

# Whatsapp Use Behaviour in Relation to Social Interaction Anxiety and Personality among Students

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## Abstract

WhatsApp is a trendy application that is widely used as a medium of communication all around the world. Student community uses it for communication, social interaction and learning purposes. Inappropriate use of WhatsApp results in addictive behavioural patterns that require authentic attention from parents, teachers and even from mental health care professionals. Personality, social anxiety, and lack of real time communication sources tempt students to use WhatsApp more than what is expected. The present study focused on “WhatsApp Use Behavior in relation to social interaction anxiety and personality among students”. The sample (N=120) comprising of both male (52) and female (68) school and college students in the age range of 15-24 years, were selected conveniently from SSLC, PlusTwo, Degree and Post Graduate levels. WhatsApp Use Behavior Scale, Social Interaction Anxiety Scale and Big Five Personality Inventory were administered to collect the necessary data from the sample. Result revealed statistically significant relationship between the WhatsApp Use Behavior and Social Interaction Anxiety and Personality among students. 13 % of the participants use WhatsApp at a very high level that is seemingly addictive in nature. There exists a significant positive low correlation between WhatsApp Use Behavior and Social Interaction Anxiety and there exists no significant correlation between WhatsApp Use Behavior and extroversion- introversion dimension of personality. They are usually driven by the thoughts of WhatsApp use and they spent most of the time in using WhatsApp and their daily routines are often affected by this behavior. Each day the WhatsApp use craze among students seems to increase. Many students get driven out by the extensive use of WhatsApp and are not able to focus on their studies. The t- test result indicates a significant difference between males and females in their WhatsApp Use behavior. Males are having high level of WhatsApp Use Behavior than females. ANOVA results indicate that there exists a significant difference among students in their WhatsApp Use Behaviour on the basis of education and age. There exists no significant difference among students in WhatsApp Use Behavior on the basis of Personality (Extraversion – introversion Dimension). The study also suggests that students should be aware of the addictive behavioral patterns of WhatsApp and its consequences.

**Keywords:** WhatsApp Use Behavior, Social Interaction Anxiety, Personality.

## 1. Introduction

WhatsApp has become very popular and well appreciated application after its invasion to the life of young generation. WhatsApp .Inc. founded in 2009 by Brian Actontc and Jan Koum, is the most globally accepted messaging application with more than 1500 million users (Statista, 2017). Youngsters, especially students, are the avid users of WhatsApp and social networking applications. WhatsApp use behavior (WUB) is defined as those entire behavioural patterns related to the use of WhatsApp. It covers productive and non productive behavior associated with WhatsApp use. High WhatsApp use behaviour is a clear indication of non-productive and addictive patterns of WhatsApp Use (Pramod, 2016).

Students use WhatsApp for their academic and learning practices. It's a highly beneficial tool for sharing their academic knowledge and communicating class room information. They also use this application to connect with peers, sharing content and media, exploring their self-identities, hanging and consuming content, accessing information and informal learning. WhatsApp is a good

tool for mobile learning when it is used in a blended course strategy. In a blended mobile lecture, a mobile application such as WhatsApp is preferred over face-to-face, in-class discussion in regard to completing course activities (Chokri Barhoumi, 2014). WhatsApp results in intimate relationships and WhatsApp has become one of the reasons for smart phone penetration in India (Jisha and Jebakumar, 2014). WhatsApp unlocked new opportunities for intimate communication, to enable the creation of micro-communities, and to richly support social practices such as collective life logging and reminiscing, contrasting the popular view of WhatsApp as a mere instant messaging tool (Evangelos Karapanos et al., 2016).

At the same time WhatsApp usage might have an addictive character. Over use, and inappropriate use of WhatsApp is more prominent among students. Knowingly or unknowingly they become addicted to WhatsApp. They feel a need for markedly increased amount of time in using this application, and avoid taking responsibilities of life on time, and have difficulty with social and occupational activities. They face physical, psychological, and social problems. Many of them use this application for overcoming feelings of depression arising out of stress (Pramod, 2016). Research by DanBouhnik , MorDeshen

and Bar Ramat Gan (2014) revealed that there are challenges and problems related to WhatsApp use. Firstly, there is the technical difficulty that not all high school students possess a Smartphone. Secondly, teachers are apt to be annoyed by the flood of irrelevant and nonsensical messages. Also, educational difficulties may arise, such as incompatibility of language between students and the students' assumptions that their teachers should be available on a 24/7 basis.

