84%	88%
3	Poor learning Conditions	22	88%	20	80%	19	76%	17	68%	78%
4	Lack of self-discipline	10	40%	8	32%	9	36%	12	48%	39%
5	Social isolation	8	32%	6	24%	5	20%	7	28%	26%

Figure no: 6 Distribution of participants with disadvantage of online learning

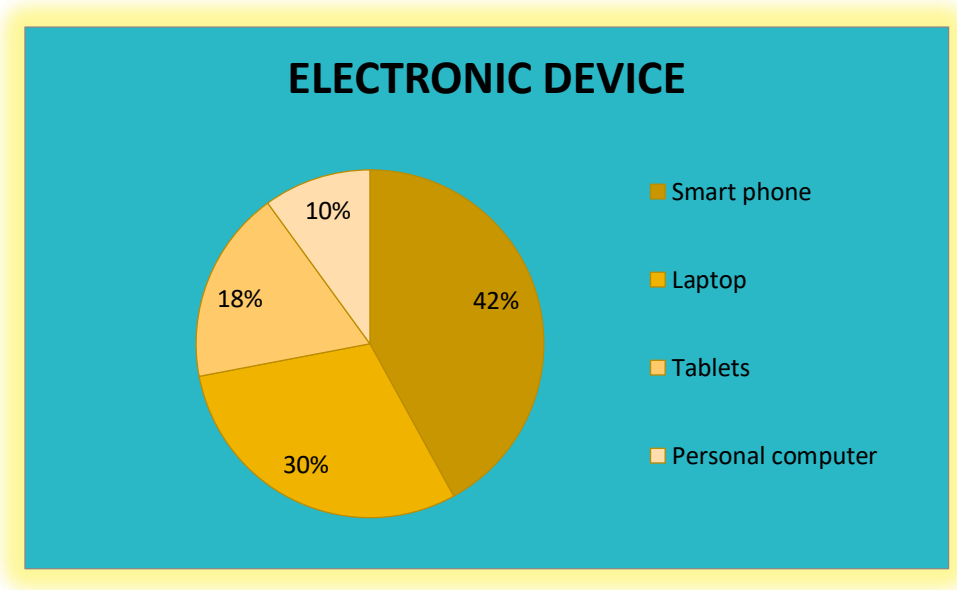


In spite of all these advantages, students perceived online learning offered lesser level of interactions compared to on campus conventional lecture model. The most frequent disadvantages of online learning is (85%) of students reduced interaction with teacher, causes some technical problems (88%), students with lack of self-discipline (39%), social isolation (26%). The data's were presented in table.6 and figure no.6

Table no: 7 Distribution of students electric device and virtual tools

S.NO	ELECTRONIC DEVICE	NO. OF STUDENTS	PERCENTAGE
1	Smart phone	42	42%
2	Laptop	30	30%
3	Tablets	18	18%
4	Personal computer	10	10%

