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Prevalence of Smartphone Addiction and Associated Ocular Problem in Young Population Of U.P, India

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Abstract: ***Through the technological development mobile phone entered in our lives which becoming the most commonly used technical device. The telecom technology (smart phones mainly) development has profound impact on lives of the students. It has more advantages, it enhance or improvise our knowledge , increase more activity in less time but sometimes it act as a harmful device by the excessive usage , on our young generation . It becomes adductor device in young population.***
Purpose- the main purpose of this study is used to find the impact on users -academic performance, daily activities, physical and mental health, social relationships, ocular problems, and withdrawal tendency.
Design- This study is based on the young age group. A complete descriptive questionnaire based study.
Method - Total 100 students were included in this study, mainly young age group between 18 to 25 years. 20 questions was structured in Google form and then sent to the student through their mobile phone. Their working hour on the smart phones, component of applications which were they most used.
Result - This study proved the level of mobile phone addiction scale, their physical, mental and behavioral changes. Ocular problems found such as Dry eye, headache, blurred vision, eyestrain, neck and shoulder pain, fatigue and red eye also general health problem like pain in wrist, index finger, phalanges etc.
Conclusion - the data collected from 100 students shows mobile addiction was determined to relate to withdrawal, tolerance and salience. The most common ocular causes was dry eye, blurred vision, eye strain, headache are recorded in this study.
Keywords: Smartphone's addiction, human machine interaction, mobile phones functions, increase impatience, daily life routine disturbance, behavioral changes.

I. INTRODUCTION

communication played an important role in our society since a long time. There are various instruments or equipment have been developed over time which enhance our communication systems which become easier, faster, and less time taking. Smartphone's are the devices which are faster, easier, durable, handy and easily available device. It being as a most convenient device to communicate with each other across the world and also for exchange of personal and professional data.

II. SMARTPHONE ADDITION

Smartphone's are most frequently used technological device, developed since the first communication using portable wireless phone was achieved, it said to have a positive effect and also provide various advantages both on socially and individually.
We easily let go the problems arisen through it and excessive usage. Some common physical problems like headache back and hand numbness, physiological issues eg. Stress, anxiety, depressive and addiction through it. No doubt it is boon for our life but also act as a ban for our health. As dependency is increased and led to an irreplaceable position of a phone in our daily life during this pandemic time. According to report of New York 2017 time 150 times mobile phones checks by the young ones, approximately 110 texts etc are send in every 6 minutes by them.
A recent statics post through an article by Huffington's is

MODE	PERCENTAGE
Online (frequent)	92
Online (constantly)	24
Social media (15 to 18)	76
Social media (13 to 14)	68
Face book	71
Instagram	52
Snap chat	41

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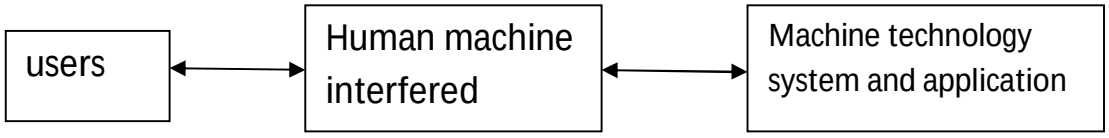
According to bankmycell website the average user checks their phones 63 times per day from 2018-2019 and 86 % of users will check their phones while they are speaking with friend and family. During bedtime 87% of user checks their phones continuously 1 hour on going to sleep and 69% of users check their phones within 5 minutes in morning after the wakening.
Smartphone's usage rises dramatically in 2020. There are nearly a 39 % increases in Smartphone's usage from 2019 according to The Indian EXPRESS. Worryingly, 73% of users said they feel isolated when they are without their Smartphone's.
The different types of functions of mobile phones, the various symptoms / addictive behavior, their impact on health, causes and treatment also discussed in this paper.

A. Mobile Phone Function

There are various types of mobile phone functions which enhance the ease of doing works, task and activities of the users. By the survey through online mode were conducted in UPUMS University, CSJM University, Allahabad university students to identify the level of engagement. author had tried to collect a sample for the representation of individuals affected by the Smartphone addiction.
100 responses by this survey on questionnaire based Google forms were designed to cell phones hobbits, primary uses of Smartphone and behavioral changes without their mobile phones.

