Salud, Ciencia y Tecnología - Serie de Conferencias. 2024; 3:714
doi: 10.56294/sctconf2024714

Category: Education, Teaching, Learning and Assessment

ORIGINAL

Education vs Entertainment on the Mobile screen time spent per day by Students in Higher Education in Tami Nadu

Educación vs Entretenimiento en el tiempo de pantalla móvil gastado por día por los estudiantes de Educación Superior en Tami Nadu

K. Bhagyasri[1]

[1]Department of Mathematics, National College (Autonomous), Affiliated to Bharathidasan University. Tiruchirappalli -620001, Tamil Nadu, India.

Cite as: Bhagyasri K. Education vs Entertainment on the Mobile screen time spent per day by Students in Higher Education in Tami Nadu. Salud, Ciencia y Tecnología - Serie de Conferencias. 2024; 3:714. https://doi.org/10.56294/sctconf2024714

Submitted: 19-06-2023 **Revised:** 09-09-2023 **Accepted:** 02-01-2024 **Published:** 03-01-2024

Editor: Dr. William Castillo-González

ABSTRACT

In the modern digital age, mobile phone have become ubiquitous tools in the lives of humans, shaping their daily routines and influencing various aspects of their academic and personal lives, it is travelling with us everywhere all the time. Mobile phone is becoming our primary memory nowadays, though the whole world is in our palm, are we distracted by the entertainment apps. This study helps us to investigate and examine the students mobile screen time used per day was for educating or entertaining. Apps send frequent alerts that disrupt focus and encourage immediate interaction, the ability to switch between multiple apps seamlessly can fragment attention and reduce productivity. This research aims to shed light on the prioritization and distribution of time spent on mobile devices.

Keywords: Education; Entertainment; Mobile Screen; Time Spent; Students; Higher Education; Tami Nadu.

RESUMEN

En la era digital moderna, el teléfono móvil se ha convertido en una herramienta omnipresente en la vida de los seres humanos, configurando sus rutinas diarias e influyendo en diversos aspectos de su vida académica y personal; viaja con nosotros a todas partes todo el tiempo. El teléfono móvil se está convirtiendo en nuestro principal recuerdo hoy en día, aunque el mundo entero esté en la palma de nuestra mano, nos distraemos con las aplicaciones de entretenimiento. Este estudio nos ayuda a investigar y examinar el tiempo de pantalla móvil de los estudiantes utilizado por día fue para educar o entretener. Las aplicaciones envían alertas frecuentes que interrumpen la concentración y fomentan la interacción inmediata, la posibilidad de cambiar entre varias aplicaciones sin problemas puede fragmentar la atención y reducir la productividad. Esta investigación pretende arrojar luz sobre la priorización y distribución del tiempo dedicado a los dispositivos móviles.

Palabras clave: Educación; Entretenimiento; Pantalla Móvil; Tiempo Dedicado; Estudiantes; Educación Superior; Tami Nadu.

INTRODUCTION

Smart phones play a vital role in today's human's life. There is no student today without a smart phone, yes it sounds good that every student has a smart phone in this developing country, but at the same time it's an alarm to study whether the smart phones are used by our students in the right sense who are the future pillars of our country. The study helps us to examine whether the students are spending their precious time in entertaining themselves or educating themselves. Today, there are 8,93 million smartphone apps worldwide, with 3,553 million apps in the Google play store and 1,642 million in the Apple app store. There is a data stating that smart phone users have 40 apps installed on their mobile device, and access 9 to 10 apps daily. In 2022 there were 4 55 000 education apps in the Google play and Apple app store a slight increase on the 4 39 000 apps available in 2021. Mobile apps are expected to generate more than $ 613 billion in revenue by 2025. In 2023, 255 billion app has been downloaded which is 25 billion increase over the previous year. Amazon app store, the third largest app store, has 483 thousand apps available for mobile devices with the android operating system. The ubiquity of smartphones has significantly transformed how today's youth spend their time, bridging the gap between Education and Entertainment. This study delves into the multifaceted ways in which the younger demographic utilizes mobile phones, exploring the symbiotic relationship between Education pursuits and recreational activities.