Figure no: 7 Distribution of students electric device and virtual tools

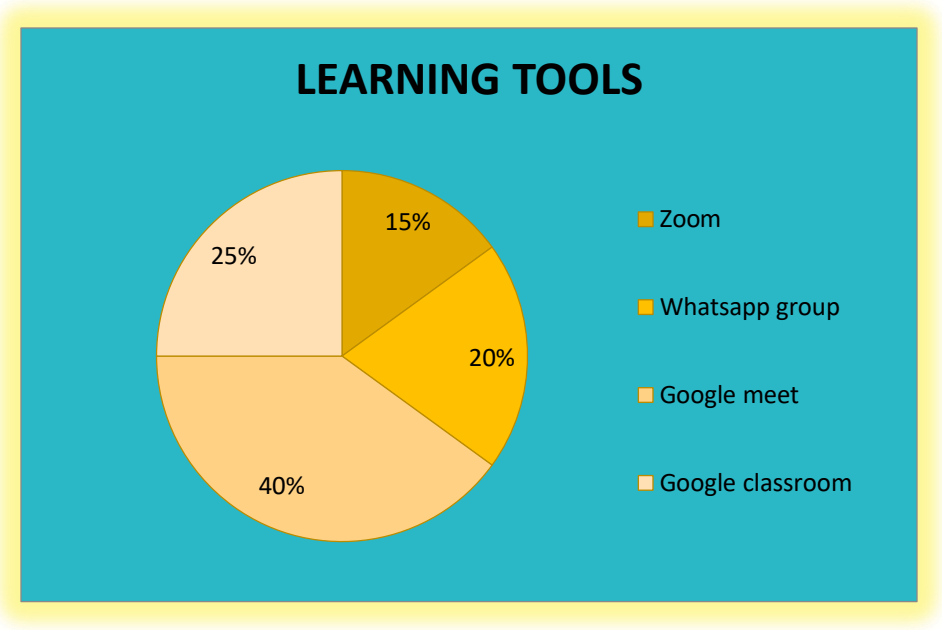


Data showed that participants used several electronic devices to study online. The most used device was the smart phone (42%) followed by laptop (30%) and tablet (18%), while the least used device was the personal computer (10%). The data's were presented in table.7 and figure no.7

Table no: 8 Distribution of students using learning tools

S.NO	LEARNING TOOLS	NO. STUDENTS	PERCENTAGE
1	Zoom	15	15%
2	Whatsapp group	40	20%
3	Google meet	25	40%
4	Google classroom	20	25%

Figure no: 8 Distribution of students using learning tools

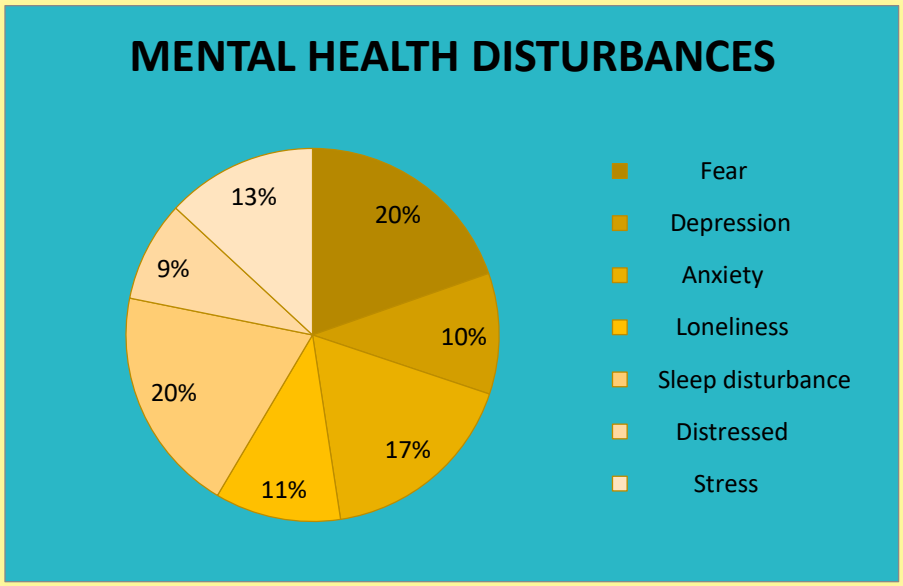


The distribution of these online tools was as follow; Google meet had the highest preference followed by Google classroom, WhatsApp and zoom. The most used device was the google meet (40%) followed by google classroom (25%) and WhatsApp group (20%), the data's were presented in table.8 and figure no.8

Table no: 9 Distribution of mental health distribution

S.No	Mental Health Disturbances	Frequency	Percentage
1	Fear	90	90
2	Depression	48	48
3	Anxiety	80	80
4	Loneliness	50	50
5	Sleep disturbance	90	90
6	Distressed	40	40
7	Stress	60	60

