

WHATSAPP KE PARINAAM.

*A Research Conducted in Mumbai to Understand the Effects
of WhatsApp*



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Abstract

Through our research paper, we intended to find out ‘**What are the effects of WhatsApp on the children of the age group of 14-18 years old residing in Mumbai?**’ Our hypothesis was; due to the prolonged use of WhatsApp, the major problems that arise are **stress, low academic performance, health issues, and solitary behaviour**. The reason behind hypothesizing that is- teenagers now-a-days do not use proper words, rather they misspell words and use abbreviations. Also, the use of WhatsApp increased exponentially in this decade and people started to consume a lot of screen time on it so it could also cause health issues and in some cases cause solitary behaviour to emerge. There is a constant flow of messages that are either relevant or irrelevant being forwarded on WhatsApp which puts pressure on the students to check each message hence stress and anxiety too. **Our hypothesis was proven wrong**. We used many data collection methods to get data for our paper such as- survey, personal interview, expert interview and secondary data! We found out how people get prone to using such an application in their day-to-day life. Teenagers of this generation are having such powerful social media tools with them at their very early age in which they are least capable of handling the same because their prefrontal cortex hasn't been developed yet! Our findings will make people aware of what can be the effects of WhatsApp on their life and how it would impact their socio-physical health too.

Introduction

A. Research Question

Through our research, we intend to find out “What are the effects of WhatsApp on the children of the age group of 14-18 years old residing in Mumbai?”

B. Hypothesis

Our hypothesis for this research topic is that due to the prolonged use of WhatsApp, the major problems that arise are stress, low academic performance, health issues, and solitary behaviour.

Justification of why we think so:

1. There is a constant flow of messages that are either relevant or irrelevant being forwarded on WhatsApp which puts pressure on the students to check each message.
2. We feel frustrated when we don't get immediate responses to our messages¹.
3. Teenagers belonging to this age group often tend to use short forms and abbreviations² of phrases and sentences to communicate with each other.
4. After using the app for hours and investing a lot of screen time, we feel tired and our eyes become tired out. This results in some short term muscle pain and sometimes acute long term pain also.³

¹ "Message sent, received but no instant reply: how does that" by-David Cowan 04 Jan.2019
<https://theconversation.com/message-sent-received-but-no-instant-reply-how-does-that-make-you-feel-101110>.

² "The Influence of Texting Language on Grammar and ... - NCBI." 31 Mar. 2016,
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4816572/>.

³ "The Unexpected Effects of All That Screen Time | Rally Health." by Melissa Pandika..26 Sept. 2016
<https://www.rallyhealth.com/health/unexpected-effects-screen-time>.

C. Rationale

1. According to the data statistics⁴ of the population, 1.47% of the population of India lives in Mumbai. India being the largest users of this communication media known WhatsApp, by 2000 million active monthly users⁵, it can be easily said that there is a huge population of WhatsApp users in Mumbai too. According to the census of 2011, India has the largest youth population which directly corresponds to the fact that Mumbai has a vast population of youth using WhatsApp.
2. Due to the advancement in technology, people are maintaining close contact with digital media. WhatsApp being an efficient communication tool is effectively bridging the communication gap digitally. But when it is exposed to the children who belong to the crucial age group of 14-18 years, it poses many dangers.
3. There are many effects of WhatsApp on the children who belong to this age group. Studies done by Johnson Yeboah's team in Ghana⁶ reflect the possible effects of WhatsApp on students. Since India is a different country, studies need to be conducted to examine the effects of so.

Why this research was important for us:

1. After conducting this research we think that we would come out with the possible effects of WhatsApp that are the factors that build upon the depression. Due to this, we would have the root causes to tackle the causes of stress.
2. We want to develop awareness on a personal level as well as on the social level. We believe that in an aware society, there is a free flow of information and acceptance of new ideas.
3. Our research could be very beneficial to scholars who are working towards creating structures for edtech during this pandemic.
4. We all think that though there is no *like* system in WhatsApp still, it is capable of inflicting deep emotions by read receipts⁷. Teenagers of this age group expect that the general immediacy and access to information afforded to us by our technology should be reflected in our online social communication, just as it would be when face-to-face.

⁴ "India Population (2020) - Worldometer." <https://www.worldometers.info/world-population/india-population/>.

⁵ "Most popular global mobile messaging apps 2020 - Statista." by-J Clement..24 Jul. 2020, <https://www.statista.com/statistics/258749/most-popular-global-mobile-messenger-apps/>.

⁶ "The Impact of Whatsapp Messenger Usage on ... - Scinapse." by- Johnson Yeboah..01 Jan.2014 <https://scinapse.io/papers/1479807614>.

⁷ "Read Receipts: The Psychology of Emotional Manipulation." 17 Jun. 2018, <https://oozestudios.com.au/read-receipts-the-psychology-of-emotional-manipulation/>.

D. Data Collection Method

1. Surveys through Google Forms.⁸

How: We all had a meeting where we drafted and published questions that were essential and relevant to answer the sub Questions of our RQ. After preparing the google forms, we conducted pilot surveys to examine the quality of the form. After that, we propagated and spread this form as much as possible in our circles.

Reasons:

- Surveys help collect mass data at once.
- Survey forms are easy to spread around the community.
- All the members of our team live in distinct communities in Mumbai. This is a huge plus point for us because we can collect data from diverse communities across the whole of Mumbai.

2. Personal Interviews.

How: We prepared a questionnaire which was aligned to the research question and was capable of testing the hypothesis. Then we managed to get volunteers for the interview! We conducted the interviews on calls which were recorded! These recordings of the call helped us to extract the required data of our use. People whom we interviewed are parents, teachers & students.

Reasons:

- Sometimes it is not possible to collect accurate data from the students by forms because of spam filling of the form.
- This makes the interviewee more eager to participate as it shows that their response matters to us.
- Also, through this we were able to get more aspects to our research paper.

3. Expert Interview.

How: We found a professional working expert who could give us inputs in our hypothesis testing process. The expert was a psychologist. Then we prepared the questionnaire which was suitable and had the question which we could use in our paper. After that, we fixed the date and time and conducted the interview on a call while recording it! The recorded material was used to make the data for our paper.

Reasons:

- We were aware that the information which we can avail from an expert could not be gained from some other place.
- It was very detailed and fine tuned for us to use in our research paper.

⁸ "Advantages and Disadvantages of Surveys - Snap Surveys." 16 Nov. 2012, <https://www.snapsurveys.com/blog/advantages-disadvantages-surveys/>.

E. Findings

a. Data Summary

- We took a survey of 219 teenagers between 14 to 18 years old. The chart below shows the percentage of their age groups. 41% of the teenagers were males while 59% were females.

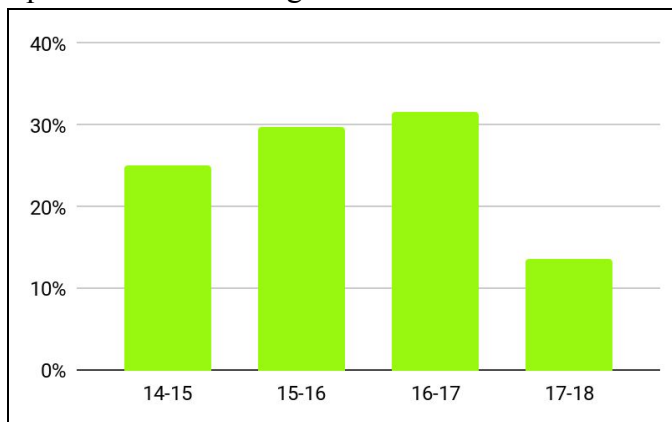


Chart 1: Sample Population Age distribution.

- 173** teenagers have been using WhatsApp for the past 1-5 years and a small population of teens i.e. 29 are using it since 6-9 years.