Education

One of the most noteworthy aspects of the young generation's engagement with mobile phones is the emphasis on education. With a plethora of educational apps and online platforms readily available, students can access a wealth of information at their fingertips. From interactive learning modules to virtual classrooms, mobile phones have revolutionized the educational landscape. Whether preparing for exams or seeking additional knowledge, the ease of access to educational resources on mobile devices has empowered students to tailor their learning experiences to their individual needs.

Entertainment

Simultaneously, mobile phones have become synonymous with entertainment for the young generation. Social media platforms serve as virtual meeting place, enabling individuals to connect, share experiences, and express themselves. Mobile phones have transformed the way young people consume media, allowing them to enjoy their favorite content anytime, anywhere. Gaming, too, has witnessed a surge in popularity, with mobile devices serving as portable gaming to complex multiplayer experiences, mobile gaming consoles. From casual games to complex multiplayer experiences, mobile gaming has become a major recreational outlet.

Balance Act

While the integration of mobile phones into education and entertainment is undeniable, the challenge lies in striking a balance. The constant connectivity and access to a wealth of information can lead to distractions and potential misuse. Proponents argue that the ability to multitask and manage various aspects of life through a single device fosters efficiency, while critics highlight concerns about screen time and its impact on mental health.

Objective

1. To examine the total screen time spent per day by the students of higher education.
2. To study how often students are distracted by the entertainment apps while using education apps.
3. To examine the usage of mobile phone without Entertainment apps.

METHOD

Study design

A study was conducted by taking a student survey through Google form containing a set of questions. Screen time you spend per day, which app distracts you a lot, which career option best aligns your aspiration, Academic status, Gender, number of Education apps and Entertainment apps you are aware of, rate the usage of smart phone, can you use your smart phone without Entertainment apps, suggest the screen time not to exceed per day. This Google form was circulated to students among various colleges at different districts in Tamil Nadu. The following study is done based on 1045 responses we received.

Participants and eligibility criteria

Undergraduate Students

Currently enrolled in undergraduate programs (such as Bachelor's degree).

Students from various disciplines (e.g., Arts, Science, Engineering, Commerce).

https://doi.org/10.56294/sctconf2024714

Both male and female students.
Different age groups within the undergraduate level (typically 18-24 years).

Postgraduate Students

Currently enrolled in postgraduate programs (such as Master's degree, PhD).
Students from various fields of study.
Both male and female students.
Different age groups within the postgraduate level (typically 21-30 years).

Eligibility Criteria

Must be a registered student at the participating college/university.
Should be willing to participate voluntarily and provide accurate information.

Survey Methodology

Sampling: use a stratified sampling method to ensure representation from both undergraduate and postgraduate levels across different colleges and districts.

Data Collection: conduct surveys using structured questionnaires distributed electronically (via email or online survey tools) or in person.

Ethical Considerations: ensure adherence to ethical guidelines, including obtaining informed consent from participants and maintaining confidentiality of responses.

Perceptions: attitudes towards balancing education and entertainment screen time, impact on academic performance, etc.

Variables

Crosstabulation

			Education	Entertainment	Total
Gender Female Count			495	263	758
		Expected Count	437,4	320,6	758,0
	Male	Count	108	179	287
		Expected Count	165,6	121,4	287,0
Total		Count	603	442	1045
		Expected Count	603,0	442,0	1045,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)		Exact Sig. (1-sided)
Pearson Chi-Square	65.318[a]	1	<.001		
Continuity Correction[b]	64.189	1	<.001		
Likelihood Ratio	65.005	1	<.001		
Fisher's Exact Test				<.001	<.001
N of Valid Cases	1045				

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.250	<.001
	Cramer's V	.250	<.001
N of Valid Cases		1045	

Figure 1. (V_1 versus V_3 and V_4)
Note: since the p value< 0,001) is less than 0,05, H_1 is accepted

https://doi.org/10.56294/sctconf2024714

- V_1 - Gender (Male/Female).
- V_2 - Current academic status (UG/PG/ Research Scholar).
- V_3 - More screen time on mobile phone was spent for Education.
- V_4 - More screen time on mobile phone was spent for Entertainment.
- V_5 - Using mobile phone without entertainment app.
- V_6 - Distracted by entertainment apps.
- V_7 - Career option that best aligns your aspiration.

H_0: Null Hypothesis (There is no statistically significant difference between the two variables, $p \geq 0,05$).
H_1: Alternative Hypothesis (There is statistically significant difference between the two variables, $p < 0,05$).
Expected count: the frequency that would be expected in a cell, on average, if the variables are independent.