Figure no: 9 Distribution of mental health distribution

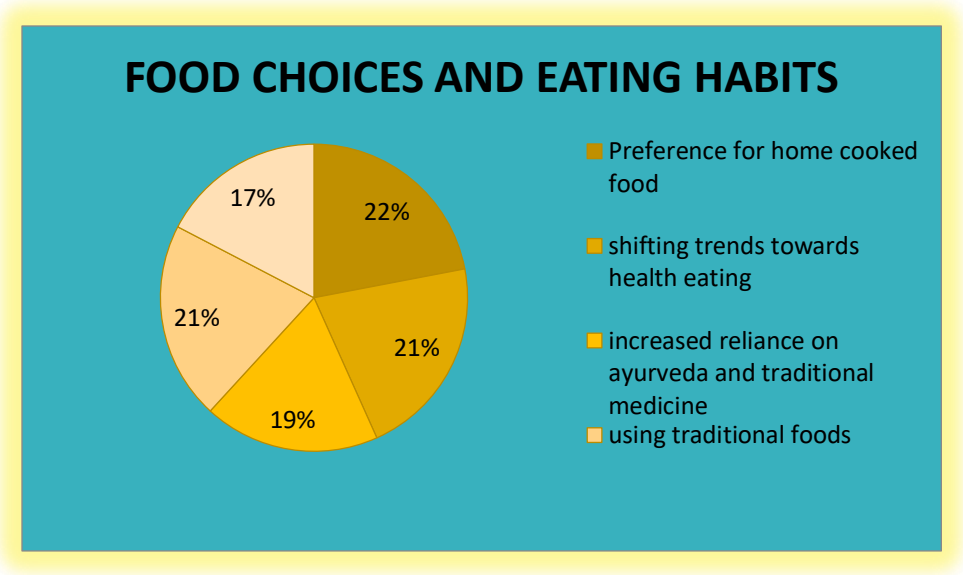


Fear, Sleep disturbance, and anxiety were normal responses that more than 60% of students suffer during the context of covid-19 pandemic. Faced with new realities of working from home, temporary unemployment of parents. Lack of physical contact with other family members and friends, academic uncertainties in terms of difficulty in concentrating on studies, stress dissatisfaction with the quality of teaching and fear of being failed in examination were associated with depression 48% of students. About 90 % of the students experienced sleep disturbances and nightmares as a consequence of stress during the covid -19 pandemic. The present research study also noticed that nearly 70% of the students were anxious and distressed due to feelings of isolation and loneliness. The data's were presented in table.8 and figure no.8

Table no: 9 Distribution of students food choices and eating habit

S.NO	FOOD CHOICES AND EATING HABITS	FREQUENCY	PERCENTAGE
1	Preference for home cooked food	95	95
2	shifting trends towards health eating	92	92
3	increased reliance on ayurveda and traditional medicine	80	80
4	using traditional foods	90	90
5	reduced use of junk foods	75	75

Table no: 9 Distribution of students food choices and eating habit



In this table identified that more than 95% of students shifted to home cooked food followed by using traditional foods 90% and opted healthier foods 92%. Closing of restaurants, hotel, street food shops during lockdown have forced the students to shift towards home cooked, traditional, healthier and nutrient dense foods. Food safety has become one of the most important during covid-19 pandemics. There was observable increase in using Ayurveda and traditional medicine by 80% of students. The awareness about Ayurvedic and traditional medicine was also given by the Ministry of Ayush, has released certain set of guidelines for immunity boosting along with yoga. One satisfactory finding of the present study was 75% of the students reduced the use of junk foods like fried items and street foods.

CONCLUSION:

The present study showed that electric learning is a valuable method of teaching paramedical students, online learning helps to keep the students up and running with a chance for self-study. Online learning education can be improved by making it more interactive, giving concise knowledge, and providing 3D virtual tools to mimic the real situation.

REFERENCE:

1. Zhu N, Zhang D, Wang W, Li X, Yang B, Song J, et al. A novel coronavirus from patients with pneumonia in China, 2019. N Engl J Med. (2020) 382:727– 33. doi: 10.1056/NEJMoa2001017
2. ICTV. Naming the 2019 Coronavirus. (2020). Available online at: https://talk.ictvonline.org/ (accessed December 07, 2020).
3. WHO. WHO Announces COVID-19 Outbreak a Pandemic. (2020).Available online at: https://www.euro.who.int/en/health-topics/healthemergencies/coronavirus-covid-19/news/news/2020/3/who-announcescovid-19-outbreak-a-pandemic (accessed August 25, 2020).
4. WHO. Coronavirus Disease (COVID-19) Pandemic. (2019). Available online at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019(accessed August 25, 2020).
5. Bedford JP, Gerry S, Hatch RA, Rechner I, Young JD, Watkinson PJ. COVID-19: towards controlling of a pandemic. Lancet. (2020) 395:1015-18. doi: 10.1016/S0140-6736(20)30673-5
6. Gostin LO, Wiley LF. Governmental public health powers during the COVID-19 pandemic: stay-at-home orders, business closures, travel restrictions. JAMA. (2020) 323:2137–38. doi: 10.1001/jama.2020.5460
7. Paital B, Das K, Parida SK. Inter nation social lockdown versus medical care against COVID-19, a mild environmental insight with special reference to India. Sci Total Environ. (2020) 728:138914. doi: 10.1016/j.scitotenv.2020.138914