B. Human Machine Interaction



Mobile interaction is the study of interaction between mobile users and computers. Almost everywhere people use mobile phones, and portable media player. Mobile technological devices are suitably designed for the human use very efficiently and it has been studied with concept of HCI (human computer interaction) .
HCI states as a discipline related to the design, evaluation and application of interactive computer systems for human use. (Dix, Finlay, Abowd and Beale 1992).
This has been studied by various disciplines and involves the combination of the two or more academic regulation concept that is human behavior, sociology, psychology etc.

C. Adverse Effect of Mobile Phones Addiction

1) Time duration will increase to use of mobile phones.
2) Recurrent thought for using the mobile phones by the user.
3) Aggressive behavior towards when phones get switched off.
4) Decreased the productivity and academic performance.
5) Emigration of individual towards the real social contact.
6) Loss of time by the excessive use of Smartphone's by engaging on various applications.
7) Nervousness, moody and anxious when withhold from usage.
8) At unfavorable environment, individual respond to text, call to other peoples and they get isolated by this kind of activities.
9) People want to check notifications, messages etc continuously.
10) One of the most common effect in individual is lack of sound sleep by the prolong use of mobile phones.
11) Several ocular problems in the eye like strain, blurring, dry eye etc.

D. 0cular changes

1) Dry eye
2) Ocular pain
3) Redness
4) Blurred vision
5) Glares

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6) Frequent rubbing of the eye
7) Excessive blinking
8) Tearing
9) Headache from the eye strain
10) Eye tiredness or double vision
11) Irritation

E. Behavioral Changes

1) Excessive use of your cell phones can cause different physical problems like permanent damage or may difficult to treat properly.
2) This study showed that there was bad impact on physiological activities by the excessive usage on young generation. Then they felt depressed and anxious while using cell phones. on the other hand some of the youngsters felt relaxed even without having a cell phones.
3) It will also disturb our real life interaction and literally alters the brain physiology such as depression, insomnia and anxiety.

F. Increase Impatience

Excessive use of the internet, cell phones and other technological devices can cause us to become more impatient, impulsive, forgetful and even more narcissistic. The factor include various vibes like "always thinking that I should use shorter time with my Smartphone but the inner feel urge to use Smartphone and sometime student behave like I spend my break time with the phone but they extended their break time by the use of Smartphone which cause the disturbance on their routine time.

G. Daily Life Disturbance

It is most important factor concerned with smart phones addiction of this age group (young college student) in all across the world also. By this study we perform in UPUMS paramedical student, Allahabad university graduate and post graduate student, CSJM university Kanpur students. It contain highest parameters which shows that the use of Smartphone's is not only the concern of the academic performance but also affect the family relationships , planned work, on time show up in class, physical soundness and ocular issues.

III. REASONS AND CAUSES

There are number of reasons that reasons can cause mobile phone addiction. Some of the main reasons are as following –

A. Human brain is strongly affected by the way of Smartphone application designing, they attract to users to increase the approach. This is created to enhance the marketing and designing technique.
B. Our mobile phone works more efficiently then the people can ever do. Smartphone's are bending to more unavoidable device in our daily lives from texting to keeping ones work related to files, safe and secure and many more.
C. People want to explore and experience new things by approaching technologies which lead to excessive use of the Smartphone's.
D. Youngsters urge to improve their follow by the social media platform that is why they constantly give their time on different application hence it also tends to excessive use.
E. To earn money by various online mode application, they play game, online marketing, business which leads to false perception of reward and can cause recurrent requirement to achieve that kind of money.
F. Lack of parent's awareness to check their children's phones and proper guidance.
G. From all these causes our country is suffer from both mental and physical behavior due to over use of Smartphone. Depression, loneliness, stress, negative emotion, anxiety, neglecting face to face contact with others.
H. Male infertility is caused due to RF radiation which damages the spermatogenesis also.
I. Several ocular problems are also seen by the survey like blurring vision after taking online classes, head and neck ache issues, lose concentration from work which affect on academic performance etc.