WhatsApp use distracts students from completing their assignments and adhering to their private studies time table. When this fascinating application is used, it surpasses the time consciousness and the user slips into a crazy virtual world. Personality, expectation, social skills, knowledge, emotions and attitudes play a major role in the way social media applications are used or misused. Instead of making communication easier and faster thereby enhancing effective flow of messages and idea sharing among students, WhatsApp has rather impacted negatively on the performance of students in tertiary institutions in Ghana (Johnson Yeboah and George Dominic Ewur, 2014). According to Navigith Singh et al., 2014 based on his study on WhatsApp use, a strong association between psychological behavioral factors measured by shyness, moody behavior, loneliness and feeling stressed on the WhatsApp addiction tendencies among the youth in the region of Punjab.

WhatsApp messenger has a drastic impact on the academic performance of students in schools and colleges. Instead of fast communication and enhancing effective flow of information and idea sharing among students, WhatsApp has actually impacted in some pessimistic performance of students. It is very difficult for minors who already use Smartphone to stop using an app that allows them to communicate in such a simple, immediate and almost free manner. This is why it is important to explain these things to them and to warn them about the privacy status of their conversations and of the images they send using WhatsApp (Sunita Singh and Seeza Franklin, 2015).

The study conducted among undergraduate Students by Langant Andrew Chris, (2015) revealed that social media applications like WhatsApp could negatively impact on the students study behaviour, academic progress and that timed-off software should be installed to control its use by students. According to this study the social media is both supportive to the students study habits particularly during the day but at the same time its addiction at night hours affect negatively during their revision time. In addition to this point the respondents agreed strongly that they are unable to exercise self-control over the interference of social media to their revision particularly at night. The findings of this study also shows that all the students are highly involved in social media whereby the majority are using WhatsApp followed by the Facebook.

Gender variations in the use of social media is not prominent it is closely similar. Overall, women use this network more often than men and they reported that they use it more often to generally communicate with the family. Men on the other hand are members overall of larger communication groups and send shorter messages (AviRosenfel, 2015). Females used WhatsApp for significantly longer periods of time than males and younger age was associated with longer duration of WhatsApp use (Christian Montag et al., 2015). Older people typically use this network less frequently, but when they do, write longer messages. More education and age are positive factors in predicting how frequently people will send file attachments. (AviRosenfeld, et al 2015).

Lack of ability to deal effectively with the society due to interaction anxiety is considered to be an important factor that makes a person to choose virtual platforms to communicate (Pramod, 2016). Social interaction anxiety is the distress an individual has when meeting and talking with other people" (Mattick and Clarke, 1998). Social interaction is needed to develop skills in understanding the emotions of other people. Social anxiety is marked by the fear of interaction with other people that brings on self-consciousness, feelings of being

negatively judged and evaluated, and, as a result, leads to avoidance. WhatsApp and similar application reduces the level of inhibitions when interacting with the external world.

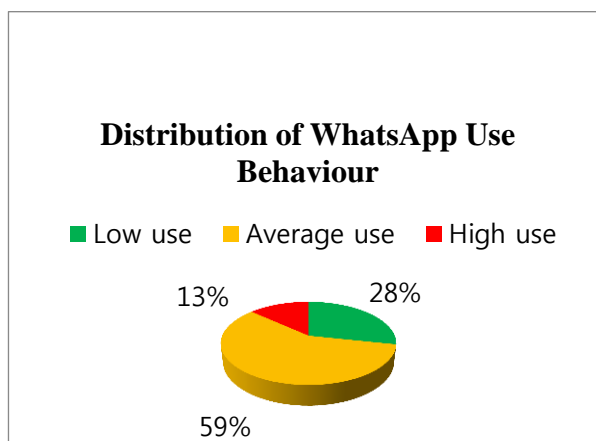
Personality is another factor that may alter the person's way of communication. The way in which technology is handled is also influenced by personality factors. Personality is a dynamic organization, inside the person, of psychophysical systems that create the person's characteristic patterns of behavior, thoughts and feelings (Gorden Allport, 1968). Extroverts can be described as socially outgoing and attaching easily to other persons. Introverts are people who are reserved and communicate with the world in a more silent way when compared to extroverts. Both use social media applications. Extroverts use it for enriching their new contacts whereas introverts use it for expressing their internal state to the external world. Personality trait extroversion and social anxiety influenced consumer attitudes toward the use of social media applications (Abullah Sultan, 2014). While the personality trait extroversion was positively associated with daily use, Conscientiousness showed an inverse correlation with the length of daily WhatsApp use. When this fascinating application is used, it surpasses the time consciousness and the user slips into a crazy virtual world. Personality, expectation, social skills, knowledge, emotions and attitudes play a major role in the way social media applications are used or misused.

