International Journal of Advanced Multidisciplinary Research
ISSN: 2393-8870
www.ijarm.com
(A Peer Reviewed, Referred, Indexed and Open Access Journal)
DOI: 10.22192/ijamr Volume 10, Issue 1 -2023

Research Article

DOI: http://dx.doi.org/10.22192/ijamr.2023.10.01.003

Technostress and its impact on Mental wellbeing and Academic productivity of Gen Z and Millennials

Dr. Roshni James, Meenal Sahu and Gulfiza
Xavier Institute of Management and Entrepreneurship, Bangalore

Keywords

Technostress, Gen Z, Millennials, Mental well-being, Academic Productivity

Abstract

Technology is something that has attracted a lot of interest and changes since covid-19. Lot of research and development is seen in the technology. And, the usage of technology has also increased a lot, especially among Generation Z or and Millennials.

Our study is on the stress created by the technology also known as Technostress on the Gen Zand Millennials. Due to the advancing and prevailing use of technology in today's world, the technostress is also prevailing among students.

This study cross-validates the technostress measurement tools using a sample of 201 studentsfrom private colleges in India.

The objective of this study is to find a relationship between technostress, mental well-being and academic productivity among Gen Z and Millennials in this competitive and VUCA world. The study showed that there is a positive relationship between technostress, mental well-being and academic productivity.

Introduction

Technostress first defined in 1984, is a phenomenon that arises when a person is exposed to information overload, constant contact with the majority of digital devices and is characterizedby particular symptoms at the cardiocirculatory, mental, and neurological levels. (Dr.ssa Marta Chiappetta. 2017)

Technology is widely used to improve teaching and learning and to automate academic procedures. Academic adoption of technology-enhanced learning has skyrocketed since Covid. ICT (Information and Communication Technology) use in higher education institutions has increased as a result of technological advancements and ubiquity. Technology is being used foracademic administration and student self-service through applications such as student life cycle management, MOOCs (Massive Open Online Courses), learning management systems, integrated online assessment, and online attendance management systems. Online learning and MOOCs were discovered to reduce students' higher education expenditures, and students were

discovered to have a favourable opinion of the use of ICT in the classroom. Technology has been shown to help reduce distance barriers and paperwork. ICT also assists HEIs (Higher Education Institutes) in improving academic administration, accelerating academic data processing, and increasing transparency. It is thought that incorporating technology into the classroom will enhance the process of teaching and learning. Although there are no questioning technology's advantages, there is a growing interest in learning how technology affects consumers negatively. According to earlier research, technology use in some situations may lead to stress. In response to negative external influences, according to Webster's dictionary stress is Stress is defined as "a mentally or emotionally disruptive or upsetting condition capable of affecting physical health, typically manifested by increased heart rate, rise in blood pressure, muscular tension, irritability, and even depression." “Take the Stress out of Your Life” authored by Jay Winner claims that stress raises the risk of many illnesses like obesity, cardiac diseases, Alzheimer, diabetes, depression, poor digestion, and asthma. Therefore, stress due to any reason or for any duration of time could be harmful to a person's life.

Few empirical research has investigated how common technostress is among the younger population, particularly students. Through decreased productivity, dropout rates, and departure from academic work, student technostress may increase the strain on higher education institutions. The frequency of technostress among students and its effects must thus be investigated. The features and behaviours of today's students are diverse, which makes them an intriguing population to study. By 2020, a new generation cohort known as "Digital Natives" will enter the workplace. These students were raised in a society where everyone has access to the Internet, and they regularly use ICT. Digital Natives (Desai & Lele, 2017). are used to multitasking, nonlinear learning, dynamic graphics, and fast, independent access to information. It would therefore be fascinating to investigate whether technostress is important to this generation, how prevalent it is among different student groups, and how it affects academic output and mental well-beingness. We use the (Tarafdar et al. 2007) proposed technostress scale to assess levels of technostress among undergraduate and graduate students at a private university and validate the instrument in an academic setting. Examining the connection between technological stress and academic productivity. The research aims to address the following questions:

- Do students' levels of technostress vary depending on their gender and age?
- Does technostress affect students' mental well-beingness?
- Does mental well-being then affect students' academic productivity?