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IV. METHODOLOGY

This is a empirical / graphical study for the identification of the smart phones action factor of undergraduate, postgraduate students of several universities, departmental students of Uttar Pradesh university of medical sciences U. P in INDIA . 100 Smartphone's addiction sample has been identified and a questionnaire has been developed. The reliability and validity of the questionnaire has also been tested by most of the seniors etc.

For the data collection 10 structured questions are prepared by the help of Google form and circulate the questionnaire to students through their mobile phone numbers with synchronizing their E- Mail ID

After the collection of the data incomplete and biased or abnormally answered data were removed through the selection process.

A. Suggestion to Overcome the Problems after Excessive use of Smartphone's

Some beneficial remedies to decrease the mobile phone addiction by the detailed study of the paper is –

1) Disconnect all the devices, switch off the wi fi and keep away from that zone by this unplugging area.
2) Uninstalled all unnecessary applications from the Smartphone .
3) Make a short time slot for the usage of mobile phones.
4) Maybe ought to have to reduce the means of entertainment.
5) Enhance the productive activity without the use of phone.
6) Interact with the people, friends and parents (family) by the real world.
7) Take time gap between the continuous class, work etc so that eyes get relaxed.
8) Proper blinking should be done to maintain the lacrimation.
9) Use spectacle to avoid the harmful rays entered into the eye.
10) Use blue filter lenses
11) Follow 20-20-20 rule means

V. DISCUSSION

Today, our life style is completely shifted towards the modern technology .our Smartphone's are the masterpiece of this process. It is a portable and handheld digital screen has multiple functions which help to improved various activities.

In fact, Smartphone's have becomes so popular that almost all teens and adults also have one or more of these Smartphone's but the most important thing id the defining visual problems due to mobile phones. Most people complain of eye strain, headache, dry eye, pain in the neck, shoulder, back, eye redness or irritating fatigue and ocular discomfort. The severity of manifestation depends on how much time people spend on the mobile phones.

VI. RESULT

The technique has been used to identify the factor that affects the Smartphone's addiction of universities students in UTTAR PRADESH INDIA

Most of the variables are affect by the various factor that are –

A. Daily life disturbance
B. Withdrawal
C. Impatience
D. Some thought that life would be empty by the absence of Smartphone's.
E. Sometimes they feel anxious about not being able repair their phone when it breaks, they use unlawful activities.
F. Some of the samples are affected by financial issues occurred by using more Smartphone because they spent more money on recharging the data, When their per day data is over the recurrently spend money to recharge for add on data it also shows a level of addiction and many more.
G. We found think of answers through are questioaire are as following bellow -

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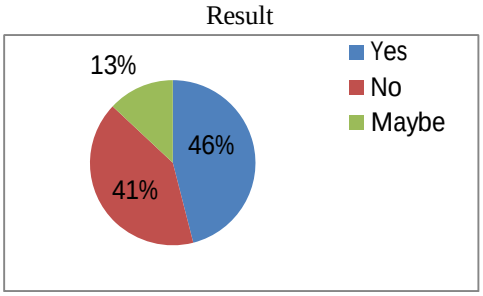
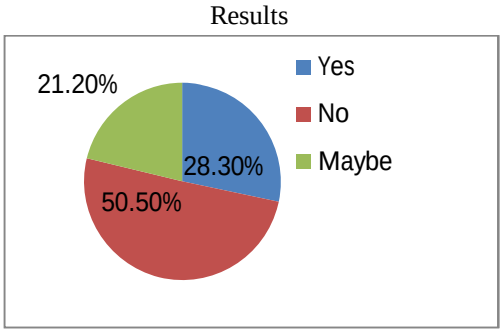
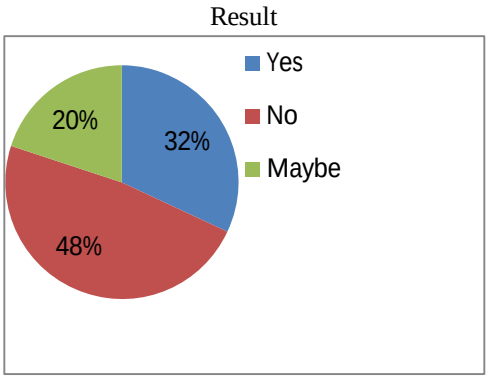
1) Does the use of your smart phone interfere with sleeping?