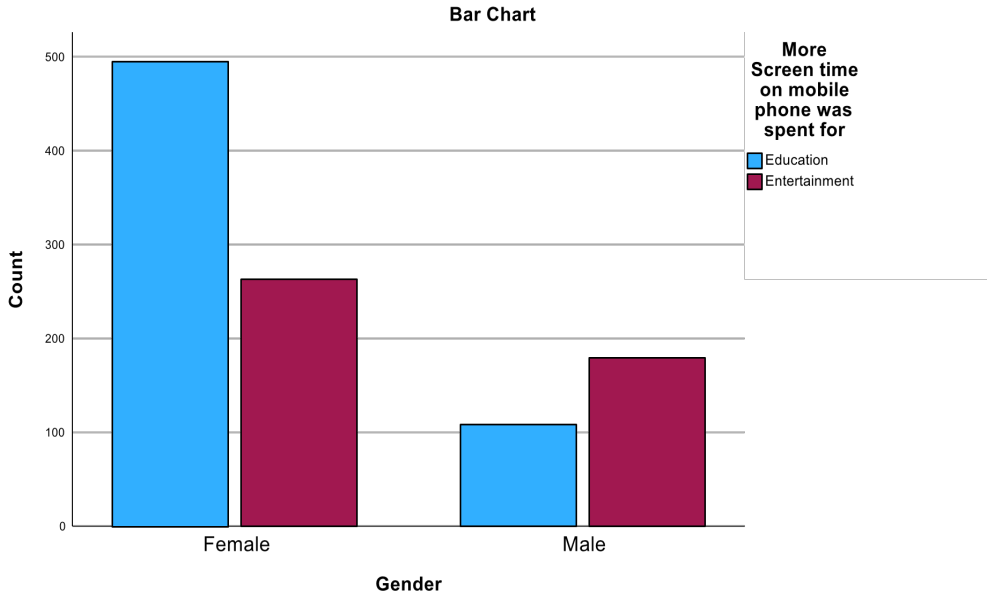

Figure 2. Gender plays a significant difference on the usage of mobile phone for education and entertainment

Crosstabulation

			No	Yes	Total
Gender	Female	Count	332	426	758
		Expected Count	333.7	424.3	758.0
	Male	Count	128	159	287
		Expected Count	126.3	160.7	287.0
Total		Count	460	585	1045
		Expected Count	460.0	585.0	1045.0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.054[a]	1	.816		
Continuity Correction[b]	.026	1	.871		
Likelihood Ratio	.054	1	.816		
Fisher's Exact Test				.834	.435

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	-.007	.816
	Cramer's V	.007	.816
N of Valid Cases		1045	

Figure 3. (V_1 versus V_5)
Note: since the p value (0,816) is greater than 0,05, H_0 is accepted