In Kerala context the use of WhatsApp is common and broadly increasing among students. WhatsApp has become a growing phenomenon with many and varied definitions in public and academic use. Besides all, this application is highly addictive and can create a great impact on regular users, and apart from that it can leave a trace that becomes difficult to control and cure. Students are often getting caught for misusing and overusing the application. Parents and teachers often complain about their children using Smartphone and mobile applications without permission. Avoiding their work and responsibilities, students often slip into addictive use of WhatsApp that require parental, educational and scientific interventions

Socially withdrawn people use this application for interacting with the world without inhibitions. Personality can also influence the use of social media applications. There are only very limited studies conducted in Indian and Kerala context to understand WhatsApp Use Behavior and its related factors. In such a context, it is highly important to understand the nature and extend of WhatsApp Use Behavior among students.

### 1.1 Objectives of the Study

1. To understand the extent of WhatsApp Use Behavior among students.
2. To understand the relationship between WhatsApp Use Behavior and Social Interaction Anxiety and personality
3. To understand whether students differ on the basis of gender, education, age, and personality in WhatsApp use behavior and social interaction anxiety



## 2. Method

### 2.1 Research Design

The present study is adapted to descriptive research design focusing on quantitative elements to understand the use of WhatsApp, Social Interaction Anxiety, and Personality by taking cross sections of the population.

### 2.2 Sample

The sample of the present study consists of 120 students who use WhatsApp. The participants were conveniently selected for the purpose belongs to high school, higher secondary, degree, and post graduate education levels.

**Table:** Breakup of the Sample Based on Education

Sl.No	Class	Frequency	Percent
1	SSLC	30	25.0
2	PLUS TWO	30	25.0
3	DEGREE	30	25.0
4	P.G	30	25.0
TOTAL		120	100.0

### 2.3 Tools

The following tools were used:

**WhatsApp Use Behavior Scale** (Pramod, 2016) – A 24 items scale that measures the extent of WhatsApp Use Behaviour. High scores indicate addictive patterns of WhatsApp Use. The scale is having reliability value of .68 and is having adequate content validity.

**Social Interaction Anxiety Scale** (Mattick. R & Clarke,1998) assess prevalence, severity, and treatment outcomes of social phobia and social anxiety disorders.

**Big Five Personality Inventory (NEO PI)** – the big five personality inventory was used for the current study to measure extroversion – introversion dimension of personality.

**Personal Data Sheet** - The researcher used personal datasheet to collect certain fundamental and personal information from the respondents. The respondents were asked to fill up the personal data sheet with appropriate details. The personal data sheet consisted of name, age, gender, and class.