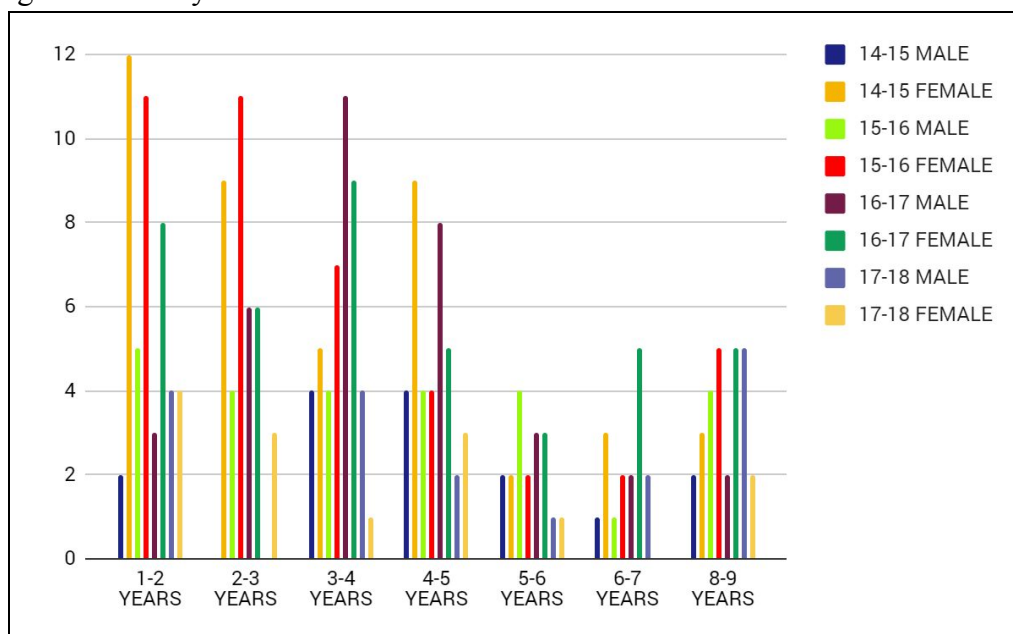


Chart 2: Number of years from when using Whatsapp.

3. From the chart below we can see that the maximum number of teenagers consume between 0 to 60 minutes of screen time. 32.4% of them consuming for 0-20 minutes while 25.1% consume 20 -40 minutes of screen time.

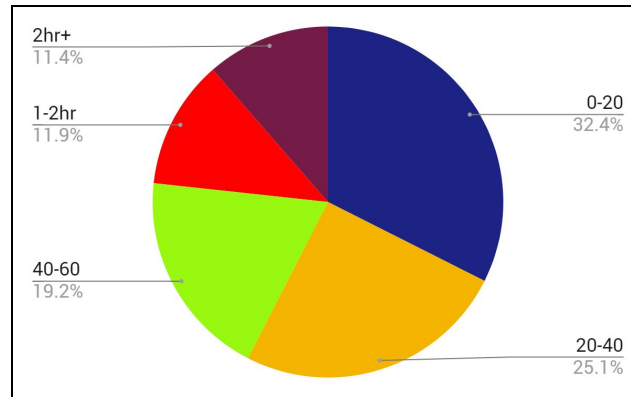


Chart 3a: Screen time consumed by teenagers

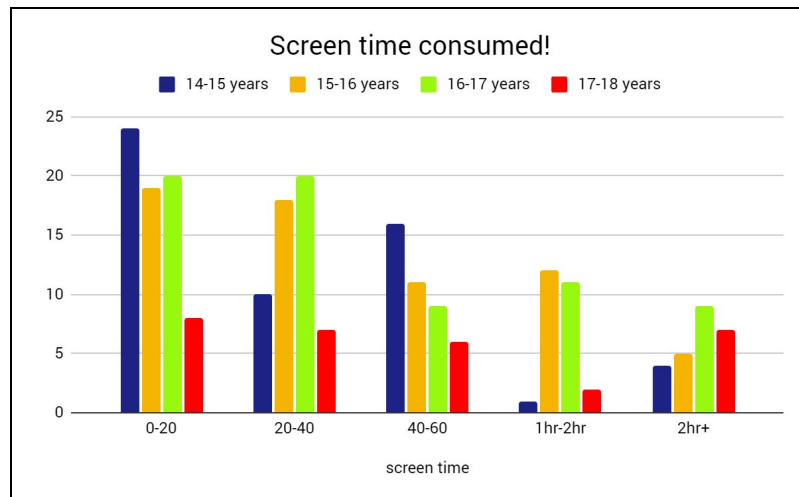


Chart 3b: Screen time consumed age distribution.

4. 60.73% of the teens who attempted the survey have marked read receipts as the most prominent con of WhatsApp. While 35.62% marked Excessive usage as the second prominent con.

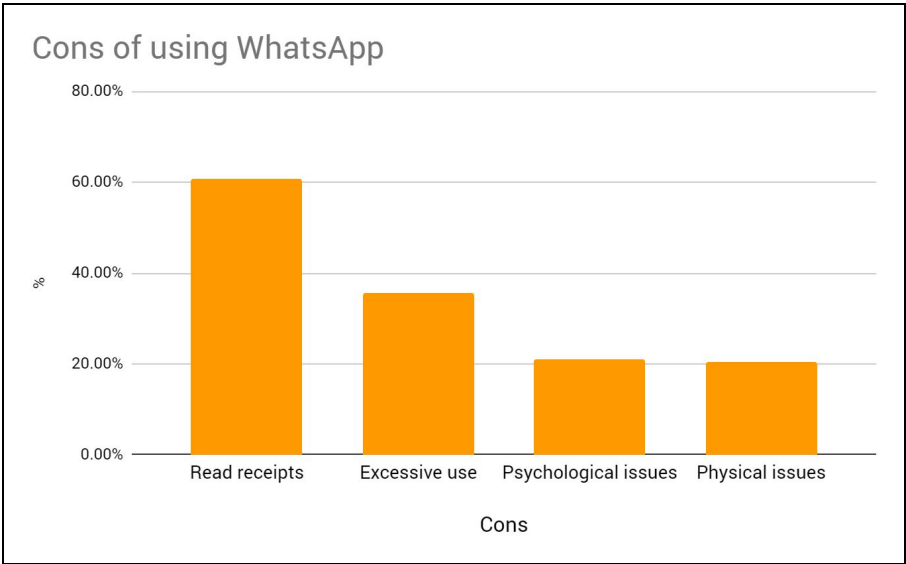


Chart 4a: Cons of using WhatsApp

Cons of using WhatsApp	No of Teenagers
Read receipts	133
Excessive use	78
Psychological issues	46
Physical issues	45

Chart 4b: Cons of using WhatsApp

5. **82.19%** of the teens marked that WhatsApp is an effective tool to get in contact with people. Plus it is also very convenient to share documents/ media files on WhatsApp as per 65.30% of them.

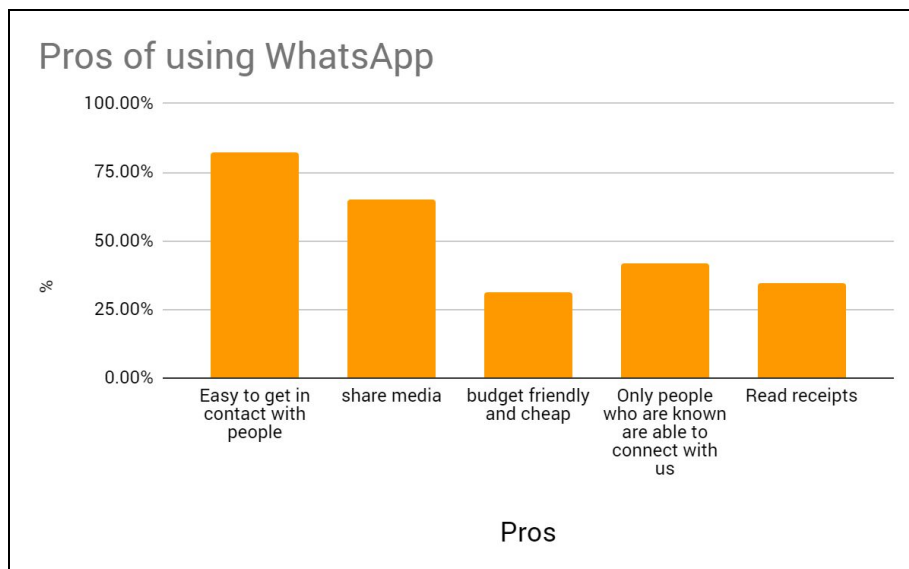


Chart 5a: Pros of using WhatsApp

Pros of using WhatsApp	No. of Teenagers
Easy to get in contact with people	180
Share media	143
Budget-friendly and cheap	69
Only people who are known can connect with us	92
Read receipts	76

Chart 5b: Pros of using WhatsApp

Psychological issues faced due to usage of WhatsApp

6. From the chart below we can also see that there are many psychological issues faced by 36.99% of teenagers. Even though 63.01% said they don't face any psychological issues, we feel that it is due to the lack of awareness. **18% of teens marked Anxiety as an issue they face** regardless of the screen time who have filled the form