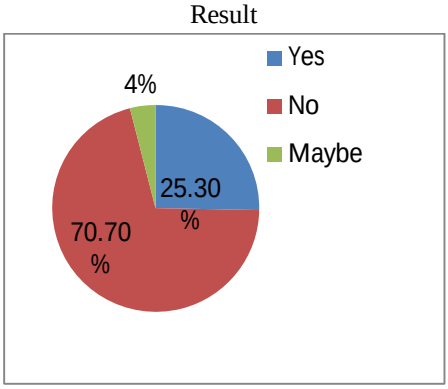
2) Do you ever feel remorse about the way use your smart phone?



3) Does your use of a smart phone boost or lower your self esteem?



4) Does the use of a smart phone cause financial problems?



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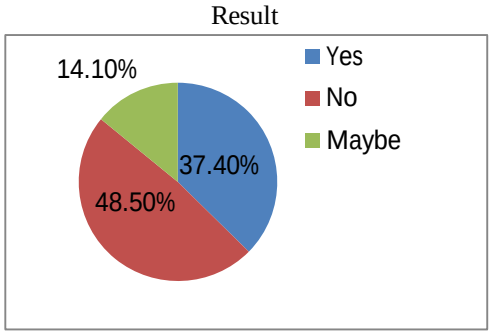
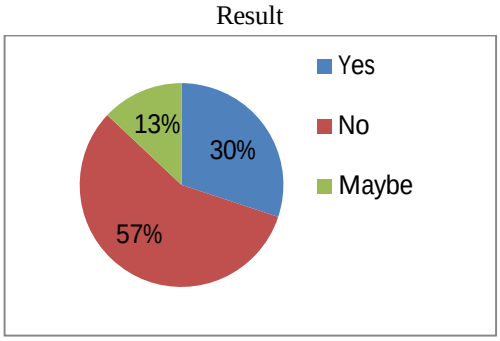
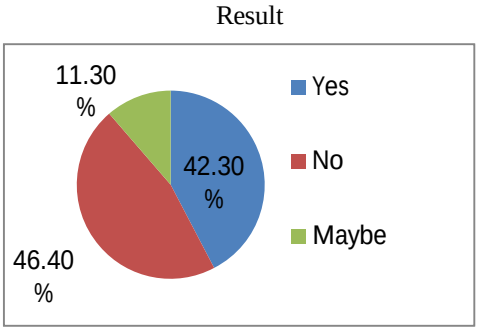
5) Does your smart phone use negatively affect your work performance?



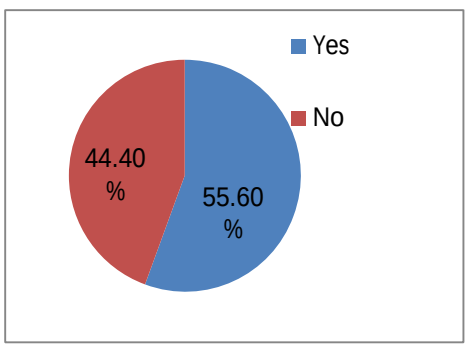
6) Do you lose time from school because of your use of smart phone?



7) Do you feel an obsessive urge to use your smart phone to escape feeling of boredom or loneliness?



8) Do you crave your smart phone after a short time without it?