https://doi.org/10.56294/sctconf2024714

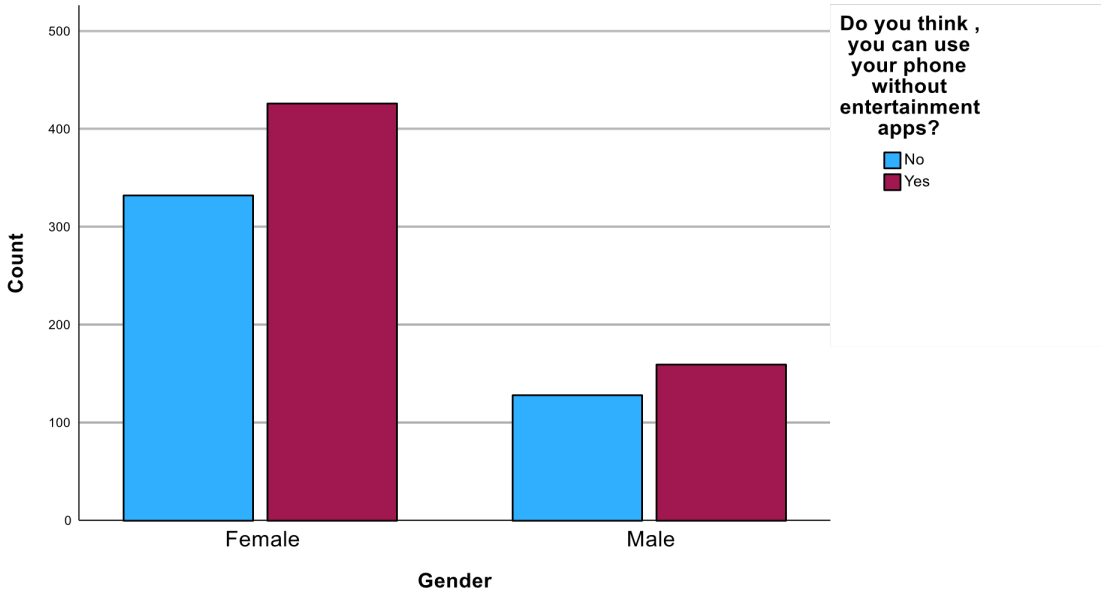

Figure 4. Gender has no significant difference on the usage of mobile phone without entertainment apps

Crosstabulation

		Education		Entertainment	
		N	%	N	%
Current Academic Status	PG	51	8.5%	70	15.8%
	Research Scholar	3	0.5%	5	1.1%
	UG	549	91.0%	367	83.0%
Total		603	100.0%	442	100.0%

		Total	
		N	%
Current Academic Status	PG	121	11.6%
	Research Scholar	8	0.8%
	UG	916	87.7%
Total		1045	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	15.201[a]	2	<.001
Likelihood Ratio	15.001	2	<.001
N of Valid Cases	1045		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.121	<.001
	Cramer's V	.121	<.001
N of Valid Cases		1045	

Figure 5. (V_2 versus V_3 and V_4)
Note: since the p value (<0,001) is less than 0,05, H_1 is accepted

https://doi.org/10.56294/sctconf2024714

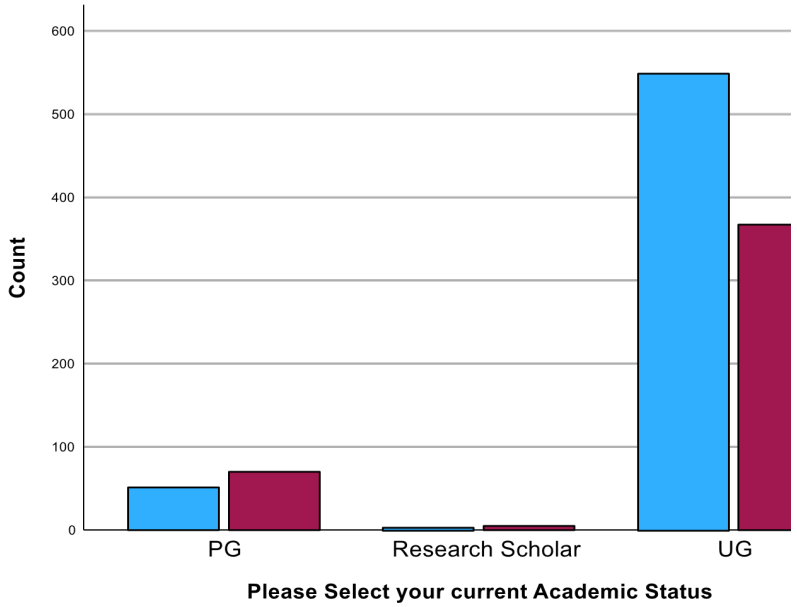

Figure 6. Current academic status plays a significant difference on the usage of mobile phone for entertainment and education

Crosstabulation

		Maybe		No	
		N	%	N	%
Current Academic Status PG		39	11.2%	32	11.9%
	Research Scholar	4	1.1%	2	0.7%
	UG	305	87.6%	236	87.4%
Total		348	100.0%	270	100.0%

		Yes		Total	
		N	%	N	%
Current Academic Status PG		50	11.7%	121	11.6%
	Research Scholar	2	0.5%	8	0.8%
	UG	375	87.8%	916	87.7%
Total		427	100.0%	1045	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi - Square	1.233 [a]	4	.873
Likelihood Ratio	1.223	4	.874
N of Valid Cases	1045		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.034	.873
	Cramer's V	.024	.873
N of Valid Cases		1045	