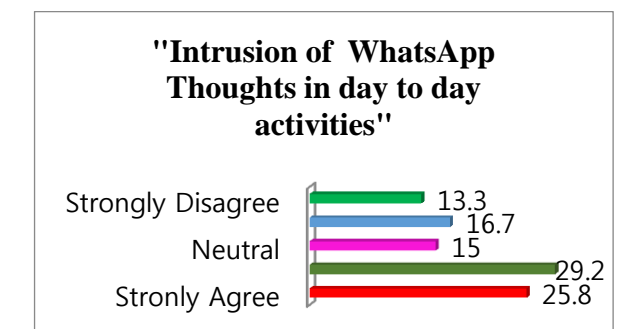
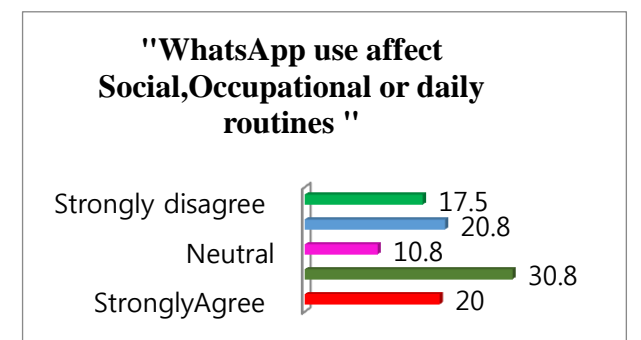
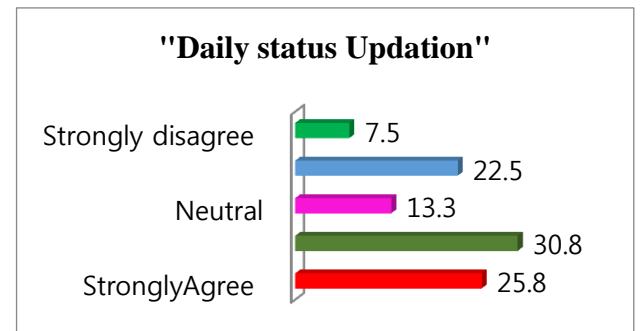
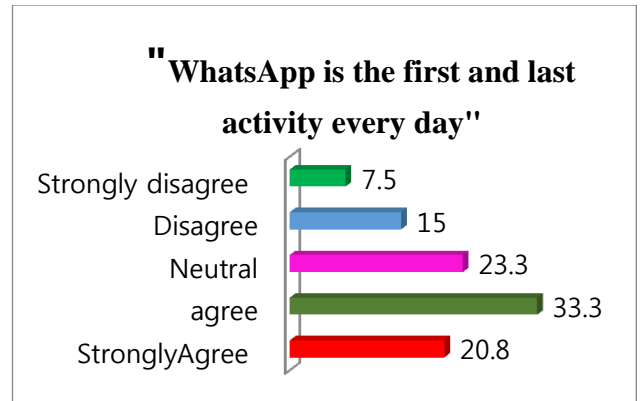
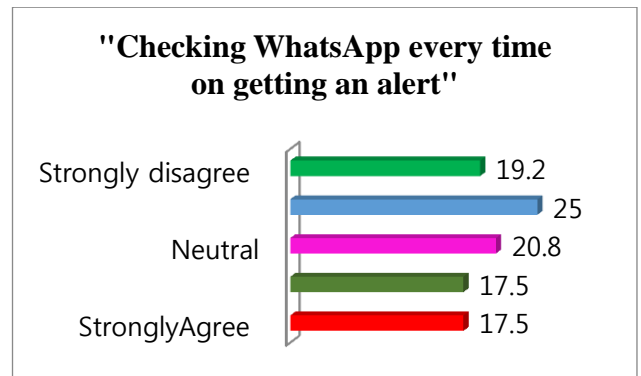
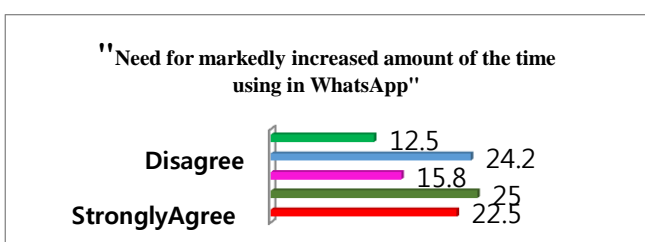
#### Procedure for Data Collection