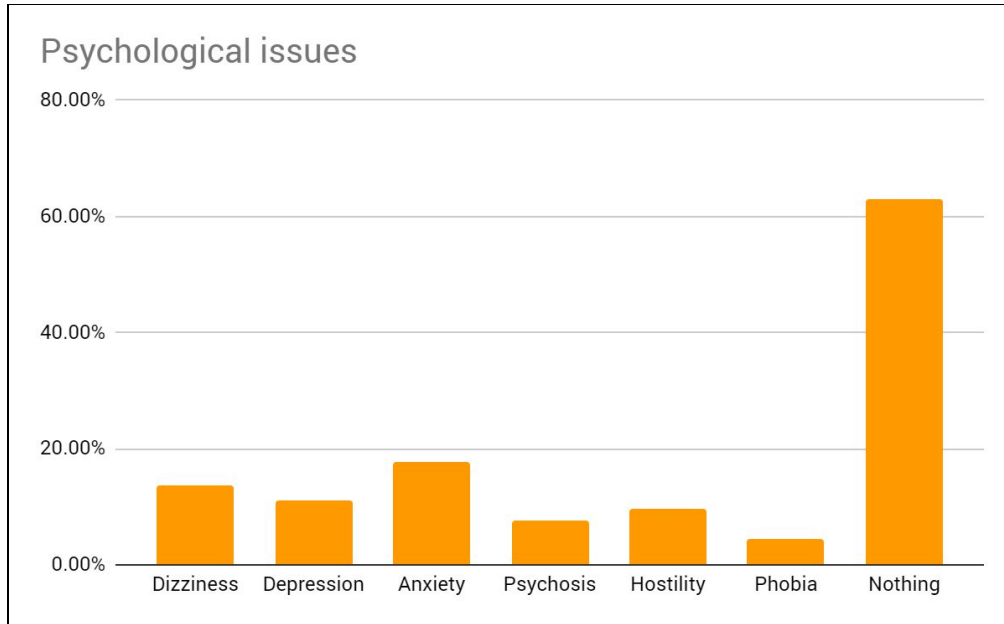


Chart 6: Psychological Issues for the full sample population.

a. Psychological issues w.r.t. screen time:

On close observation, we can see that, with increase in screen time consumption, there is an increase in the proportions in the psychological issues faced by teens.

Chart 6.a. : Psychological issues w.r.t. screen time

	Dizziness	Depression	Anxiety	Psychosis	Hostility	Phobia	Nothing
0-20	7	4	6	2	7	1	48
20-40	5	7	14	3	4	4	36
40-60	6	5	7	4	5	3	26
1-2hr	7	3	7	5	4	1	13

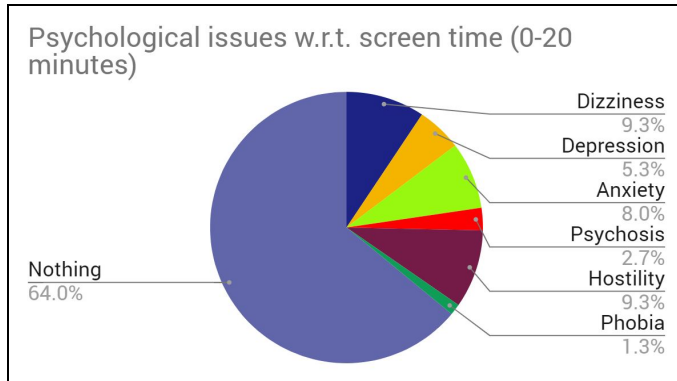


Chart 6.a.1: Psychological issues w.r.t. screen time (0-20 mins)

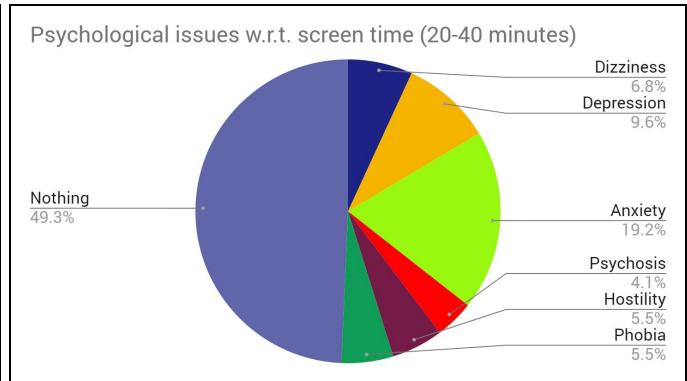


Chart 6.a.2: Psychological issues w.r.t. screen time (20-40 mins)

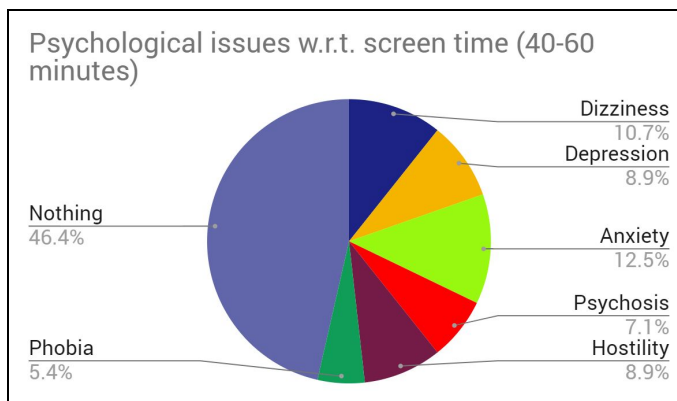


Chart 6.a.3: Psychological issues w.r.t. screen time (40-60 mins)

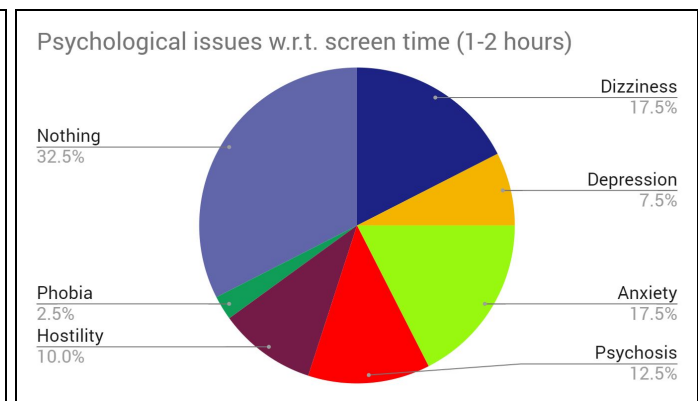


Chart 6.a.4: Psychological issues w.r.t. screen time (1-2 hrs)

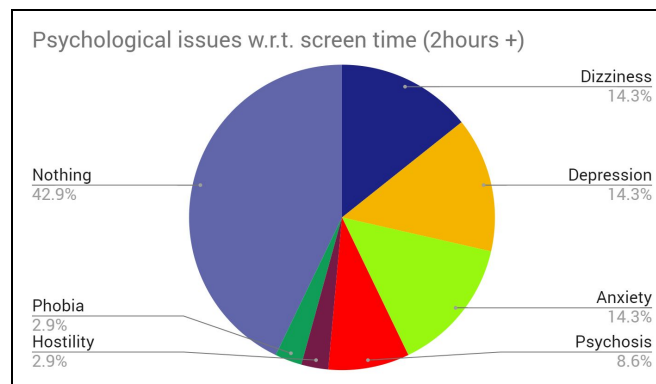


Chart 6.a.5: Psychological issues w.r.t. screen time (2hr +)

b. Psychological issues w.r.t. to age

- The teens of the age group 14-15 years have fewer psychological issues as compared to the teens of the age group of 17-18 years.
- The younger teenagers have fewer depression cases as compared to the older ones, it goes from 3.4% to 7.8% to 8.4% to 17.4%. From the charts below, we can also notice that with

increase in age, the proportion of teens facing psychological effects of using WhatsApp also increases.

Anxiety is the most marked option here also in the table of w.r.t. Age.