Figure 7. (V_2 versus V_6)
Note: since the p value (0,873) is greater than 0,05, H_0 is accepted

https://doi.org/10.56294/sctconf2024714

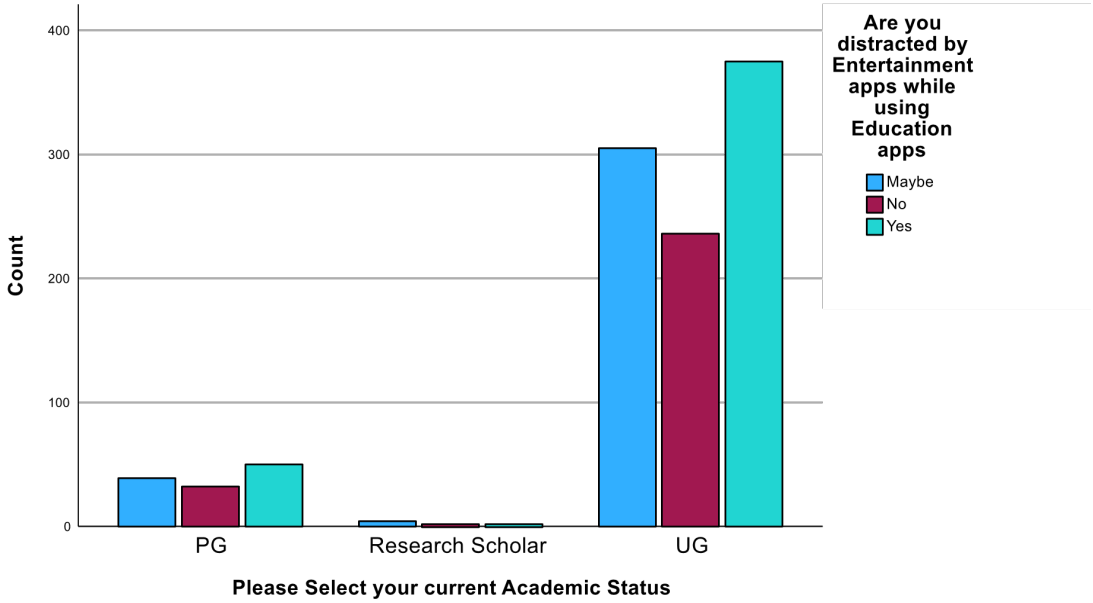

Figure 8. Current academic status has no statistical significance the distraction while using mobile phone for Education purpose

Crosstabulation

		No		Yes
		N	%	N
Please Select your current Academic Status	PG	63	13.7%	58
	Research Scholar	6	1.3%	2
	UG	391	85.0%	525
Total		460	100.0%	585

		Yes	Total	
		%	N	%
Please Select your current Academic Status	PG	9.9%	121	11.6%
	Research Scholar	0.3%	8	0.8%
	UG	89.7%	916	87.7%
Total		100.0%	1045	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.957[a]	2	.031
Likelihood Ratio	6.985	2	.030
N of Valid Cases	1045		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.082	.031
	Cramer's V	.082	.031
N of Valid Cases		1045	

Figure 9. (V_2 versus V_5)
Note: since the p value (0,031) is less than 0,05, H_1 is accepted