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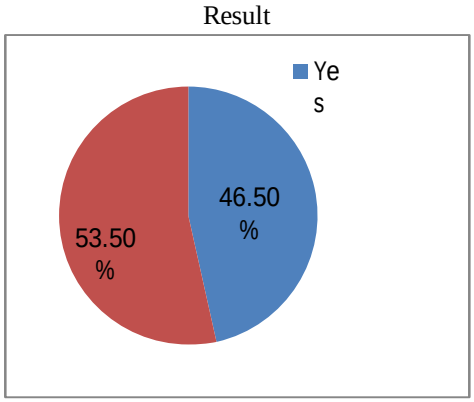
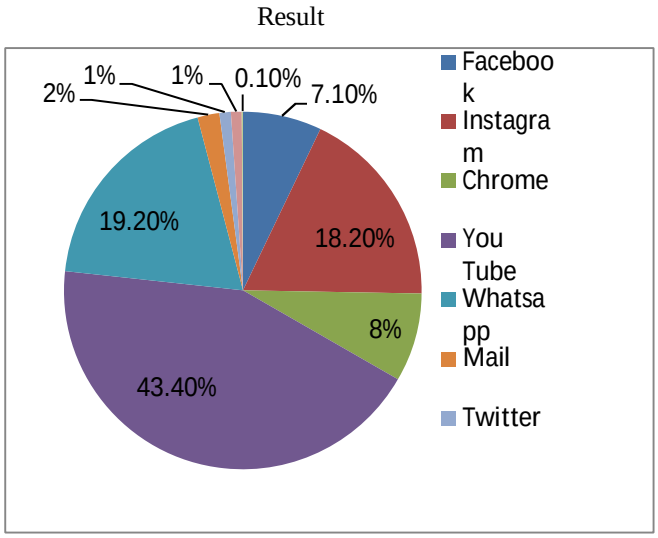
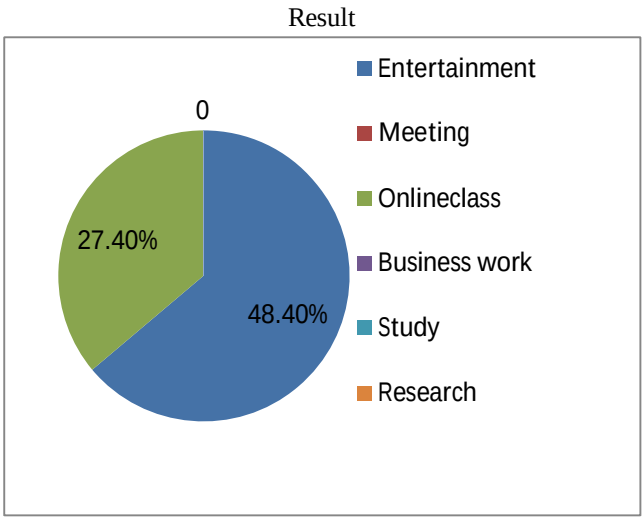
9) Have you substituted one smart phone app for thinking for example that Face book is the problems and switching to Instagram?



10) Which app you use mostly?



11) Purpose for using smart phone?



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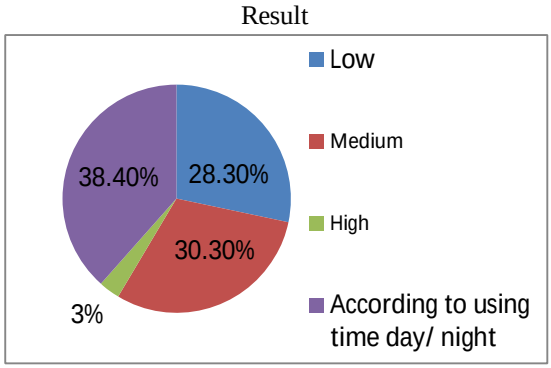
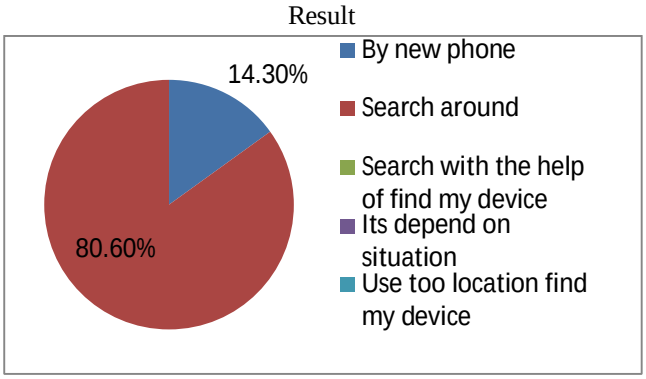
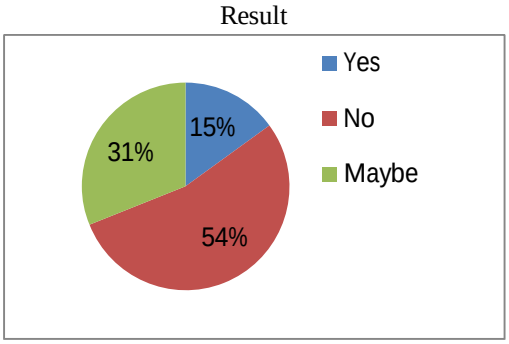
12) What is the brightness level of your screen at using time?