Chart 6.b.: No. of psychological issues w.r.t. age

	Dizziness	Depression	Anxiety	Psychosis	Hostility	Phobia	Nothing
14-15 years	4	2	6	1	4	1	40
15-16 years	11	7	15	7	8	3	41
16-17 years	12	7	10	5	5	3	41
17-18 years	3	8	8	4	4	3	16

14-15 years:

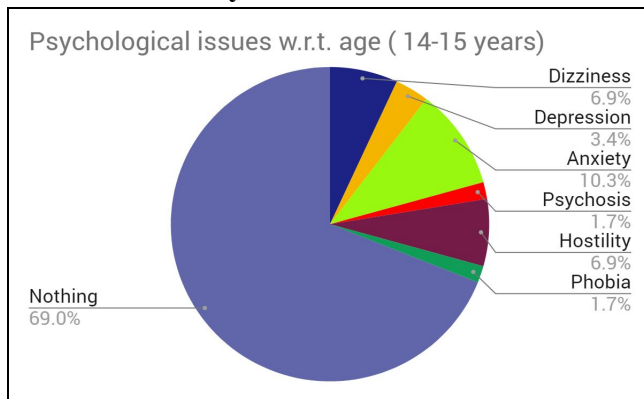


Chart 6.b.1: Psychological issues (14-15 years)

15-16 years:

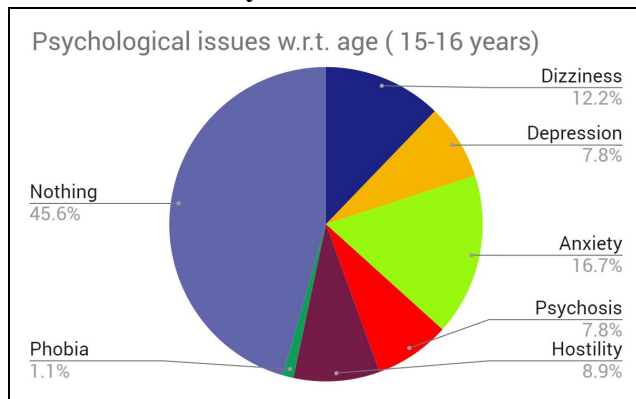


Chart 6.b.2: Psychological issues (15-16 years)

16-17 years:

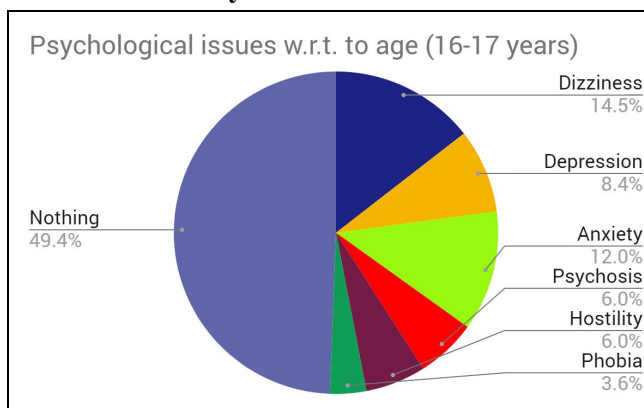


Chart 6.b.3: Psychological issues (16-17 years)

17-18 years:

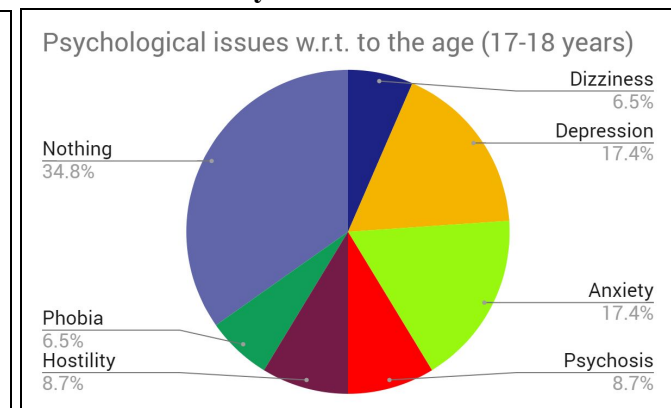


Chart 6.b.4: Psychological issues (17-18 years)

7. Physical issues

As we can see in the graph below, teenagers using WhatsApp have many physical issues **Eye issues and headaches** are the top marked physical issues by **44.75% and 37.90% each respectively**. Then followed by neck pain and finger pain by 17.4% and 13.7% each respectively.

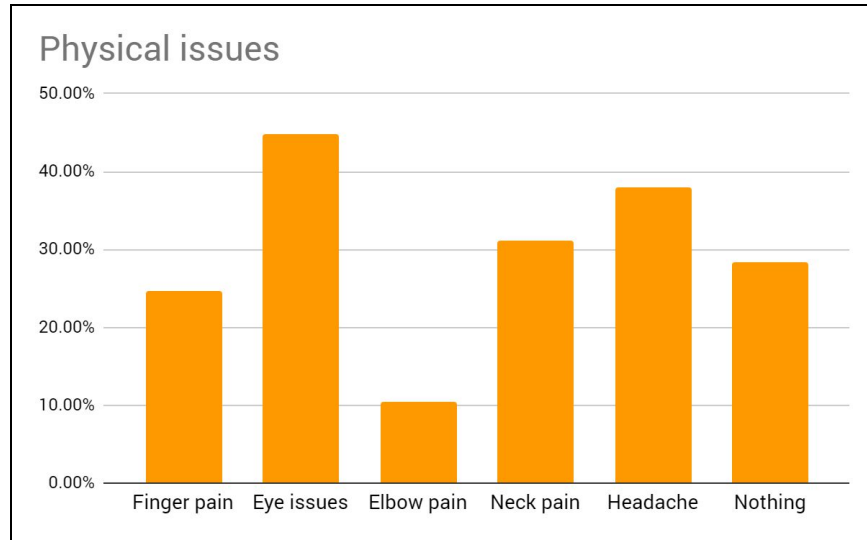


Chart 7: Physical issues

a. Physical issues w.r.t. screen time

On closely observing all the data below, we can easily infer that with increase in screen time, the proportion of people facing physical issues also increases.

Chart 7: Physical issues						
	Finger pain	Eye issues	Elbow pain	Neck pain	Headache	Nothing
0-20 mins	12	25	3	18	23	26
20-40 mins	13	24	6	18	20	19
40-60 mins	11	22	8	19	15	7
1-2hr	10	14	3	8	13	4
2hr+	8	13	3	5	12	6

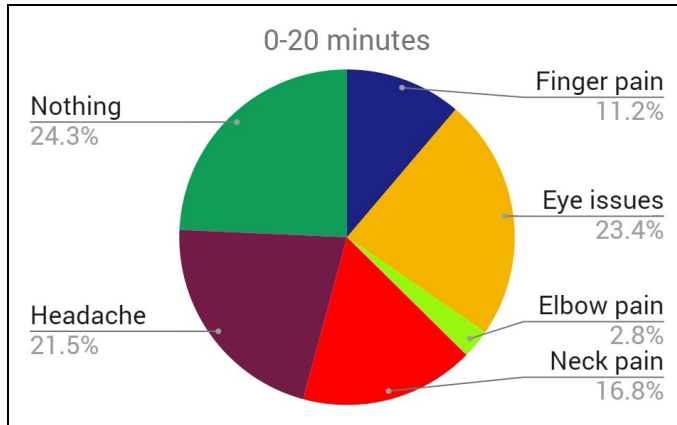


Chart 7.a.1: Physical issues (0-20 mins)

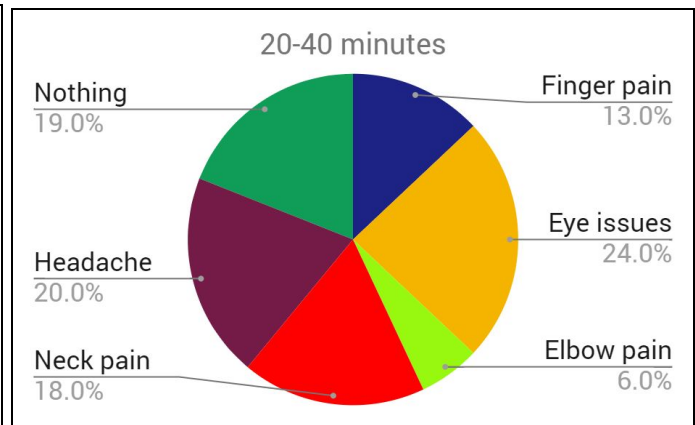


Chart 7.a.2: Physical issues (20-40 mins)

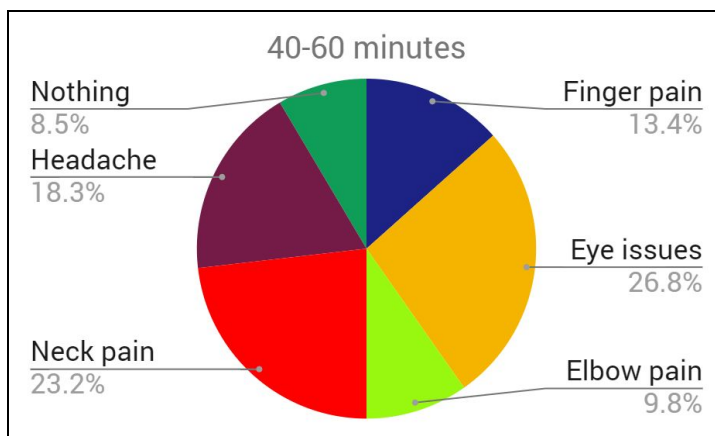


Chart 7.a.3: Physical issues (40-60 mins)