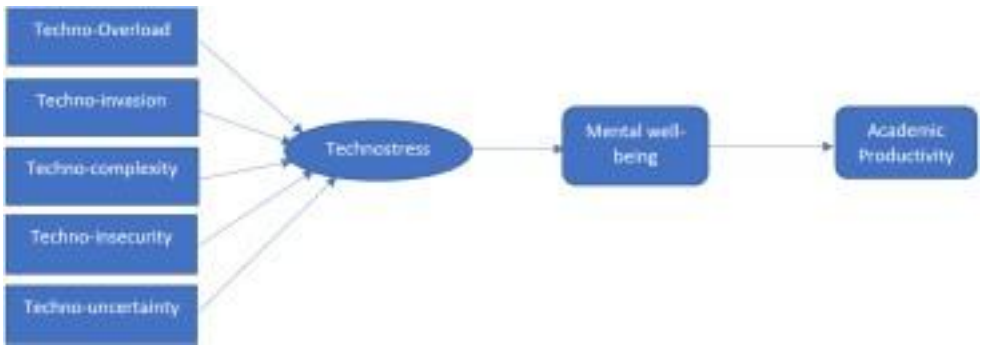

Fig 1: Conceptual Framework

Literature Review

Technostress is the problem of adaptation that an individual experiences when unable to cope with new technology. (P.Upadhyaya & Vrinda, 2020)

Technostress, which is the stress people suffer as a result of their failure to meet the demands of information technology (IT) use, is one such unfavorable effect (Ayyagari et al., 2011). In today's electronic age technology-related stress (technostress) is already very common and working in an online educational environment adds additional levels to this type of stress.(Sandra Bucci,et.al 2014)

Technostress is believed to be contributing a significantly percentage of anxiety and depressive among students. (Torales, J. et.al 2022)

Information and communications technology (ICT) use in organizations is increasingly causing employees to think critically about things like interruptions and information overload. These ideas have been incorporated in recent work under the umbrella term "technostress," which is stress brought on by an inability to handle the demands of organizational computer usage. (Tarafdar et al. 2007).

The traditional kind of stress is anxiety, which is characterized by high levels of physiological activation as well as tension and discomfort with regard to ICT. Computer anxiety has been used as a phrase to express the fear, trepidation, and agitation that people experience and is one of the most studied techno-strain sensations. (Dr. Somasundaram R ,2014)

Consistent cell phone use and data overload are both strongly linked to technostress, which adversely affects sleep quality and academic self-awareness. (Marta Chiappetta, 2017).

The greatest influence on obsessive social app usage and technostress is the demand for touch. Technostress is a serious outcome of compulsive use of social media apps. (Iskandar, Yulita Hanum P. 2021)

One of the most popular online pastimes is using social networking sites (SNS), such as Snapchat, Instagram, WhatsApp, and Twitter. According to estimates, 57% of people worldwide will use SNS in 2021. (DataReportal, 2021). While there are advantages to using social networking sites, a substantial amount of empirical research also reveals the drawbacks of SNS use (Cao et al., 2018, 2020; Luqman et al., 2017; Turel, 2015; Turel and Serenko, 2012).

The usage of smart devices by undergraduate students has led to a rise in technostress, which has a detrimental effect on their ability to learn using the devices. (Oladosu. Et.al. 2020) University students are benefiting in ways that have never been possible before from technology-enhanced learning, but they are also likely struggling because of the higher standards and altered academic expectations that come with it. (Lu Li. et.al 2020)

Technology use can have an impact on their physical and emotional health. (Murphy.et.al.2016),personal and professional life (Torre et al., 2019).

Overuse of technology has been linked to negative outcomes in terms of behavioral, affective, and cognitive effects. (David A. et.al, 2016), frequently linked to the onset of psychiatric and behavioral disorders. (Torre et al., 2019).

Technostress can have a number of harmful effects on a person's psychological and physical health, such as frustration, worry, and exhaustion (Al-Fudail.et.al. 2008 & Jena, R. 2015). It canalso have a negative impact on their performance at work by impairing their ability to focus, clouding their judgments about digital technologies, and other things (Estrada-Muñoz, C. et.al. 2020 & Tarafdar, M. et. al. 2014).