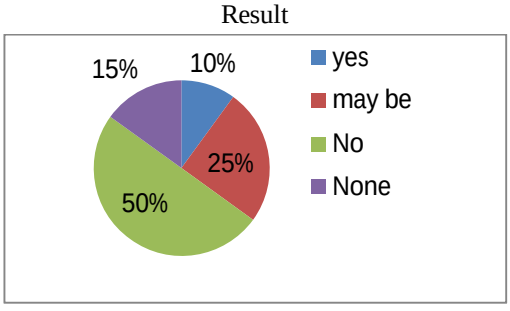
13) Sudden loose your smart phone what will you do?



14) Do you feel it would be almost impossible to live without the uncontrolled use of smart phone?



15) Is there burning & etching on your eyes when you expend more time with smart phone?



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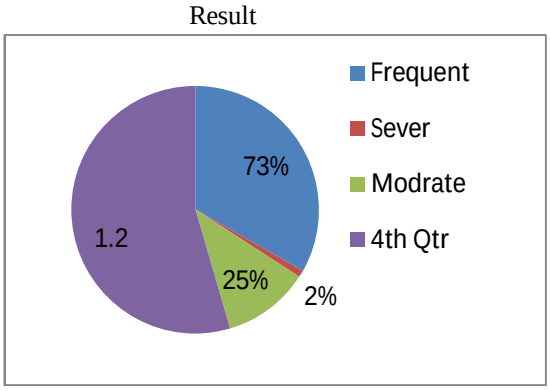
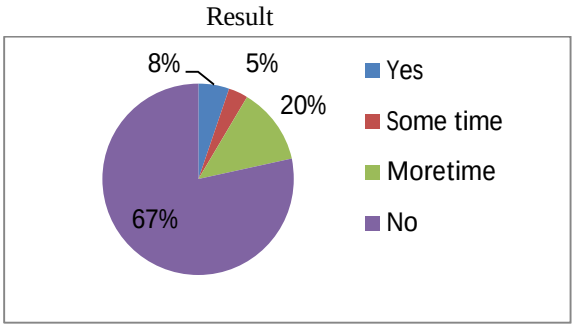
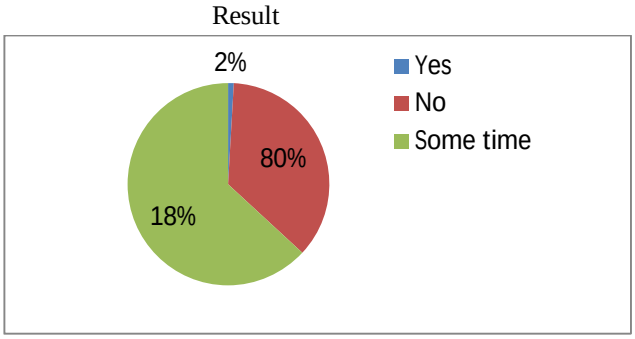
16) Redness in your eyes?



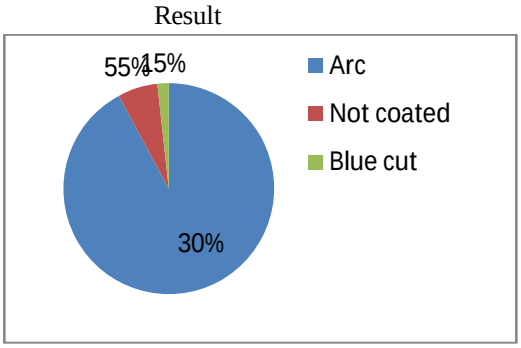
17) Are you rubbing your eyes during the contact with screen or smart phone?



18) Are you use lubricant?



19) Which type of glasses are you use during the contact of smart phone?