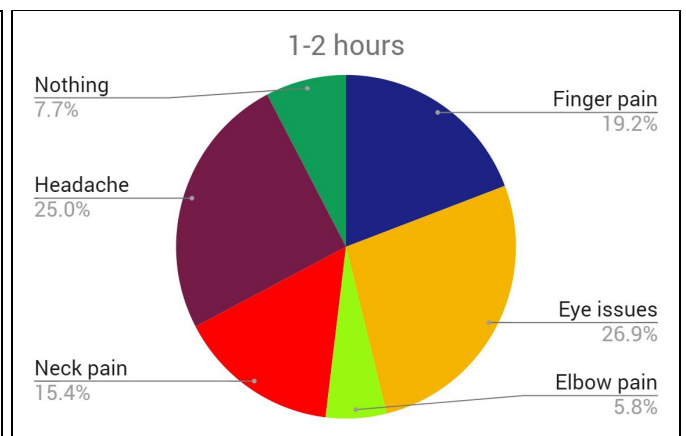


Chart 7.a.4: Physical issues (1-2hr)

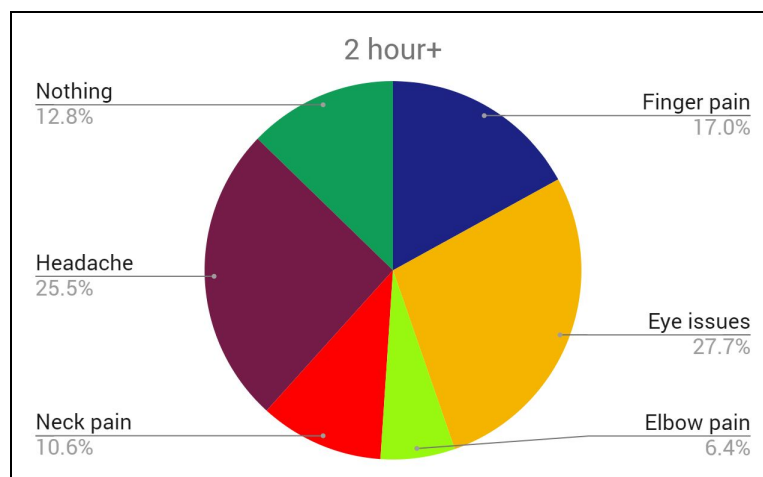


Chart 7.a.5: Physical issues (2hr+)

8. When we asked teenagers if they are influenced by the viral trends on WhatsApp, only 24.7% of them agreed to it. Whereas 41.6% of the people said that they were not influenced while 33.8% took a neutral stand on it.

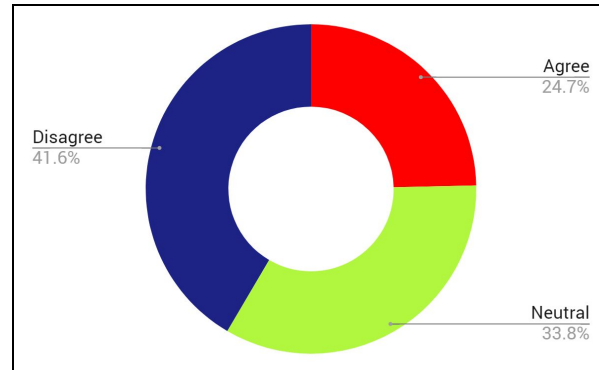


Chart 8: Influence of the viral trends on WhatsApp

9. Out of the full sample population, 47% of the people said that WhatsApp's read receipt feature didn't make them nervous and 37.4% were uncertain about this. Only 15.5% of the teens said that WhatsApp's read receipts feature made them nervous.

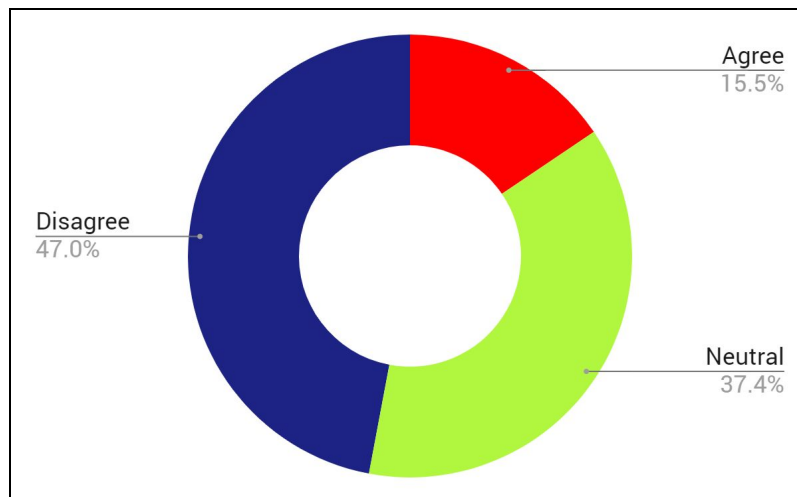


Chart 9: Read receipts make me nervous.

10. **24.2%** of teens agreed that they check each and every message in their groups, while **30.59%** of them disagreed! **44.29%** of them took a neutral stand.

There is a pressure on me to check each and every message in my groups

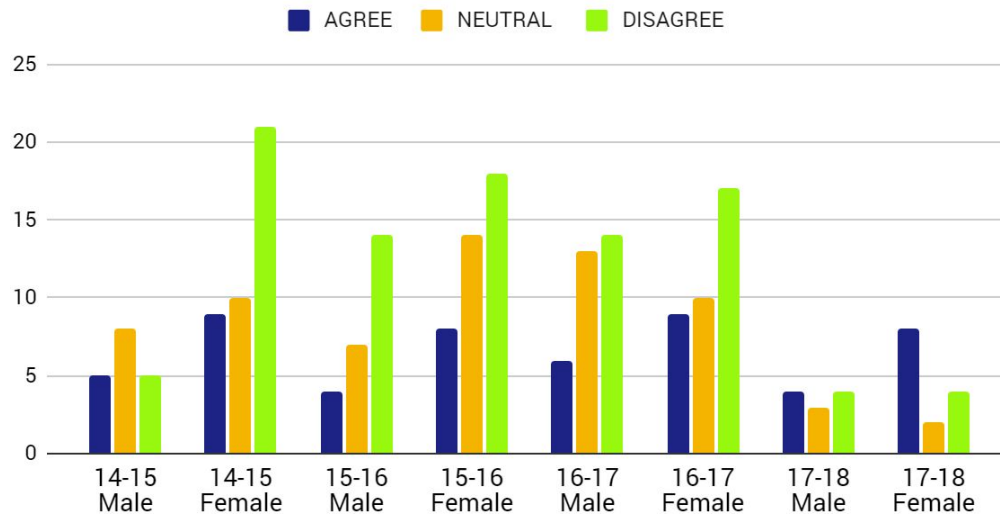


Chart 10a: No of teenagers feeling the pressure to check WhatsApp messages in their group - Age and Gender distribution

There is a load of pressure on me to check each and every message in my groups			
	AGREE	NEUTRAL	DISAGREE
14-15 Male	5	8	5
14-15 Female	9	10	21
15-16 Male	4	7	14
15-16 Female	8	14	18
16-17 Male	6	13	14
16-17 Female	9	10	17
17-18 Male	4	3	4
17-18 Female	8	2	4

Chart 10b: No of teenagers feeling the pressure to check WhatsApp messages in their group Age and Gender distribution (Tabular representation)

11. We found an even pattern that the 16.44% males of the age group 14-18, are more cautious and careful about the messages and the tone they put in the groups whereas 9.13% are not. 15.98% of females of the age group 14-18, are more cautious and careful about the messages and the tone they put in the groups whereas 24.66% are not.