Technostress transforms into anxious and depressive symptoms amid the disturbance brought on by the outbreak of a pandemic disease through coping mechanisms. (Galvin, J., Evans. 2021)

The pandemic has led to a paradigm shift in the teaching methodology (from the traditional classroom method to online mode) this study helps to understand the stress experienced by Millennial and Gen Z generation in the usage of technology which has very much become thenorm especially after the pandemic.

Research Questions - Does using too much technology gives technostress to students of Gen Z and Millennials? Does it affect their mental well-being and academic productivity as well?

Research Objectives

1) To study the role of age & gender in creating technostress among Gen Z and Millennials.
2) To study the relation between technostress and mental well-being of Gen Z and Millennials.
3)To study the relation between mental well-being and academic productivity of Gen Z and Millennials.
4) To prove that mental well-being plays a mediator's role between technostress and academicproductivity of students.

Hypothesis of the study

The study began with an objective to check whether there is a significant relation between technostress, mental well-being, and academic productivity among students of Gen Z and Millennials and analysis of the factors that expedite technostress among students of Gen Z and Millennials. After thorough study the following hypotheses were formulated.

H1: Age and gender plays a significant role in developing technostress among students. H2: There is a significant relationship between technostress and mental wellbeing. H3: There is a significant relationship between mental wellbeing and academic productivity of students.

H4: Mental well-being mediates the relationship between technostress and academic productivityof students.

Methodology

The research design used for the study is descriptive. The target population is students belonging to the category of Gen Z and Millennials. The data type is Primary data.

Around 201 responses were received in total by using a mix of convenience and judgment sampling technique. The sample's respondents ranged in age from 20 to 35 years, with 88.5% of the students being between the ages of 18 and 22. The sample's median age is 20. Among the responses, 56.8% of students were male and 43.2% were female.

Students' levels of technostress were assessed using a 25-item scale developed by Tarafdar (2007) and their mental well-being were assessed using a 14-item scale the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) developed by R.Tennat (2007). A five-point Likert scalewas used to evaluate every item. Five sub-dimensions of technostress, which includes techno-overload, techno-complexity, techno-invasion, techno-insecurity, and techno-uncertainty, were represented as a second-order construct.

The initial analysis of the data showed that none of the responses were missing any information.

A confirmatory factor analysis was performed to determine the structure of the technostress sub-constructs and ensure construct validity. The principal component approach, factor analysis,and varimax rotation were employed (Ho, 2006). The findings showed that the Keiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-SA) had a satisfactory value of0.886. According to Malhotra (1999), KMO-MSA values higher than 0.5 suggest the validity of the factor analysis. All 23 of the instrument's items' factor loadings were seen in the rotated component matrix, and items having factor loadings of lower than 0.5 were eliminated from further analysis.

Techno-overload is the result of technology that is forcing students to work more quickly and for longer periods of time.

The term **"techno-invasion"** describes how technology encroaches on students' personal lives and compels them to work longer hours than are usual for college students.

Techno-complexity is a condition where pupils feel their skill sets are insufficient due to technology.

Techno-insecurity is described in the context of higher education as the state in which studentsfeel threatened by their subpar academic performance in comparison to other students who have more experience utilizing technology.

Techno-uncertainty is a condition when students experience uncertainty due to continuous changes and technological advancements.

Academic Productivity- productivity is sometimes referred to as "task productivity" in the information systems field and is defined as, the extent that an application enhances the user's output per unit of time. By academic productivity we mean a student's working efficiency and productivity related to his/her academic knowledge.

Mental Well-being- Our mental and physical health are both crucial to our overall well-being. When we are in good mental health, we are able to work well, enjoy our free time, and actively engage in our communities.

Reliability Test

The Cronchbach's Alpha value was used to determine the reliability of the questionnaire. The usual range for Cronbach's alpha reliability coefficient is 0 to 1. The coefficient, however, actually, has no lower limit. The internal consistency of the scale's items is directly proportional to how close Cronbach's alpha coefficient is to 1.0. A value of .8 is a reasonable goal as per a study titled "Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales" by Joseph A. Gliem & Rosemary R. Gliem (2003). For this research the alpha value came out to be .94 which is a decent score.

Reliability Statistics	
Cronbach's Alpha	N of Items
.940	42

Table 1: Reliability Statistics

Analysis

The demographic profiles of the respondents are summarized in the given tables.

