

## COMPARATIVE STUDY OF SOCIAL MEDIA PLATFORM USERS USING STATISTICAL TOOLS AND TECHNIQUES

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### ABSTRACT

Social media is a collective tool for communication. Some of the common and most widely used social media platform includes WhatsApp, Facebook, Twitter, Instagram, You tube, blog, etc. The use of social media has both negative and positive impacts on users. In this paper our aim to study most frequently used social media especially to the social media user. So, we are interested to study which social media users using some statistical Tools and Techniques based on secondary data available on Internet. Our study shows that The face book you tube, WhatsApp and Instagram platforms are more used.

**Key Words:** Social Media Platform, Graphical Representation, Chi-square test, T-test, Level of significance.

### 1. INTRODUCTION

In nut-shell, social media is significant part of our lives today. The youth must be able to use their time productively to improve their lives and not squander their valuable time. To be on social media is not a choice today. Social media have become prominent parts of life for many young people today. Most people engage with social media without stopping to think what the effects are on our lives, whether positive or negative. According to various research studies in the field of online social networks, it has been revealed that these sites are impacting the lives of the youth greatly. When using these sites such as Twitter, Facebook, WhatsApp, etc. there are both positive and negative effects on the youth. As the youth tend to spend many hours on these sites, they rarely have face-to-face interaction. Other negative effects of social networking various peoples suggested included encouraging poor spelling and grammar. In recent years an increasing number of studies have investigated the ways in which the Internet and social media facilitate acts of violence against children and adolescents King et.al, (2007): . In addition, social media has also been used as a vehicle for inflicting self-harm—most notably, cyber-suicide see Cash et.al (2013) Today's youth are avid users of social networking sites—e.g., Twitter. Approximately 90% of adolescents use the Internet regularly while 70% have a user profile on at least one social networking site Subrahmanyam et.al. (2009). Research suggests that adolescents use the online environment to explore matters important to them in their off-line lives Subrahmanyam et.al. (2009). In this study we compare different social media platform users with following objectives. Prakash S. Chougule et.al (2020) study the repercussions of social media on college teacher their study shows that the maximum teacher used social media for teaching and learning about 3-5 Hrs. in week. Also, teachers are used E-mail for teaching process and used pendrive for storing the information. Most of the teachers used Flip-cart networking sites for purchasing teaching instruments on mobile and computer. WhatsApp is more preferable for important massage and notes. The Availability of students training in college for the awareness of social media is dependent on area. The proportion of social media users in rural and urban is same. So, finally we conclude that, the social media in teaching practice is helpful for effective teaching. Tejaswi S. Kurane and Prakash S. Chougule (2020) studied the impact of social media used by college youth their study shows that there is good as well as bad side effect on college youth. Most of the youth used WhatsApp for sharing notes & messages. Further analysis we conclude that boys are mostly used social media as compare to girls. Moreover, gender and awareness about social media in college students are independent. Furthermore, gender and area from which the youth came are independent; also types of phone and area from which the youth came are independent. Prakash S. Chougule et.al (2020) study the impact of social media on society their study shows that in rural area male users of social networking sites are greater in number than female users. In urban area male users of social networking sites are greater in number than female users. Impact of social networking sites on social life in urban area and rural area is positive. Health and academic performance in rural area is more positively impacted. A male as well as female user of social networking sites in rural is less than urban area. The area and users of social networking sites are independent. Effect of use of different social networking sites on lifestyle and area are independent. Users of social networking sites and area are positively associated. Sharing of personal, social and economic aspects on social networking sites is not uniformly distributed over the rural area and urban area. In this study we make comparative Study of social media platform users based on statistical Tools.

## 2. OBJECTIVES

- To study pattern of social media users.
- To study the significance difference between male and female users
- To compare who are most social media users.
- To study which social media platform is more used in the world.