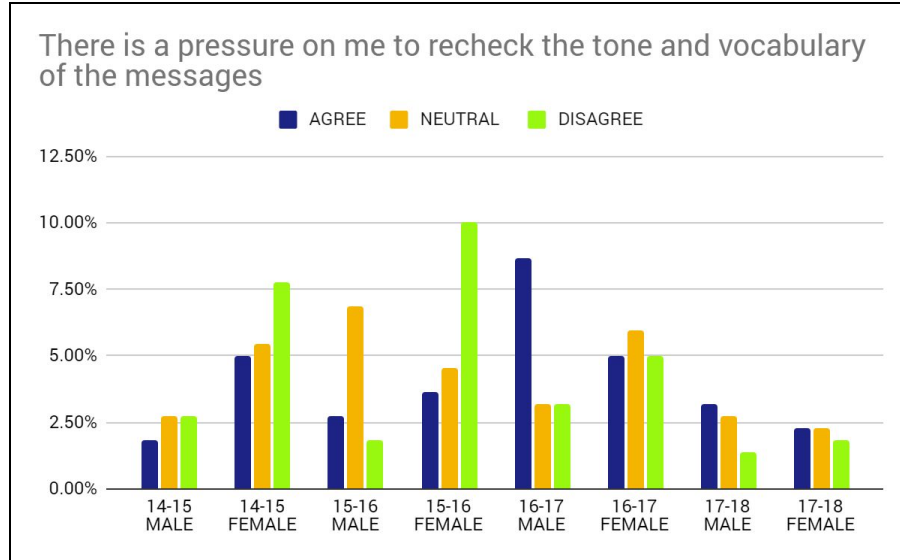


Chart 11a: Pressure to recheck the tone and vocabulary of the message in the groups- age and gender distribution.

There is a pressure on me to recheck the tone and vocabulary of the message, which is in my friend's group or my school/college group!			
	AGREE	NEUTRAL	DISAGREE
14-15 MALE	4	6	6
14-15 FEMALE	11	12	17
15-16 MALE	6	15	4
15-16 FEMALE	8	10	22
16-17 MALE	19	7	7
16-17 FEMALE	11	13	11
17-18 MALE	7	6	3
17-18 FEMALE	5	5	4
Total %			
Males	16.44%	15.53%	9.13%
Females	15.98%	18.26%	24.66%

Chart 11b: Pressure to recheck the tone and vocabulary of the messages

12. The research question revolves around the question of whether prolonged usage of WhatsApp affects academic performances. Curiously in the graph shown below, we can see that we have some interesting inputs from the survey. **Grammatical errors, excessive use of slang phrases and confusion between tone and vocabulary** stand out the most.

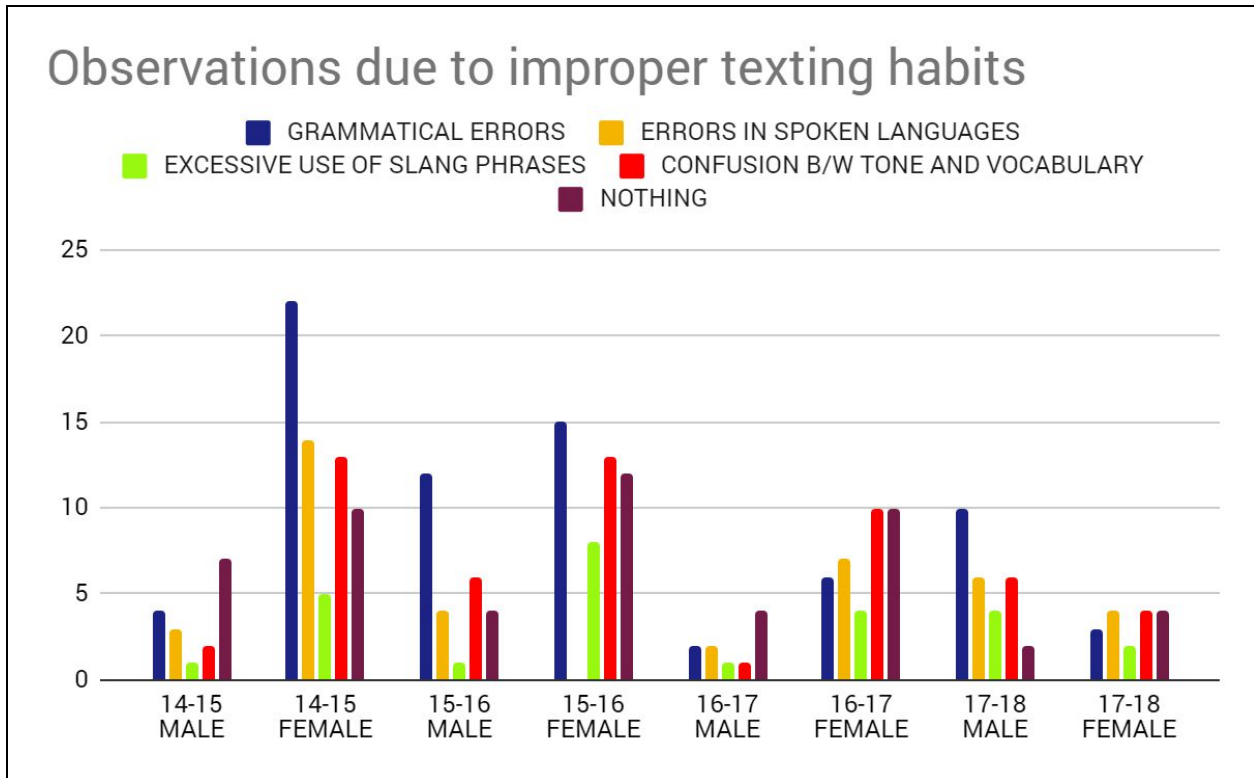


Chart 12a: Observations through improper texting

Observations due to improper texting habits!					
Checkboxes	GRAMMATICAL ERRORS	ERRORS IN SPOKEN LANGUAGES	EXCESSIVE USE OF SLANG PHRASES	CONFUSION B/W TONE AND VOCABULARY	NOTHING
14-15 MALE	4	3	1	2	7
14-15 FEMALE	22	14	5	13	10
15-16 MALE	12	4	1	6	4
15-16 FEMALE	15	0	8	13	12
16-17 MALE	2	2	1	1	4
16-17 FEMALE	6	7	4	10	10
17-18 MALE	10	6	4	6	2
17-18 FEMALE	3	4	2	4	4

Chart 12b: Observations through improper texting

13. **43.8%** of teens disagree with the fact that WhatsApp affects their studies. While 42.5% of them took a neutral stand. A small population of 13.7% said that WhatsApp affects their academic performance.

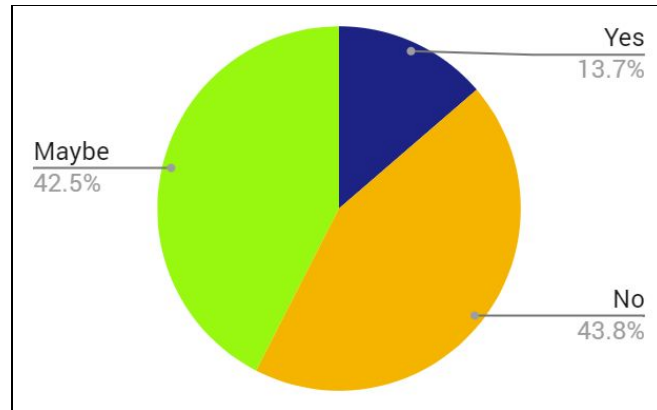


Chart 13: Does WhatsApp affect academics?

14. Through the survey, we found out that **25.1%** of teens agree WhatsApp affects the way they interact and hence creates an atmosphere where people want to live alone i.e. solitary behavior. Whereas 42% of them took a neutral stand. 32.9% of the teens disagree to the same.

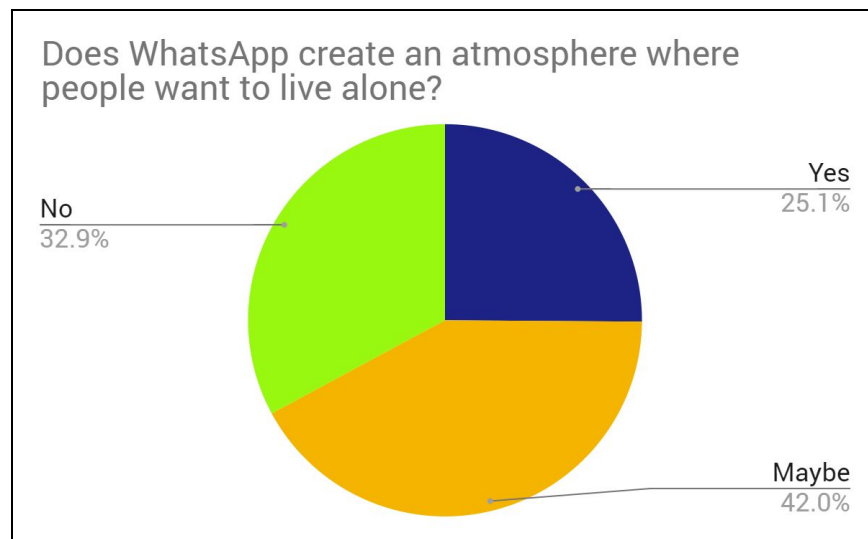


Chart 14: Does WhatsApp create an atmosphere where people want to live alone?