Profile	Frequency	Percentage %
Age Profile		
Millennials	24	11.94%
Gen Z	177	88.06%
Total	201	100%
Gender		
Male	114	56.72%
Female	87	43.28%
Total	201	100%

Cohort	Age Group	Approximate Current Age
Millennials	1981 to 1996	Late 20s to early 40s
Gen Z	1997 to 2012	Under 25

Table 2 &3: Demographic table of respondents

H1-Technostress and age

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	635.770[a]	708	0.976
Likelihood Ratio	394.019	708	1.000
Linear-by-Linear Association	30.957	1	0.000
N of Valid Cases	201		

a. 890 cells (100.0%) have expected count less than 5. The minimum expected count is .01.

Table 4: Chi-square Test for Technostress and age

As per the findings, the p value is .976 which is greater than .050. Hence, it can be inferred that it is a statistically insignificant relationship. Thus, the null hypothesis—that there is no relationship at all between student's age and technostress—is accepted, while the alternative hypothesis—that age has a relationship with it—is rejected.

Technostress and gender

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	179.315[a]	177	0.437
Likelihood Ratio	248.306	177	0.000
Linear-by-Linear Association	0.047	1	0.828
N of Valid Cases	201		

a. 356 cells (100.0%) have expected count less than 5. The minimum expected count is .49.

Table 5: Chi-square Test for Technostress and gender

As per the findings, the p value is .437 which is greater than .050. Hence, it can be inferred that it is a statistically insignificant relationship. Thus, the null hypothesis—that there is no relationship at all between a student's gender and technostress—is accepted, while the alternative hypothesis—that gender has a relationship with it—is rejected.

H2- Technostress and mental well-being

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.298	4	12.825	22.784	.000b
	Residual	109.762	195	.563		
	Total	161.060	199			

a. Dependent Variable: Mental_Wellbeing

b. Predictors: (Constant), Techno_Uncertainty, Techno_Complexity, Techno_Overload, Techno_Invasion

Table 6: Anova analysis

As per the findings, the p value is .000 which is less than .050. Hence, it can be inferred that it is a statistically significant relationship. So, the alternative hypothesis that Technostress does affects mental well-being of students is accepted and the null hypothesis that there is no significant relationship between technostress and mental well-being of students is rejected.

H3- Mental Well-being and Academic productivity

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.257	1	42.257	61.941	.000b
	Residual	135.076	198	.682		
	Total	177.333	199			

a. Dependent Variable: Academic_Productivity

b. Predictors: (Constant), Mental_Wellbeing

Table 7: Anova analysis

As per the findings, the p value is .000 which is less than .050. Hence, it can be inferred that it is a statistically significant relationship. So, the alternative hypothesis that mental well-being does affect academic productivity of students is accepted and the null hypothesis that there is no significant relationship between mental well-being and academic productivity of students is rejected.

H4- Mental Well-being acts as a mediator between Technostress and Academic productivity of students.

As per the findings, from the above two hypothesis that:

H1-Technostress does affects mental well-being of students.
H2- And Mental wellbeing does affect academic productivity of students.

A conclusion can be drawn that mental well-being acts as a mediator between technostress and academic productivity of students. Therefore, the alternative hypothesis that mental well-being acts as a mediator between technostress and academic productivity of students is accepted and the null hypothesis that there it doesn't act as a mediator is rejected.

Factor Analysis

Sample Adequacy- The Kaiser-Meyer-Olkin (KMO) metric of sample adequacy is used to evaluate the applicability of factor analysis. If the data is suitable for further analysis, it will be indicated by the KMO value, which goes from 0 to 1. If KMO is greater than or equal to 0.5 andthe data have significant values (sig) or probabilities (p) less than 0.05, the data is already viable for subsequent factor analysis. This is according to a study by N Darmawan.et.al. (2017) titled "Validity Testing of Technology Acceptance Model Based on Factor Analysis Approach". High results (between 0.5 and 1.0) imply that factor analysis can be conducted. If the value is less than 0.5, factor analysis might not be acceptable. A group of 30 statements listing elements that were thought to be crucial in influencing technostress and mental well-being among students based on the review were selected for the current study. A principal component analysis using the varimax rotation method was conducted. The KMO measure of sampling adequacy showed a score of 0.926 with a significance of 0.00 which is a desirable score.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926
Bartlett's Test of Sphericity	Approx. Chi-Square	5190.798
	df	435
	Sig.	0.000

Table 8: KMO and Bartlett's Test

The goal of the factor analysis was to reduce the number of variables by clubbing them together into identifiable factors and provide us an improved comprehension of the key elements of the research. 39 items were taken initially but due to low factor loading 2 itemswere removed and 30 items were finalized.