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VII. CONCLUSION

The factors are to expect that increased impatience, tolerance, withdrawal, daily life disturbance, financial issue and ocular problems have no using of blue cut lens 30%, rubbing of eyes in more time 20%, burning and itching 15% and other problems 20 % to 30%. This study observed that the regular academic performances of the college students are obstruct by the excessive use of Smartphone's.

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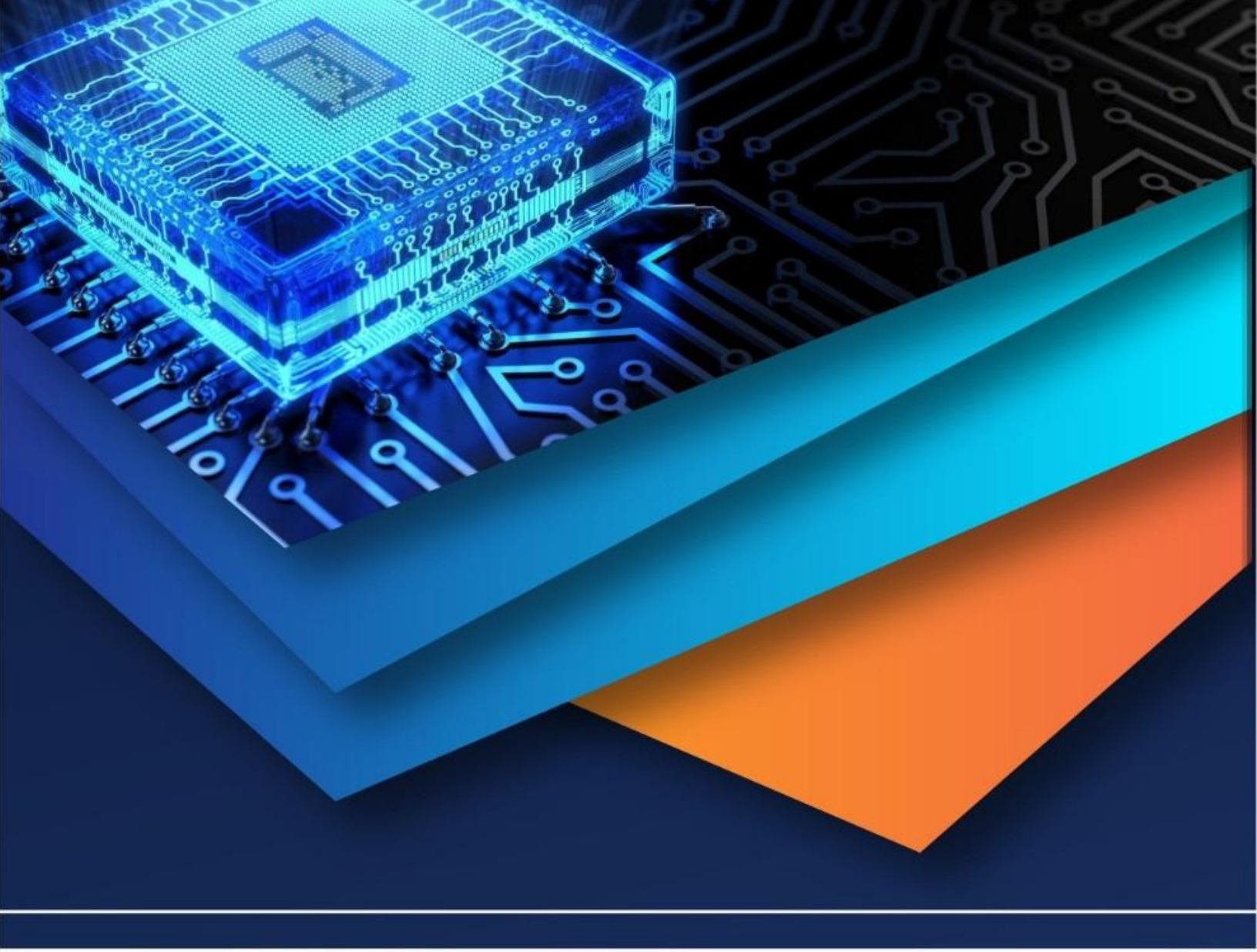

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