15. 'WhatsApp has brought me closer to my friends' circle'- said by **67.2%** of the teens who filled the form. Whereas 7.6% of people disagree with the same. This contradicts our hypothesis that students suffer from solitary behaviour.

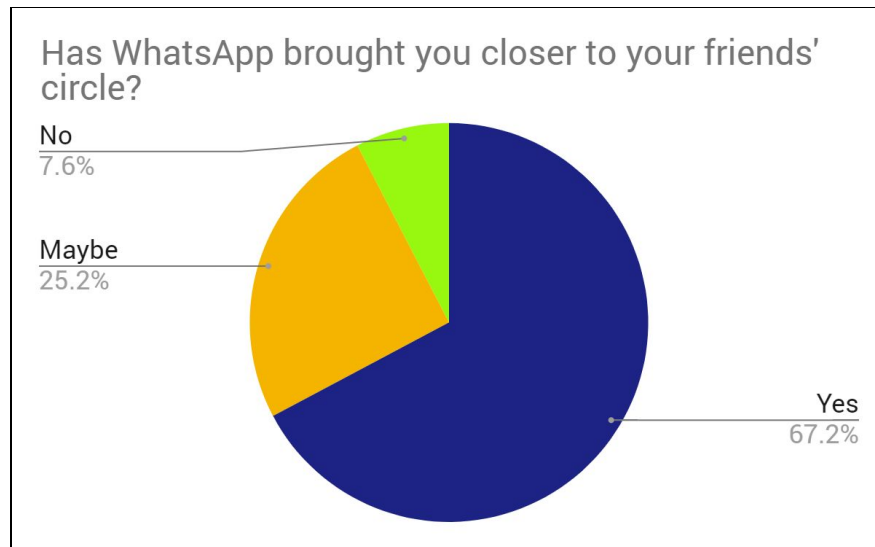


Chart 15: Has WhatsApp brought you closer to your friends' circle?

b. Interview Summary

Teachers

We interviewed **Mr Vivek Kaushik, Founder of Claylab Education Foundation, Teach For India Fellow alumnus** and **Mrs Suhani Jain, Manager, Fellow Leadership at Teach for India**. Some common things that they both talked about are:

Problems:

1. Since 80-90% of our students have access to mobile phones, it partially affects their academics.
2. There is a **high chance of getting indulged into wrong practices**. Also, it is very hard to restrict the use of the mobile phone as it is the **only medium to interact with people**.
3. It **reduces the face-to-face conversation** as of the real-life.
4. When students see the status of their friends, there are some instances in which they feel **frustrated, jealous and feel alone or left out**.
5. There have been many situations in which children lose their **self-esteem, attention from studies and their milieu**.

6. Students forget they are just glued to a gadget that is just a **means of communication**. The actions of parents and their outlook on everyday things directly affect the way their children perceive their surroundings.
7. During this COVID -19 online learning, it is observed that many students are not attentive in online class to be active on other social media, including WhatsApp. According to them students suffer from low academic performance which contradicts what students had said in the survey (*refer chart 13*)

Solutions:

1. When in an online lecture, we should **notify parents about the timings**.
2. In the current generation, research should be driven on the topic- What can be the solutions to this immense problem (Children being glued to their phones)?
3. Some basic **solutions** could be:
 - a) Uninstalling the application
 - b) **Using well-being applications to restrict excessive use.**
4. As mentioned in the 7th point, app developer companies should work towards developing applications for the education in which- it is not possible to leave the live classroom application!

Parents

We interviewed three parents of students, who belonged to the age group 15-17. They portrayed different academic performances and social interactions. The common insights that came out were:

Problems:

1. Teens' **use of WhatsApp**, for a long time, **can't be easily specified**. This contradicts the survey data where maximum teenagers consume 0-20 minutes of screen time.
2. Due to excessive usage of WhatsApp, they get **headaches, eye issues** which hinders their vision, hence they get very stressed with the everyday work which at last **builds to their anxiety**.
3. This has affected their studies because they are not focused and concentrated.
4. The **habit of using improper use of language** and too many **abbreviations** affects their academics.
5. Because of the continuous exposure to the digital media, their tone with which they communicate has become very harsh. They have become very **solitary**, hence don't spend time with family and friends. This contradicts the survey data in which students said that it doesn't make them solitary. (*refer chart 14*)

Solutions:

1. Indulging the child in some recreational work where he gets busy and learns something from it. E.g.:
 - a. Maintaining a personal diary in the buffer time.
 - b. Getting the child engaged in the kitchen, cleaning or gardening work.

2. Monitoring their activities on the phone during the buffer time.

Students

We interviewed 6 students who belonged to different age groups, had different screen time and reside in different places in Mumbai. All the students talked about these common things:

1. WhatsApp is an **excellent medium for interaction** with people; it creates a very **positive impact on daily life** as we use it for academic purposes like getting access to PPT, school groups and for revisions.
2. Especially in this lockdown, WhatsApp has become a very **vital tool to study properly**.
3. One thing which is terrible about WhatsApp is that we have the pressure of checking it again and again, sometimes we don't get a reply promptly then we get **irritated**.
4. To give fast replies **we use lots of short forms** which affects us while writing exams because we sometimes make those **errors** in the exam sheet also.

Psychologist

When we interviewed Ms Janaki Subramanian from With Love We Care, a professional psychologist, we found out some very critical insights from her side.

According to her:

Problems:

1. When a person is glued in the mobile phone every day for a prolonged period, he /she is highly **vulnerable to being disconnected from reality or developing the fear of being offline**.
2. It's the **content and not the quantitative time** which teens consume is dangerous.
3. Especially among the young generation, there is a **very high risk of interacting with strangers on social media**.
4. When teenagers are exposed to the hustle-bustle of social media (WhatsApp) then they get **addicted to the dopamine hit of the instant replies of messages or the sweet compliments of status updates**.
5. This doesn't seem a big problem for Gen Z, but this has been proven how badly this addiction can affect them. Here the **lack of awareness** comes into the picture.

Solutions:

1. We should also spread awareness in a non-judgemental way to each teen of this generation.

2. A person going through this addiction to social media (WhatsApp) should not be forced to leave it abruptly, rather we should try to communicate with them based on and statistics of how this addiction could be dangerous.
3. One more thing- when trying to help such a person we should not lose our hope on him/her. We should keep trying to help them from our side.
4. We should also schedule some offline time to indulge the person going through the same in some hobby. This could help in shifting the attention from the phone to the real world.

Experts

We attended a live seminar which was being streamed from Canada by /**TheSocialDilemma_ team**. This session was hosted by **Lisa Ling**, *Executive Producer, Host at CNN*. Experts named **Tim Kendell**, *CEO of Moment, Director of Monetization Facebook, President at Pinterest* and **Jennifer Siebel Newsom**, *CEO, Founder of the Representation Project*

Some insights which we received from the seminar were:

1. **The number one psychiatric disorder among teenagers is anxiety.** This anxiety is about needing to check in with social media.
2. Even though social media makes teenagers more anxious and worried about missing out, they can't stop looking at it. The prefrontal cortex of the brain hasn't developed enough to tell them, to put it down, to say to themselves it's not making me feel good. **The prefrontal cortex area of the brain that is involved in cognitive control, our ability to process and direct our attention based on our goals, is the last part of our brain to develop.** It gets completely developed in the mid-twenties of their life.
3. **There are changes in the way teens interact with their peers and the world. These changes in interactions lead to changes in behaviour, changes in psychiatric and sort of mental health.**
4. They are bombarded by the continuous inputs and stimulus of information technology.
5. There are many activities which are critical for their development: face-to-face communication, physical activities, exposure to nature and sleep but these activities are **threatened by increasing access to information technology.**

Parents are also in a serious dilemma right now. They have to balance between trying to protect their kids, but also, let them face it- there's an enormous social pressure to use technology. And it's also incredibly important that children are technically literate.

c. Data Analysis

1. From our findings we can deduce that when students are exposed to digital media, they are vulnerable to getting in contact with the inappropriate content on social media. There is also a very high chance of getting addicted to continuous input and stimulus of WhatsApp.
2. On comparing the inputs received from the teachers and psychologist with the ones received from the students, we can see that- students face many psychological (*refer chart 6*) and physical effects (*refer chart 7*) associated with WhatsApp, students don't agree that it affects their social and academical background. *We can infer that there is a lack of awareness among students about the short or long term effects of WhatsApp.*
3. **22.83%** of teens said that there is a strain to check the messages immediately which they are receiving as well as the ones they are sending. Also, we have deduced that with increase in screen time, there is an increase in anxiety. (*refer chart 6*) This hence builds to the stress & anxiety of the teenager.
4. As per the responses received from the teachers and students, we can say that- use of WhatsApp does affect the academics by:
 - a) Loss of concentration
 - b) Grammatical errors, errors in spoken languages, confusion between tone and vocabulary. (*refer chart 12*)
5. On analysing the responses of the students, teachers, psychologist and experts we see that use of this media affects the health by:
 - a) Causing the development of low self-esteem, self-centred behaviour
 - b) Making one addicted by the dopamine hits
 - c) Making them stressed and anxious
 - d) Eye, head, neck are the most common issues marked by them
6. On analysing the responses which we got from the survey and the interviews with experts and psychologist, we can deduce that teenagers are not aware of whether their usage of WhatsApp makes them solitary or not. (*refer chart 14*) But, experts-psychologist have said that using a particular device for long times devops some kind of disconnection from reality.
7. We can also say that; **WhatsApp** particularly hasn't been vital in bringing that divide. As **67.2%** of the teens said it has brought them closer to their friends. Whereas 7.6% of people disagree with the same.