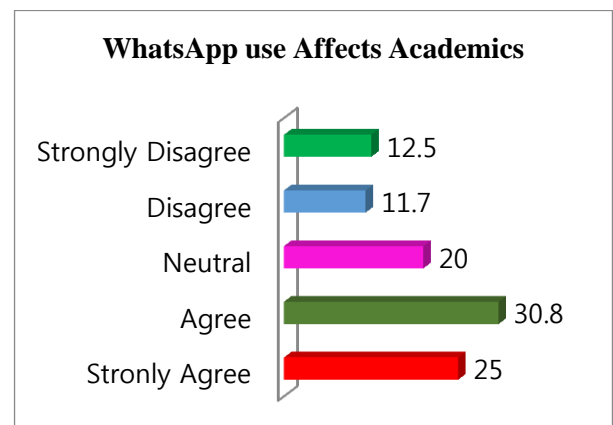
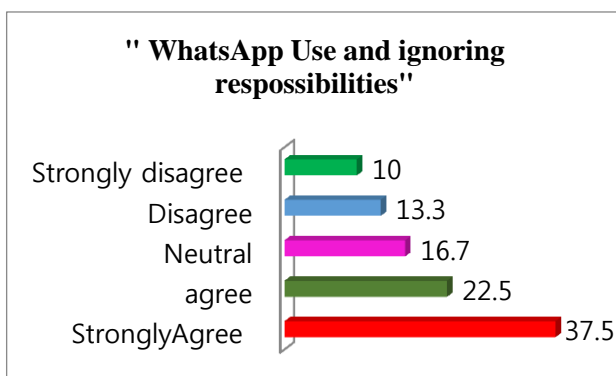
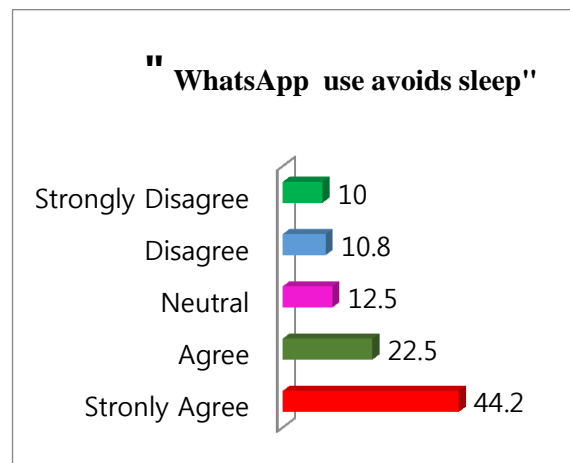
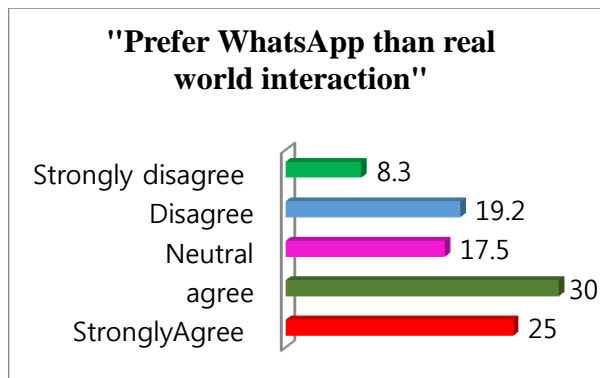
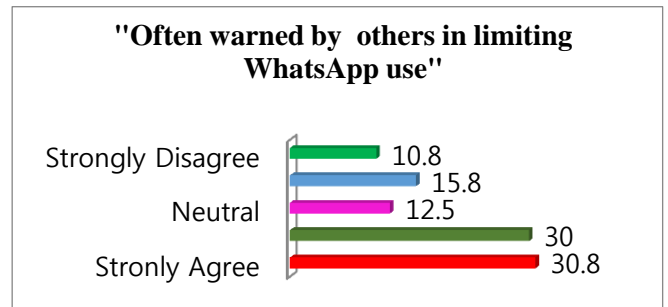
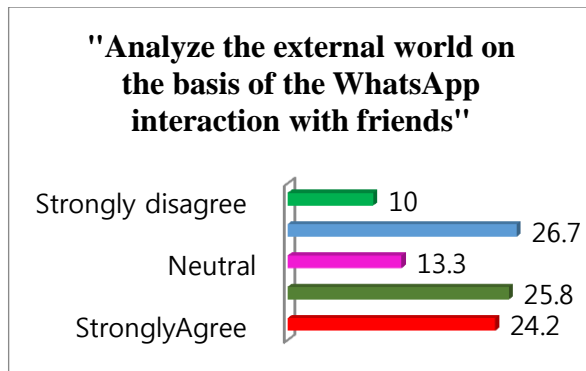
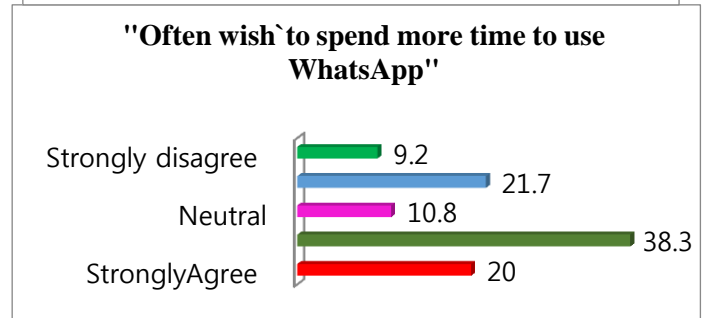
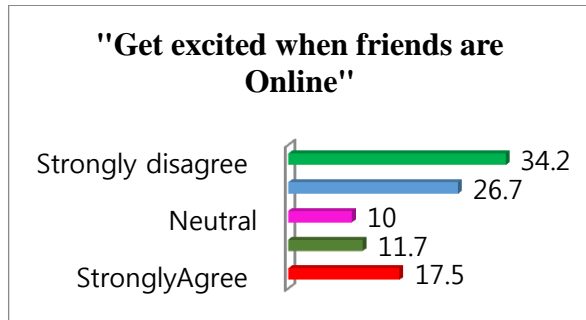
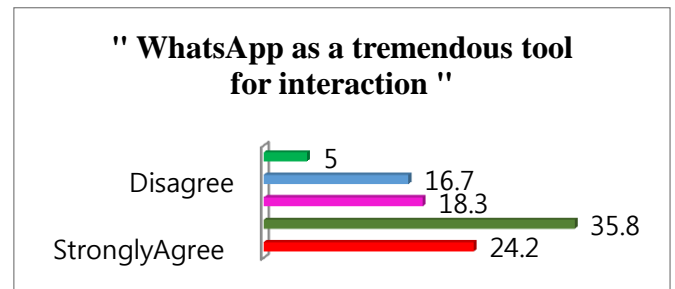
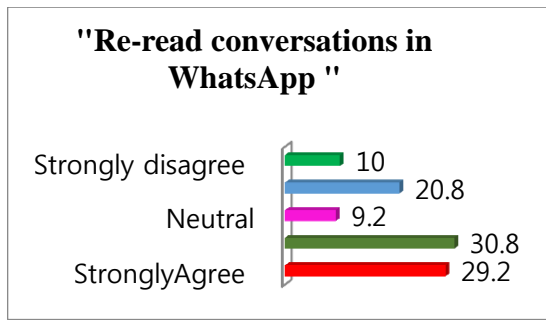
For collecting the data from degree students, prior permission was taken from the school and college authorities respectively. The students were met in their respective classes. A brief introduction regarding the purpose of the study was given and the tools were distributed. Confidentiality was ensured, instructions regarding the tools were given and the doubts were cleared. After the participants completed filling the data sheet it was collected back. Data was collected conveniently from P.G students.