The table Number 8 indicates 30 statements were reduced to 6 factors which explained 76.341 percent of the cumulative variance. The variance shows a significant impact of these factors affecting mental well-being and academic productivity of students. In other words, these 6 factors account for explaining 76.341 percent of students experience mental stress due to overuse or constant use of technology, which eventually brings down their academic productivity. Given that the Eigen value of the first factor is 8.766, i.e., greater than 1.0, it explains a greater range of variation than a single factor. This factor accounts for 29.220 percent of the variance. The second factor has an Eigen value of 4.063 and accounts for 13.542 percent of the variance. With an Eigen value of 2.772, the third factor accounts for more than 9.238 percent of the variance. The fourth factor has an Eigen value of 2.743 and accounts for 9.143 percent of the variation. With an Eigen value of 2.591, the fifth factor accounts for 8.637% of the variation. The sixth factor, which has an Eigen value of 1.968 and accounts for 6.561 percent of the variation.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	13.016	43.387	43.387	13.016	43.387	43.387	8.766	29.220	29.220
2	4.116	13.721	57.107	4.116	13.721	57.107	4.063	13.542	42.762
3	1.896	6.321	63.428	1.896	6.321	63.428	2.772	9.238	52.001
4	1.676	5.588	69.016	1.676	5.588	69.016	2.743	9.143	61.143
5	1.223	4.076	73.092	1.223	4.076	73.092	2.591	8.637	69.780
6	.975	3.249	76.341	.975	3.249	76.341	1.968	6.561	76.341
7	.769	2.564	78.905						
8	.550	1.832	80.737						
9	.537	1.788	82.525						
10	.502	1.674	84.199						
11	.441	1.471	85.671						
12	.404	1.346	87.016						
13	.375	1.251	88.268						
14	.360	1.200	89.468						
15	.330	1.100	90.567						
16	.302	1.005	91.572						
17	.284	.947	92.519						
18	.266	.887	93.406						
19	.246	.821	94.228						
20	.228	.759	94.986						
21	.207	.690	95.677						
22	.194	.646	96.323						
23	.175	.584	96.907						
24	.164	.547	97.454						
25	.163	.543	97.998						
26	.147	.490	98.488						
27	.134	.446	98.934						
28	.117	.389	99.323						
29	.105	.351	99.674						
30	.098	.326	100.000						

Extraction Method: Principal Component Analysis.

Table 9: Total Variance Explained

The factor loadings of the various factors that are combined are shown in the tables below. 30 statements were clubbed together to represent six factors: Techno-overload, Techno-invasion, Techno-complexity, Techno-uncertainty, Academic Productivity, and Mental well-beingness.

Rotated Component Matrix[a]

	Component					
	1	2	3	4	5	6
Techno-overload 1		.681				
Techno-overload 2		.837				
Techno-overload 3		.844				
Techno-overload 4		.795				
Techno-overload 5		.783				
Techno-invasion 2					.764	
Techno-invasion 3					.819	
Techno-invasion 4					.777	
Techno-complexity 2			.821			
Techno-complexity 3			.874			
Techno-complexity 4			.838			
Techno-uncertainty 1						.542
Techno-uncertainty 2						.767
Techno-uncertainty 3						.743
Academic Productivity 2				.829		
Academic Productivity 3				.839		
Academic Productivity 4				.844		
Mental well-beingness 2	.703					
Mental well-beingness 3	.778					
Mental well-beingness 4	.735					
Mental well-beingness 5	.717					
Mental well-beingness 6	.788					
Mental well-beingness 7	.791					
Mental well-beingness 8	.782					
Mental well-beingness 9	.840					
Mental well-beingness 10	.855					
Mental well-beingness 11	.832					
Mental well-beingness 12	.777					
Mental well-beingness 13	.810					
Mental well-beingness 14	.774					

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.
Variance explained is 76.34 %

Table 10: Rotated Component Matrix

The factor loadings for each component in the rotated component matrix are shown. Nine items in all, five from Techno-insecurity, one from Techno-invasion, one from Techno-complexity, and one from Mental Well-Beingness, had factor loadings of less than 0.5 and were thus excluded from further analysis.