F. Discussions

Conclusion

From this research, we conclude, the effects of WhatsApp on the teenagers of the age group 14-18 are as follows:

- a) Academic instability due to lack of concentration and errors in the grammar, excessive use of slang phrases and confusion between tone and vocabulary.
- b) Physical issues like headache and eye issues and psychological issues like anxiety emerge after prolonged usage.
- c) Builds to the stress and anxiety of the teenagers as their prefrontal cortex isn't mature enough to tell them that it is making them stressed.

Our **hypothesis was proven wrong** because there was no such clear distinct evidence which showed that WhatsApp creates an atmosphere where people want to live alone i.e solitary behaviour.

Implications

This research has implications for :

- a) Researchers to research in depth on how the use of a particular social media application can cause some potential threats on the way people behave.
- b) Psychologists working in the field of effects of social media because we have received some genuine findings which could be beneficial.
- c) Teachers who design online curriculum especially in this pandemic because the teachers part of the data has described the problems that happen in an online set up and some solutions which one can incorporate in his or her classroom.
- d) The Government can use our findings to spread awareness in the public about how excessive use of a social media application results in psychological and physical issues.
- e) It will be helpful for parents as well as teenagers to manage their media and screen time consumption.

Factors influencing our result

The factors that could have influenced the result are:

1. Our sample size for the survey was very small to represent the whole population of teens in Mumbai.
2. The unavailability of a doctor (physician) to know the in depth about physical issues.

Solutions

1. We should hold an online campaign for all the teenagers from all over Mumbai, where we could tell them what we have learnt from this research and how they can benefit from it.
2. We can also approach students from different cities in India to have this discussion going on- how and why should we use the social media and the necessary steps that we need to take so that we do not become an addict to it.

New Question

A new research question that has emerged from this research **‘What kind of content on social media platforms have adverse psychological effects on teenagers?’** after completing this research.

Another question that arises is **‘What are the psychological effects of Instagram on the teenagers and the working professionals belonging to the age group of 14-40 years old?’**

G. Appendix

Things that were considered by us while making the questionnaire:

Purpose:

1. Making the work easy
2. To get data in an organised format
3. Reach out to a large mass of teenagers by online surveys

Who is the target population: 14 to 18-year-old teens.

Mode of conduction: Conducting it via(by the use of) a mobile or other technological media over the internet.

1. Survey questionnaire: [CaL Questionnaire](#)
2. Questionnaire for the interview:
We intend to keep the same questions for the interview also. But the advantage of the flexibility of tweaking the questions and getting a detailed answer would be more which would help us in having some detailed responses also.

Questions for the interview:

Teachers:

1. Have you ever received any complaints from the parents' side that his/her child uses mobile phones extensively?
2. Have you seen fake or unverified messages being forwarded in your school group by the students? [If yes, then: What actions have you taken against this?]
3. According to you what are the effects of social media/ WhatsApp on students?
4. If you were to be conducting this research then, which aspect of this problem would you be focussing on? [This problem: The problem of this generation where students tend to stick to their mobile phones] And what social media platforms would you trigger?
5. What can we as a society do to help the students to be less sticky and connected to the phones and be more interactive in the real-life?

Students:

1. What is the impact of WhatsApp on your daily life?
2. If you were to be conducting this research then, which aspect of this problem would you be focussing on? [This problem: The problem of this generation where students /teenagers tend to stick to their mobile phones] And what social media platforms would you trigger?

3. Do you think that doing a study on the effects of social media is important for this age? WHY?

Parents :

1. How long does your child use WhatsApp and what is his daily screen time on the phone?
2. Does your child feel some bodily pains due to the usage of the phone, especially during this Pandemic?
3. Does your child feel anxiety or stress due to the usage of the phone, especially during this Pandemic?
4. According to you, what are the effects of WhatsApp on the teens?
5. What actions have you taken on your child against reducing the screen time of his/her phone?

Psychologist:

1. According to you what should be the minimum age from when a person should indulge in using social media?
2. How long should be the average usage of the mobile phone, considering the pandemic and all the schooling is going on the phone?
3. What are the gradual changes seen in the behavioural pattern of a person who is constantly engaged in using the phone?
4. If you were to be conducting this research then, which aspect of this problem would you be focussing on? [This problem: The problem of this generation where students tend to stick to their mobile phones] And what social media platforms would you trigger?
5. What are the easy solutions that can be taken to help a child going through this problem?

Experts:

1. What are the things in social media/ WhatsApp which uplift the daily usage of an individual teenager?
2. What are the gradual changes seen in the body of a person who is constantly engaged in using the phone?
3. What are the gradual changes seen in the behavioural pattern of a person who is constantly engaged in using the phone?
4. Why is it important to do a study on the effects of social media in the current generation?
5. What can we do to help a child who is having the difficulty to get away from the phone?

H. Team Reflections

GROUP REFLECTION -

Indicators -Collaboration	4	3	2	1	Example
<u>Every</u> member of the team was <u>always</u> prepared, well informed on the project topic and ready to work.		Y			We used to take a while get work sorted
<u>Every</u> member of the team <u>always</u> completed assigned tasks on time without having to be reminded.		Y			We used to forget the work and get a bit delayed
As a team, we created a detailed task list that divided project work reasonably among the team members.	Y				We usually divided the work according to our strengths.
As a team, we set a schedule and tracked progress toward goals and deadlines.		Y			We had not been able to track progress properly and got delayed sometimes.
As a team, we used time and ran meetings efficiently; kept materials, drafts, notes organized			Y		Meetings never go as per agenda in the meetings. We got diverted from topic.
As a team, we developed ideas and created products with the involvement of <u>all</u> team members	Y				We came to a common ground usually. Never disrespected other's ideas.
Indicators Communication	4	3	2	1	Example
Every member of the team listened to others' ideas without interrupting;	Y				Initially deciding on a topic was difficult. But in the end we decided on

responded positively to ideas even if rejecting.					the topic and listened to each other's opinion.
Team members communicated openly and treated one another with respect.	Y				Communicated openly and treated ideas with respect. We all tried the best to discuss every single point with each other.
Every member of the team felt safe and free to seek assistance and information, share resources and insights, provide advice, or ask questions of each other.	Y				When rationale was not prepared or when our participation dropped we quickly started gathering data, shared with team mates and jotted in rationale.

Individual Reflection -

Aman : Drafting the rationale- reading different research and creating something well framed was the most enjoyable for me during the CAL project. I struggled a lot with communication with my team members. I learned to communicate better, leading my team towards a goal, working with a team, time management, empathy and hardwork. During the last weeks of November, there was immense pressure on us to filter out the rough data collected from the forms and interviews, make them into charts and diagrams and also put it into the data. This led us to work for the long hours at a stretch to complete the data in time. Though this was a big burden on us, I can definitely say that I have learnt a lot from this. I have developed skills like communication, leadership, working with a team, time management, empathy, hardwork and working on Google Docs, Sheets, Calendar.

Ranjana: I enjoyed collaborating on Zoom call while sharing ideas and getting into arguments and learning from team mates. I struggled because of time management because I used to have lots of other things to look into. Not having access to a laptop was also a major problem while working on the digital part of the paper. I learned to work together in a team and learned to take things seriously.

Prachi: I always felt safe with my teammates and learned a lot of skills with my team which was an enjoyable process. I struggled a lot with not having a proper computer to work on the document when it came to editing the final research paper. I learned to manage digital documents, collaborate with my team and communicate with them properly.