## 3. Results and Discussion

### 3.1. Extent of WhatsApp Use Behavior among Students

13 % of the participants use WhatsApp at a very high level that is seemingly addictive in nature





22.5% (n=25) of the students agreed that they felt a very strong need for markedly increased amount of time in using WhatsApp. 25% (n=21) used to check WhatsApp every time they get an alert. For 20.8% (n=25) looking WhatsApp was the first thing that they engaged in the morning and the last activity that they engaged in before sleep. 25.8% (n=31) reported that they update their status on a daily basis. For 20.0% (n=24) WhatsApp use affected their daily routines. Many students 25.8% (n=31) were having obsession in using WhatsApp and the thoughts about WhatsApp use affect their day to day activities. 029.2% (n=35) re-read conversations in WhatsApp instead of reading books before going to bed. 17.5% (n=21) get excited hand they see their close friends online. 24.2% (n=29) analyze the external world on the basis of the WhatsApp interaction with friends. 25% (n=30) prefer to use WhatsApp than spending time for interacting with friends in the real world. 24.2% (n=29) consider WhatsApp as a tremendous tool for interaction. 8.3% (n=10) get excited when discovering interesting WhatsApp facts. 17.5% (n=21) strongly agree to the fact that they have more fun with their friends using WhatsApp. 37.5% (n=45) use WhatsApp ignoring responsibilities. 20% (n=24) have a strong need for more time to use WhatsApp. 30.8% (n=37) students are often warned by others in limiting WhatsApp use. 44.2% (n=53) use WhatsApp avoiding sleep. 19.2% (n=23) use of WhatsApp helping escape from feelings of depression arising from stress. 25% (n=30) students academics are very well affected by WhatsApp use. 27.5% (n=33) when the expectation of get sad emotionally raised feelings of sad, anger with in group. 30% (n=36) WhatsApp status and profile pictures change every day. 16.7% (n=20) keep a close looking everyone's status and profile pictures. 15.8% (n=19) felt the urge to reply to a message the minute they receive it. 10.8% (n=13) desperately wait for replies from friends.