Techno-overload-The loadings of Factor are displayed in the above table. The first five variableswith positive factor loadings were picked because they appear to co-vary with one another and share the majority of their variances. The factor identified is "**Techno-overload**" i.e., the overload of technology used by students. The factor loadings suggest that there is an overload of technology among students.

Techno-invasion- The next three variables in the above table show the factor loading of the factor 2 "Techno- invasion". This factor tells how technology has invaded the lives of students and how dependent they have become towards technology.

Techno-complexity- The next three variables in the above table depict the loadings of factor 3- "Techno-complexity". It tells how today's students face difficulties to adapt to the new technology and keep up with the trends and changes in the technology.

Techno-uncertainty- The next three variables in the above table depicts the loadings of factor 4- "Techno-uncertainty". This factor talks about the uncertainty of the technology and how unpredictable it is to change.

Academic Productivity- The next three variables depict the loading of factor 5- "Academic Productivity" which tells us about how the changes in technology has affected the overall productivity of the students and made them a prey to technology.

Mental Well-beingness- Finally, Factor 5- "Mental well-beingness" tells us about how the students mental health has been affected by the use of excess technology. The technology has invaded their lives and lowered their physical activities by increasing their time of sitting in front of screens. Eventually making the students prey to technology which is slowly eating away their mental peace and bringing down their academic productivity as well as their creativity level.

Results and Findings

Technostress and Age - According to the studies done before (Pallavi Upadhyaya & Vrinda ,2021) they found that there is a difference in technostress levels of students with different age groups. So, we tried to test it based on the responses that we got. We performed correlation analysis and found out that yes there is definitely correlation between the age and Technostress. That means age plays roles in creating technostress among students at different age groups.

Technostress and gender-Based on the analysis of their literature (Pallavi Upadhyaya & Vrinda ,2021) they found that there is a difference in technostress levels of male and female students. So, we went on a step ahead and based on the responses that we got there were 56.72% Males and 43.28% females. So, we went on to find correlations between Gender and Technostress and we found out that there is no significant relationship between Gender and Technostress thus, we can say that Gender has nothing to do with technostress.

The major finding of this research is that the technostress has an impact on the mental well-being of students, which in turn affects the academic productivity of students. A research done by Pallavi Upadhyaya & Vrinda (2021) proves that technostress does have an effect on students' academic productivity. This research proves that technostress affects students' mental well-beingness. Which often makes them feel lonely and makesthem prey to technology.

The finding of this paper is that there is an effect of mental well-being on academic productivity of Gen Z and Millennials. The negative effect on mental well-being of students leads to a downfall in their academic productivity. Depriving them from being able to give their 100% in their academics.

The other finding of this paper is that mental well-being plays the role of a mediator between technostress and academic productivity of students of Gen Z and Millennials.

The stress caused by using too much of technology negatively effects the mental well-beingness of students and hence the downfall of the mental well -beingness also brings down the academic productivity of the students.

Limitations

This study has few limitations such as we've only taken students from the southern partof India and with a small sample of 201 students. So future researchers can focus on studying the effect of technostress on a larger sample size and with diverse geographicdimensions.

Secondly, this study is not focused on personality of the students so future researchers can try to figure out how personality plays a role in developing technostress among students.

Thirdly, for this research, we have taken the sample only from the urban population of tier-1 cities. More research needs to be done taking representations from rural populations and tier-2 and tier-3 cities.

Fourthly, this study is only focused on-technostress is impacting the student's mental health and academic productivity. More research can be done to find a way to balance the technology and physical activity in a student's daily life for their overall development.

Conclusion

From the general understanding of the findings of the different factors with respect to the age groups it was found that the Technostress have varied impacts on different age groups. The gender of a person didn't seem to have a significant impact on causing technostress among students as per the Chi-square test. The factor analysis shows that six factors were extracted andeach of these six factors have a different magnitude of effect on students' perception about technology and its usage. The factors identified were Techno-overload, Techno-invasion, Techno-Complexity, Techno-uncertainty, Techno-insecurity, Academic Productivity and Mental Well-being. These attributes had varying degrees of influence over the technostress among GenZ and Millennials.