8. Pragholapati A. COVID-19 impact on students. EdArXiv [Preprint].(2020). p. 1–6. doi: 10.35542/osf.io/895ed
9. Nicola M, Alsafi Z, Sohrabi C, Kerwan A, Al-Jabir A, Iosifidis C. et al.The socio-economic implications of the coronavirus pandemic (COVID-19): a review. Int J Surg. (2020) 78:185–93. doi: 10.1016/j.ijsu.2020.04.018
10. UNESCO. Education: FromDisruption to Recovery. (2020). Available online at:https://en.unesco.org/covid19/educationresponse (accessed May 24, 2020).
11. Esposito S, Principi N. School closure during the Coronavirus disease 2019. (COVID-19) pandemic: an effective intervention at the global level? JAMA Pediatr. (2020). doi: 10.1001/jamapediatrics.2020.1892. [Epub ahead of print].
12. Sahu P. Closure of universities due to Coronavirus Disease 2019. (COVID-19): impact on education and mental health of students and academic staff. Cureus. (2020) 12:e7541. doi: 10.7759/cureus.7541
13. Yamin M. Counting the cost of COVID-19. Int J Inform Technol. (2020) 20:1–7. doi: 10.1007/s41870-020-00466-0
14. UNESCO. Universities Tackle the Impact of COVID-19 on Disadvantaged Students. (2020). Available online at:https://en.unesco.org/news/universitiestackle-impact-covid-19-disadvantaged-students (accessed May 24, 2020).
15. Anuradha, M. (2021). Link between covid and mental health neurological condition: Lancet. The Indian Express.
16. DasguptaK, S. (2020). *Blog DA-IICT. Post-COVID 19 Higher Education in India - An Interview with* [Internet].
17. FMCG Gurus COVID-19 survey across 18 countries. For more information please contact info@fmcggurus.com
18. Joshi, O., Chapagain, B., Kharel, G., Poudyal, N.C., Murray, B.D., and Mehmood, S.R. (2020). Benifits and challenges of online instructions in agriculture and natural resource education. *Interactive Learning Environments*, 1-12.
19. Kopp, M., Groblinger, O., and Adams, S. (2019). Five common assumptions that prevent digital transformation at higher education institutions. *INTED2019 Proceedings* (pp. 1448-1457).
20. Korkmaz G., Toraman c. (2020) Are we ready for the post covid -19 education practice? An investigation into what educators think as to online learning. International Journal of technology in Eduaction and Science (IJTES). Volume. 4(4). PP. 293-309.
21. Means, B., Toyama, Y., Murphy, R., Bakia, M., and Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies.
22. World Health Organization. (2020). Mental Health and psychological considerations during the COVID-19 outbreak.
23. Michał Ba˛czek, MD∗ , Michalina Zaga_nczyk-Ba˛czek, MD, Monika Szpringer, MD, PhD,Andrzej Jaroszy_nski, MD, PhD, Beata Wo_zakowska-Kapłon, MD, PhD.
24. Alsoufi A, Alsuyihili A, Msherghi A, ElhadiA, Atiyah H, Ashini A, et al. (2020) Impact of theCOVID-19 pandemic on medical education:Medical students' knowledge, attitudes, andpractices regarding electronic learning. PLoS ONE 15(11): e0242905. https://doi.org/10.1371/journal.pone.0242905
25. Dr. Lakshmi M. Paloti1, Dr. Piragouda A. Ghanti International Journal of All Research Education and Scientific Methods (IJARESM), ISSN: 2455-6211 Volume 9, Issue 4, April -2021, Impact Factor: 7.429, Available osnline at: www.ijaresm.com