## 3. METHOD OF DATA COLLECTION

Various method of collecting data are employed by social scientist. There are two methods of data collection which are primary data and secondary data. The secondary data was taken from internet and the website is “<https://oosga.com/social-media/ind/>”

## 4. STATISTICAL TECHNIQUES

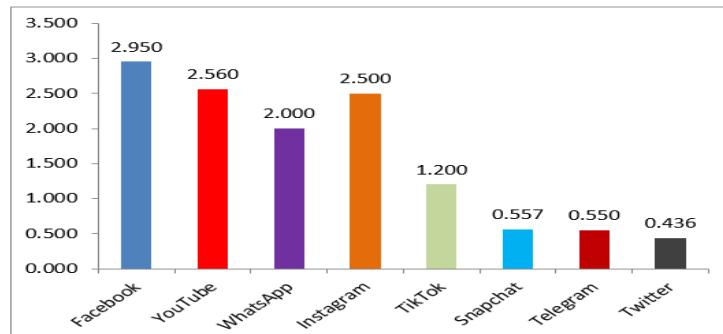
- Graphical Representation.
- Testing of hypothesis.

### Software used :

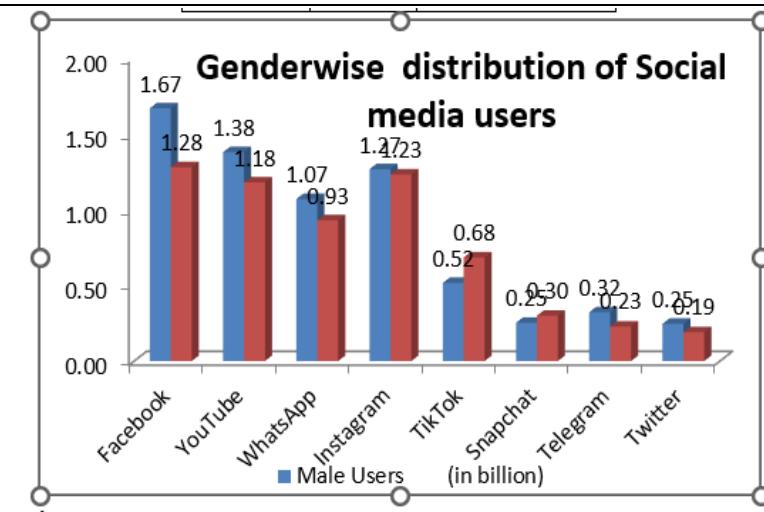
- MS-EXCEL.
- MS-WORD.

### a) Graphical Representation

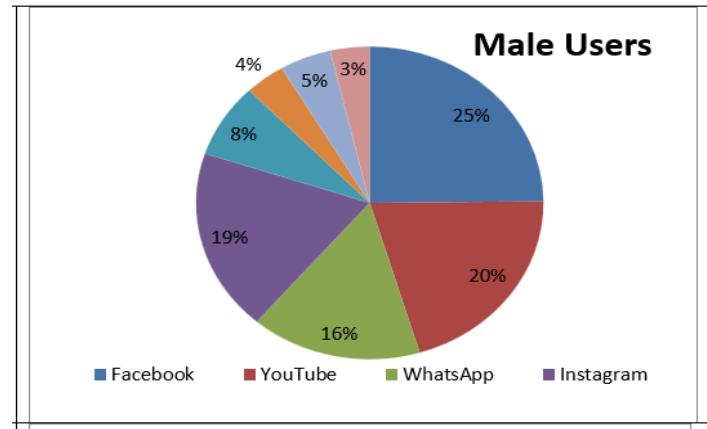
Social Media Platform	Number of Users (billion)
Facebook	2.950
YouTube	2.560
WhatsApp	2.000
Instagram	2.500
TikTok	1.200
Snapchat	0.557
Telegram	0.550
Twitter	0.436