**3.2. Relationship between WhatsApp Use Behaviour, Social Interaction Anxiety and Personality**

*Correlation results*

Variable	Pearson correlation		
	1	2	3
1. WhatsApp Use Behaviour	( )	.299**	-.069
2. Social Interaction Anxiety	..	( )	
3. Personality (extraversion-introversion)	..	..	( )

\*\* Indicates Significance at 0.01 level

There exists a low positive correlation (r = .299) between WhatsApp Use Behavior and Social Interaction Anxiety. This indicates that as Social Interaction Anxiety increases WhatsApp Use Behavior also increases or vice versa. Students who are socially anxious and who have deficiencies in interacting with the external world make use of WhatsApp as a medium to communicate with the social world. The more satisfaction they get out of it, the more they try to use it. This often results in addictive patterns of WhatsApp use. There exists no significant relationship between WhatsApp Use Behavior and extraversion-introversion dimension of Personality. Extroverts and introverts are almost equally using WhatsApp as medium of virtual social interaction. A negative value of the correlation coefficient indicates that introverts are more prone to have high WhatsApp Use Behavior when compared to extroverts.

**3.3 Gender Difference in WhatsApp Use Behavior and Social Interaction Anxiety Results of t-test on WhatsApp Use Behavior and Social Interaction Anxiety based on gender**

There exists significant difference between males and females in their WhatsApp Use behavior. Males are having high level

Variable	Gender	N	Mean	Std Deviation	t-Value
WhatsApp Use Behavior	Male	5	78.093	13.7192	4.585* *
	Female	6	61.5795	18.59472	
Social Interaction Anxiety	Male	5	30.5312	10.30811	1.247#
	Female	6	27.4432	12.53946	

NOTE: \*\* indicates the value is significant at 0.01 level. # indicates the values is not significant at 0.01

level of WhatsApp Use Behavior than females. Males are often getting into addictive patterns of WhatsApp Use Behavior than females, as they are more exposed to Smartphone technologies than females. For many students especially, females do have restriction

In using internet facilities and mobile phones at their study places or at homes.

There exists no significant difference between males and females in their Social Interaction Anxiety. All students have equal opportunities to interact with the external world and thus it's not mere gender that lead to Social Interaction Anxiety but other factors like education, socialization patterns, and social interaction opportunities and so on.

**3.4. WhatsApp Use Behavior and Social Interaction Anxiety based on Education**

Result of ANOVA on WhatsApp Use Behavior and Social Interaction Anxiety based on Education

Variable		Sum of Squares	Df	Mean Square	F
WhatsApp Use Behavior	Between Groups	1952.800	2	976.400	8.080* *
	Within Groups	40363.167	117	344.984	
Social Interaction Anxiety	Between Groups	222.675	2	111.338	4.139* *
	Within Groups	16974.792	117	145.084	

Note: \*\* Indicates significance at 0.01 level

There exists significant difference among students in their WhatsApp Use Behaviour on the basis of education.

Duncan test for WhatsApp Use Behavior: Comparison of students on the basis of Education			
Education level	N	Subset for alpha = 0.05*	
		1	2
Degree	30	58.1000	
Post Graduate	30	58.3333	
SSLC	30		72.6333
Plus Two	30		74.8667
Sig.		.959	0.619

\*Mean values appearing in the same subset are not significantly different from each other.

The results of Duncan test indicates that students belonging to SSLC and PLUS TWO have significantly high WUB than the degree and post graduate students. Age related temptations, tendency to experiment with new technologies, tendency to develop a sense of identity, to find freedom, the trials to get relaxation from academic stress makes students belonging to lower classes to stick on to social media applications especially

WhatsApp. Thus they engage in WhatsApp for more time than for studies.

### 3.2 Duncan test for Social Interaction Anxiety

Comparison of students on the basis of Education

Education Level	N	Subset for alpha = 0.05	
		1	2
Post Graduate	30	23.1333	
Degree	30	27.8000	27.8000
SSLC	30	28.5000	28.5000
Plus Two	30		33.6333
Sig.		.092	.067

\*Mean values appearing in the same subset are not significantly different from each other.

Table 4.5 indicates that students belonging to PLUS TWO have the highest mean value for Social Interaction Anxiety and they differ from post graduate students who scored the lowest mean value for the same.