Too much use of technology is affecting the mental growth of the students, the future generation of our country. They are slowly becoming prey to technology and getting away from physical activities. On one hand while technology is making students develop, learn and excel in their careers, it's also hampering their overall development. Sitting too long in front of screens is slowly distancing them from physical activities which is a must for a child's both mental andphysical development.

Hence, this research is to show a different perspective of what the technology is doing to the coming generation of our developing country. Using too much technology may kill the mental development of the coming generation and will also affect their physical growth. Although technological changes are important, this research points out that we need to limit the screen timings of the students and let them have some physical activities too. This will make sure the overall development of our coming generation is well and good.

References

1. Abd Aziz, N., Awang Kader, M., & Ab Halim, R. (2021). The Impact of Technostress on Student Satisfaction and Performance Expectancy. *Asian Journal Of University Education*, 17(4), 538-552.
2. Abd Aziz, N., Awang Kader, M., & Ab Halim, R. (2021). The Impact of Technostress on Student Satisfaction and Performance Expectancy. *Asian Journal Of University Education*, *17*(4), 538-552.
3. Alvarez-Risco, A., Del-Aguila-Arcentales, S., Yáñez, J. A., Rosen, M. A., & Mejia, C. R. (2021). Influence of technostress on academic performance of university medicine students in Peru during the COVID-19 pandemic. Sustainability, 13(16), 8949.
4. Con Qi (2019). *Behaviour & Information Technology.* Vol. 38, Issue 12.Pg 1337-1354. 5.
5. Desai S.P & Dr. Lele V. (2019). *Behaviour & Information Technology* .Vol.38, 2019 - Issue 12
6. Galvin, J., Evans, M. S., Nelson, K., Richards, G., Mavritsaki, E., Giovazolias, T., ... & Vallone, F. (2022). Technostress, coping, and anxious and depressive symptomatology in university students during the COVID-19 pandemic. *Europe's Journal of Psychology*, 18(3), 302-318.
7. Iskandar, Y. H. P. (2021). The Factors Influencing Compulsive Social Apps and Its Impact on Technostress among Students. Anatolian Journal of Education, 6(2), 207-220.