https://doi.org/10.56294/sctconf2024714

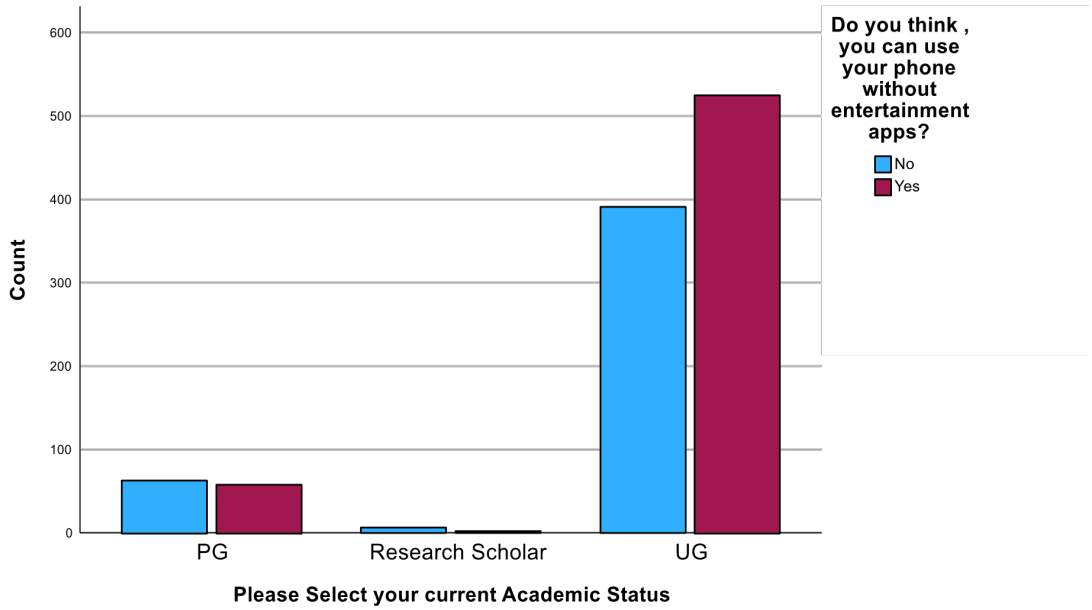

Figure 10. Current academic status plays a significant difference on the usage of mobilephone without entertainment apps

Crosstabulation

		Education		Entertainment
		N	%	N
Career option that best aligns with your aspirations:		6	1.0%	9
	Civil Services	41	6.8%	37
	Entrepreneurship	39	6.5%	55
	Government Employee	426	70.6%	243
	Private Sector	44	7.3%	56
	Research & Development	47	7.8%	42
Total		603	100.0%	442
		%	N	%
Select the career option that best aligns with your aspirations:		2.0%	15	1.4%
	Civil Services	8.4%	78	7.5%
	Entrepreneurship	12.4%	94	9.0%
	Government Employee	55.0%	669	64.0%
	Private Sector	12.7%	100	9.6%
	Research & Development	9.5%	89	8.5%
Total		100.0%	1045	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-square	31.245[a]	5	<0.001
Likelihood Ratio	31.069	5	<0.001
N of Valid Cases	1045		

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0.173	<0.001
	Cramer's V	0.173	<0.001
N of Valid Cases		1045	

Figure 11. (V_7 versus V_3 and V_4)
Note: since the p value (<0,001) is less than 0,05, H_1 is accepted

https://doi.org/10.56294/sctconf2024714

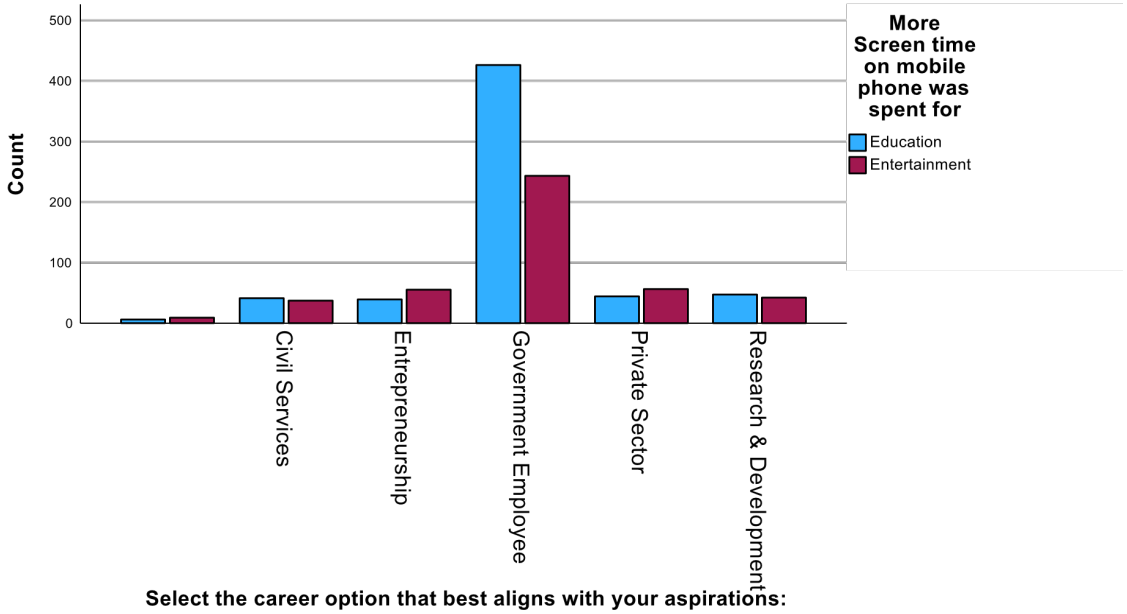

Figure 12. There is statistical significance between the Career that best aligns you and the more screen time was spent for Education or Entertainment