### 3.3 WhatsApp Use Behavior and Social Interaction Anxiety based on Age

Result of ANOVA on WhatsApp Use Behavior and Social Interaction Anxiety based on Age

Variable		Sum of Squares	Df	Mean Square	F
WhatsApp Use Behavior	Between Groups	8357.215	3	2785.738	9.516**
	Within Groups	33958.752	116	292.748	
Social Interaction Anxiety	Between Groups	1475.212	3	491.737	3.628*
	Within Groups	15722.254	116	135.537	

Note: \*\* Indicates significance at 0.01 level

\*Indicates significant at 0.05 level

There exists significant difference among students in their WhatsApp Use Behavior and Social Interaction Anxiety on the basis of age.

### 3.4 Duncan Test for Whatsapp Use Behavior:

Comparison of students on the basis of Age

Age (years)	N	Subset for alpha = 0.05	
		1	2
18-21	25	53.1200	
22-24	35	61.8571	
14-15	28		73.4286
16-17	32		74.0313
Sig.		.052	.893

\*Mean values appearing in the same subset are not significantly different from each other.

Duncan test reveals that students belonging to age 14-15, 16-17 differ significantly from students of age 18-21, 22-24 years. When taken from a developmental perspective the lower age groups undergo significant physical, physiological, psychological and social changes. They have a tendency to experiment with new developments especially related to technological advancements.

### 3.5 Duncan Test for Social Interaction Anxiety:

Comparison of students on the basis of Age

Age (years)	N	Subset for alpha = 0.05	
		1	2
18-21	35	24.4571	

22-24	25	26.8800	
14-15	28	28.1429	28.1429
16-17	32		33.6250
Sig.		.256	.073

\*Mean values appearing in the same subset are not significantly different from each other.

Students of age 16 -17 secured the highest mean value of 33.6250 which is significantly different from the mean value of 24.4571 obtained by students belonging to age 18 – 21 years. The results clearly indicate that students of low age group do have more Social Interaction Anxiety when compared to students of high age group.

### 3.6 WhatsApp Use Behavior and Personality

Result of ANOVA on WhatsApp Use Behavior and Personality

Variable		Sum of Squares	Df	Mean Square	F
WhatsApp Use Behavior	Between Groups	1952.800	2	976.400	2.830 #
	Within Groups	40363.167	117	344.984	

# indicates f-value is significant at 0.01 levels

There exists no significant difference among students in WhatsApp Use Behavior on the basis of Personality (Extroversion Introversion dimension). Both extroverts and introverts use social media for communicating with the external world. Extroverts have positive attitudes towards WhatsApp Use for making new friends and establishing a wider relationship circle around them, whereas introverts use it for expressing their feelings and attitudes without much social inhibition.

### 3.7 Major Findings

- 13% and 28% of students have high and low WhatsApp Use Behavior respectively. 59% of the respondents are average users of WhatsApp.
- There is a significant relationship between WhatsApp Use Behaviour, and Social Interaction Anxiety. There exists a low positive correlation (r = .299) between WhatsApp Use Behavior and Social Interaction Anxiety.
- There is no significant relationship between WhatsApp Use Behavior and Personality.
- There is a significant difference in WhatsApp Use Behaviour based on the gender. Males engage in more WhatsApp Use Behavior than females.
- There is no significant difference in Social Interaction Anxiety based on the gender.
- There is significant difference in WhatsApp Use Behaviour and Social Interaction Anxiety on the basis of education. Students belonging to SSLC and PLUS TWO engage in more WhatsApp Use Behaviour than degree and post graduate students.
- There is significant difference in WhatsApp Use behavior and Social Interaction Anxiety on the basis of age.
- Personality wise difference does not exist in WhatsApp Use behavior.

## 4. Summary and Conclusion

The present study conducted among school and college students who use WhatsApp provides a clear picture of the extent of WhatsApp Use Behavior among them. 13% had high level of WhatsApp Use Behavior, which is almost similar to addictive use

of WhatsApp. Understanding the dynamics of WhatsApp Use Behavior and its relation to social interaction anxiety and personality among students of Kerala will help to have a clear picture about the extent of influence of WhatsApp Use Behaviour among them. A clear perceptiveness about the behavioral dynamics of using social media and smart phone applications is highly essential for guiding and helping students to productively use such applications.

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