8. La Torre, G., Esposito, A., Sciarra, I. *et al.* Definition, symptoms and risk of techno-stress: a systematic review. *Int Arch Occup Environ Health* 92, 13–35 (2019)
9. Monideepa Tarafdar.et.al. (2019). *Information System Journal*. Vol. 29, Pages 6-42
10. Murphy, Kathryn DNSc, NP. Is technology affecting our health?. *Nursing Made Incredibly Easy!*: July/August (2016) - Volume 14 - Issue 4 - p 44-52.
11. Oladosu, Kamaldeen K.; Alasan, Ndaceko J.; Ibironke, Emmanuel S.; Ajani, Hammed A.; Jimoh, Taofeeq A. *International Journal of Education and Development using Information and Communication Technology*, v16 n2 p40-47 (2020).
12. Ragu-Nathan. (2014). *Journal of Management Information Systems.* Vol. 24, 2007 - Issue.1
13. Sandra Bucci, Matthias Schwannauer, & Natalie Berry (2019).*Building an Integrative Science for Psychotherapy for the 21st Century*, Vol.92, Issue 2 Pgs 277-297.
14. Schettino, G., Marino, L., & Capone, V. (2022). The Impact of University-Related Variables on Students' Perceived Employability and Mental Well-Being: *An Italian Longitudinal Study. Sustainability*, 14(5), 2671.
15. Scott, D.A., Valley, B. & Simecka, B.A. Mental Health Concerns in the Digital Age. *Int J Ment Health Addiction* 15, 604–613 (2017).
16. T. Kolenik and M. Gams, "Persuasive Technology for Mental Health: One Step Closer to (Mental Health Care) Equality?," *in IEEE Technology and Society Magazine*, vol. 40, no. 1, pp.80-86, March (2021).
17. Tennant, R., Hiller, L., Fishwick, R. *et al.* The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health Qual Life Outcomes* 5, 63 (2007). https://doi.org/10.1186/1477-7525-5-63
18. Torales J, Torres-Romero AD, Di Giuseppe MF, et al.(2022). Technostress, anxiety, and depression among university students: A report from Paraguay. *International Journal of SocialPsychiatry.* 68(5):1063-1070.
19. Torales, J., Torres-Romero, A. D., Di Giuseppe, M. F., Rolón-Méndez, E. R., Martínez-López, P. L., Heinichen-Mansfeld, K. V., ... & Ventriglio, A. (2022). Technostress, anxiety, and depression among university students: *A report from Paraguay. International Journal of Social Psychiatry*, 00207640221099416.
20. Upadhyaya, P., Vrinda Impact of technostress on academic productivity of university students. *Educ Inf Technol* 26, 1647–1664 (2021).
21. Verkijika, S. F. (2019). Digital textbooks are useful but not everyone wants them: *The role oftechnostress. Computers & Education*, 140, 103591.
22. Wang, X., Li, Z., Ouyang, Z., & Xu, Y. (2021). The Achilles Heel of Technology: How Does Technostress Affect University Students' Wellbeing and Technology-Enhanced Learning. *International Journal of Environmental Research and Public Health*, 18(23), 12322.
23. Whelan, E., Golden, W., & Tarafdar, M. (2022). How technostress and self-control of social networking sites affect academic achievement and wellbeing. *Internet Research*.
24. Xinghua Wang, Seng Chee Tan, Lu Li, Technostress in university students' technology-enhanced learning: An investigation from multidimensional person-environment misfit, *Computers in Human Behavior*, Volume 105, (2020), 106208.
25. Y. Choqque-Cabrera, Y., J. Malaga-Villalba, M., & M. Talavera-Mendoza, F. (2021, May). Technostress in the frequency of use of ICT. In 2021 3rd *International Conference on ModernEducational Technology* (pp. 93-99).
26. Cao, X., Masood, A., Luqman, A. and Ali, A. (2018), "Excessive use of mobile social networking sites and poor academic performance: antecedents and consequences from stressor-strain-outcome perspective", Computers in Human Behavior, Vol. 85, pp. 163-174.

27. Luqman, A., Cao, X., Ali, A., Masood, A. and Yu, L. (2017), "Empirical investigation of Facebook discontinues usage intentions based on SOR paradigm", Computers in Human Behavior, Vol. 70, pp. 544-555.
28. Turel, O. (2015), "Quitting the use of a habituated hedonic information system: a theoretical model and empirical examination of Facebook users", European Journal of Information Systems, Vol. 24 No. 4, pp. 431-446.
29. Turel, O. and Serenko, A. (2012), "The benefits and dangers of enjoyment with social networking websites", European Journal of Information Systems, Vol. 21 No. 5, pp. 512-528.
30. Ayyagari, R., Grover, V. and Purvis, R. (2011), "Technostress: technological antecedents andimplications", MIS Quarterly, Vol. 35, pp. 831-858.
31. Al-Fudail, M.; Mellar, H. Investigating teacher stress when using technology. *Comput. Educ.* 2008, *51*, 1103–1110.
32. Jena, R. Technostress in ICT enabled collaborative learning environment: An empirical study among Indian academician. *Comput. Hum. Behav.* 2015, *51*, 1116–1123.
33. Estrada-Muñoz, C.; Castillo, D.; Vega-Muñoz, A.; Boada-Grau, J. Teacher technostress in theChilean school system. *Int. J. Environ. Res. Public Health* 2020, *17*, 5280.
34. Tarafdar, M.; Tu, Q.; Ragu-Nathan, T. Impact of technostress on end-user satisfaction and performance. *Manag. Inf. Syst.* 2014, *27*, 303–334.

Access this Article in Online

Website: www.ijarm.com

Subject: Management Information System

Quick Response Code

DOI:10.22192/ijamr.2023.10.01.003

How to cite this article:
Roshni James, Meenal Sahu and Gulfiza. (2023). Technostress and its impact on Mental wellbeing andAcademic productivity of Gen Z and Millennials. Int. J. Adv. Multidiscip. Res. 10(1): 26-39.
DOI: http://dx.doi.org/10.22192/ijamr.2023.10.01.003