Crosstabulation

		N	%
Career option that best aligns with your aspirations:		7	1.5%
	Civil Services	36	7.8%
	Entrepreneurship	38	8.3%
	Government Employee	290	63.0%
	Private Sector	45	9.8%
	Research & Development	44	9.6%
Total		460	100.0%

		Yes		Total	
		N	%	N	%
Career option that best aligns with your aspirations:		8	1.4%	15	1.4%
	Civil Services	42	7.2%	78	7.5%
	Entrepreneurship	56	9.6%	94	9.0%
	Government Employee	379	64.8%	669	64.0%
	Private Sector	55	9.4%	100	9.6%
	Research & Development	45	7.7%	89	8.5%
Total		585	100.0%	1045	100.0%

Chi-Square Tests

	Value	df		Asymptotic Significance (2-sided)
Pearson ChiSquare	1.901[a]		5	0.863
Likelihood Ratio	1.897		5	0.863

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	0.043	0.863
	Cramer's V	0.043	0.863
N of Valid Cases		1045	

Figure 13. (V_7 versus V_5)
Note: since the p value (0,863) is greater than 0,05, H_0 is accepted

https://doi.org/10.56294/sctconf2024714

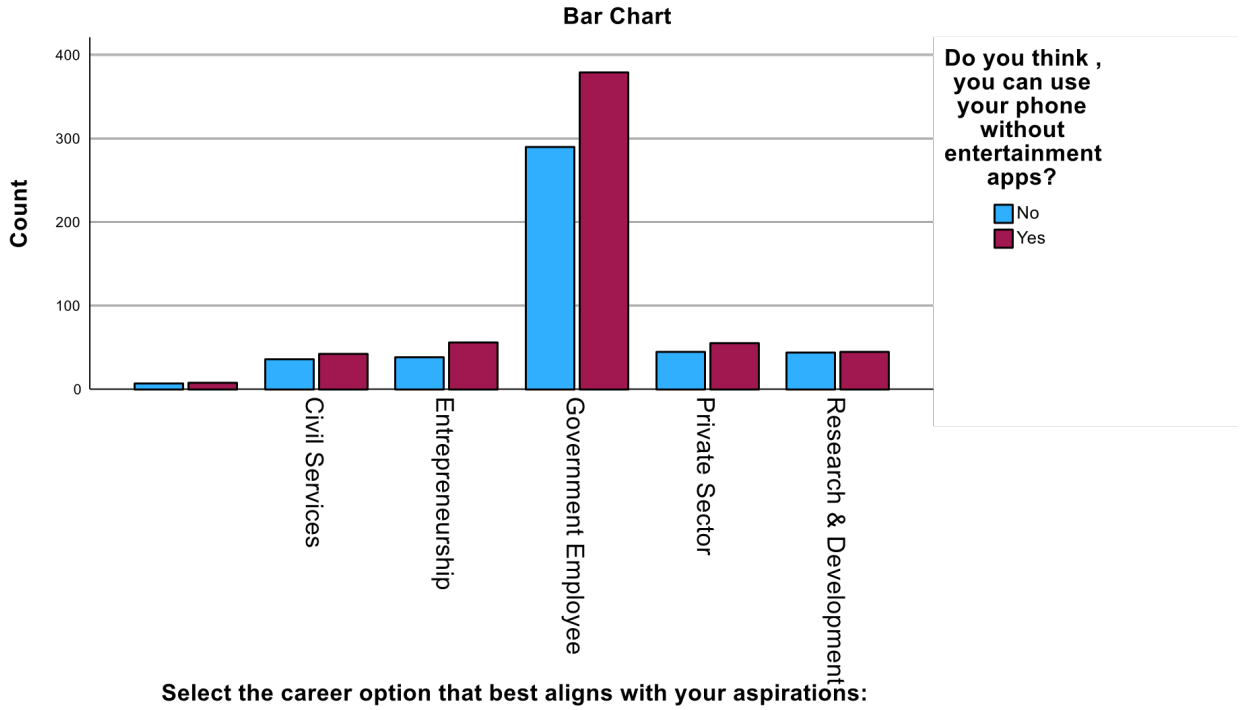

Figure 14. There is no statistical significance between the Career option that best aligns with your aspiration and the usage of mobile phone without Entertainment apps

RESULTS

The research objectives were successfully met using SPSS software for data analysis. The statistical techniques applied provided some of the major findings as illustrated below.