Social Media Platform	Male Users (in billion)	Female Users (in billion)
Facebook	1.67	1.28
YouTube	1.38	1.18
WhatsApp	1.07	0.93
Instagram	1.27	1.23
TikTok	0.52	0.68
Snapchat	0.25	0.30
Telegram	0.32	0.23
Twitter	0.25	0.19

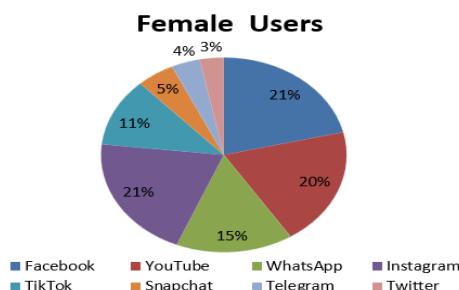


Social Media Platform	Male Users (in billion)
Facebook	1.67
YouTube	1.38
WhatsApp	1.07
Instagram	1.27
TikTok	0.52
Snapchat	0.25
Telegram	0.32
Twitter	0.25



#### Testing of Hypothesis:

Social Media Platform	Female Users (in billion)
Facebook	1.28
YouTube	1.18
WhatsApp	0.93
Instagram	1.23
TikTok	0.68
Snapchat	0.30
Telegram	0.23
Twitter	0.19



**b) CHI-SQUARE TEST:**

**H0:** No. of users in social media is uniformly distributed over genders. V/S

**H1:** No. of users in social media is not uniformly distributed over genders.

Test statistic:  $\chi^2 = \sum \left( \frac{oi^2}{ei} \right) - N$

Observation Table:

Platform (x)	No. of users	$P_i = 1/8$	$ei = N \cdot P_i$	$oi^2/ei$
Facebook	2.95	0.125	1.59	5.46
YouTube	2.56	0.125	1.59	4.11
WhatsApp	2.00	0.125	1.59	2.51
Instagram	2.50	0.125	1.59	3.92
TikTok	1.20	0.125	1.59	0.90
Snapchat	0.56	0.125	1.59	0.19
Telegram	0.55	0.125	1.59	0.19
Twitter	0.44	0.125	1.59	0.12
	12.75			17.41

Under  $H_0$ :

$$\chi^2_{calculated} = \sum \left( \frac{oi^2}{ei} \right) - N$$

$$\chi^2_{calculated} = 17.41 - 12.75$$

$$\chi^2_{calculated} = 4.65$$

$$\chi^2_{table} = \chi^2_{7, 5\%} = 2.17$$

$$\chi^2_{calculated} > \chi^2_{table}$$

b) T-test for equality of means assuming unequal variances

$H_0$ : Average male and female users of social media are same V/S

$H_1$ : Average male and female users of social media are not same

Observation table

Social Media Platform	Male Users (in billion)	Female Users (in billion)
Facebook	1.67	1.28
YouTube	1.38	1.18
WhatsApp	1.07	0.93
Instagram	1.27	1.23
TikTok	0.52	0.68
Snapchat	0.25	0.30
Telegram	0.32	0.23
Twitter	0.25	0.19

Calculation part: using data analysis the output is given in the following table

	Male Users (in billion)	Female Users (in billion)
Mean	0.84	0.75
Variance	0.33	0.22
Observations	8.00	8.00
Hypothesized Mean Difference	0.00	
df	13.00	
t Stat	0.34	
t Critical two-tail	-1.76	

Under Ho

$T_{calculated} = 0.34$  and  $T_{table} = -1.76$

$T_{calculated} > T_{table}$

## 5. CONCLUSION

The face book You Tube, WhatsApp and Instagram platforms are more used as compared Tiktok, snapchat, Telegram and Twitter .Facebook is most popular platform among the social media users. The Social Media Platform like Facebook, YouTube, WhatsApp, Instagram, Telegram, Twitter are more used by male users as compared to females users where as The Social Media Platform Snapchat and TikTok are more used by female user as compared to male users. Also No. of users in social media is not uniformly distributed over several platform of social media and average male and female users of social media are not same

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