Figure 1: (V_1 Versus V_3 and V_4) - H_1 is accepted. Gender plays a significant difference on the usage of mobile phone for education and entertainment.

Figure 3: (V_1 Versus V_5) - H_0 is accepted. Gender has no significant difference on the usage of mobile pone without entertainment apps.

Figure 5: (V_2 Versus V_3 and V_4) - H_1 is accepted. Current academic status plays a significant difference on the usage of mobile phone for entertainment and education.

Figure 7: (V_2 Versus V_6) - H_0 is accepted. Current academic status has no statistical significance the distraction while using mobile phone for Education purpose.

Figure 9: (V_2 versus V_5) - H_1 is accepted. Current academic status plays a significant difference on the usage of mobilephone without entertainment apps.

Figure 11: (V_7 versus V_3 and V_4) - H_1 is accepted. There is statistical significance between the Career that best aligns you and the More screen time was spent for Education or Entertainment.

Figure 13: (V_7 Versus V_5) - H_0 is accepted. There is no statistical significance between the Career option that best aligns with your aspiration and the usage of mobile phone without Entertainment apps.

CONCLUSIONS

The report of the study released is based on a survey of 1045 respondents from students of various colleges in Tamil Nadu. Some of the major findings states that 3,3 % students do not have their personal mobile phone, 57,9 % use mobile screen time more for Education while 42 % use for Entertainment. 15,7 % rate the usage of mobile is highly rated for Education and less rated for Entertainment while 8,4 % rate the usage of mobile phone is highly rated for Entertainment and less rated for Education but 25,9 % rate both Education and Entertainment equally. 59,4 % suggest less than 2 hrs screen time per day is good for updating and 72,7 % suggest screen time not to exceed 2 hrs per day. 46,2 % say that they are distracted by you tube and 44,4 % say that they are distracted by Instagram. In conclusion, todays young generation navigates a dynamic landscape shaped by the integration of mobile phones into their lives. The synergy between Education and Entertainment reflects the adaptability of this demographic to the technological advancement in the current century. As mobile devices continue to evolve, it is imperative to foster a conscious and balanced approach to their use, ensuring that the benefits of Education and Entertainment are maximized while mitigating potential drawbacks.

BIBLIOGRAPHIC REFERENCES

1. Al-Sahaf, H.; Bi, Y.; Chen, Q.; Lensen, A.; Mei, Y.; Sun, Y.; Tran, B.; Xue, B.; Zhang, M. A survey on evolutionary machine learning. J. R. Soc. New Zealand 2019, 49, 205–228.

https://doi.org/10.56294/sctconf2024714

2. Duc Bui, Yuan Yao, Kang G Shin, Jong-Min Choi and Junbum Shin, “Consistency analysis of data-usage purposes in mobile apps”, In Proceedings of the 2021 ACM SIGSAC Conference on Computer and Communications Security, pp. 2824-2843, 2021.

3. Francisco J Martínez-López, Yangchun Li and Susan M Young, Social Media Monetization: Platforms Strategic Models and Critical Success Factors, Springer Nature,

4. A. Kankanhalli, B. C. Tan and K. K. Wei, User adoption and usage of mobile apps: An empirical investigation, vol. 66, pp. 2419-2434, 2015.

5. C. L. Hsu and H. P. Lu, Understanding users’ mobile app behavior: An empirical study of app usage, vol. 48, pp. 99-108, 2015.

6. Google Play: number of available apps 2009-2023 Published by Laura Ceci, Jan 19, 2024.

7. Fundamentals Of Mathematical Statistics Paperback – 1 January 2018by S.C.. Gupta (Author)

FINANCING

The authors did not receive financing for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: K. Bhagyasri.
Data curation: K. Bhagyasri.
Formal analysis: K. Bhagyasri.
Research: K. Bhagyasri.
Methodology: K. Bhagyasri.
Drafting - original draft: K. Bhagyasri.
Writing - proofreading and editing: K. Bhagyasri.

https://doi.org/10.56294/sctconf2024714