



EXPERIENCES OF INDIVIDUAL OVER PHANTOM VIBRATION SYNDROME AND ITS EFFECT ON COGNITIVE HEALTH- A SURVEY

Sonali Chaurasia¹, Nidhi Agrawal*¹, Pawan Kulkarni², Pawan Kumar Sharma²

¹ Faculty of Paramedical Sciences, Rama University, Mandhana, Kanpur, U.P., India

² Faculty of Medical Sciences, Rama University, Mandhana, Kanpur, U.P., India

Abstract: -

Background: - Humans are surrounded with vibrations". Vibrations can be detected by sensitive skin mechanoreceptors, but our conscious awareness of their presence is generally limited. In quiet places, users place phones on vibration mode to retain access. Using the electronic devices in vibration mode frequently, one may create the illusion that the device is vibrating when it isn't. This phenomenon is called as "phantom vibration syndrome. Stress is proportional to the phantom vibration syndrome, according to the recent studies. Phantom vibration syndrome can cause sleep problems in some people which further affects the daily living.

Methodology: - Three hundred sixty-three sample data was collected with the help of questionnaire that they were suffering from phantom vibration syndrome in a self-structured questionnaire. Data was analysed with the help of SPSS version 20.0.

Result: - A survey study on phantom vibration syndrome was conducted using questions survey methods, against which 400 responses were recorded that compared the activity of students and the faculties. On assessing Spearman's correlation coefficient, between these variables, we obtained the following, Correlation b/w Addiction+ Attention deficit, and Addiction+ Over – vigilance, Addiction+ Worsening mental health, and Attention deficit+ Anxiety, Over-vigilance+ Worsening mental health.

Conclusion: - After the result and discussion the study showed positive impact on use of smartphones by revealing increase in Anxiety, over- vigilance, attention deficit, emotional disturbance during classes. Hence the present study concludes, Phantom vibration syndrome is more prevalent in the current scenario and thus it is important to educate people about phantom vibration syndrome.

Key words: Phantom vibration syndrome(PVS),Attention-deficit ,Anxiety ,Over-vigilance, Emotional disturbance

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INTRODUCTION-

A need or problem encourages creative efforts to meet the need for solving the problem. It is quoted that; Necessity is the mother of invention. Modern diseases are the outcome of new Inventions. This could be true of conditions that are being categorized as "techno-pathology"-disorders resulting from the overuse or misuse of technology.[1] "Humans are surrounded with vibrations". Vibrations can be detected by

sensitive skin mechanoreceptors, but our conscious awareness of their presence is generally limited.[2] There are three fundamental categories of sensory receptors in our somatosensory system, each of which detects various forms of external stimuli. Mechanoreceptors detect light touch, vibration, pressure and texture.[3] According to the Neoplastic Theory, phantom vibration syndrome brain develops a new connection with stimulus to



changes in the environment. A mobile phone vibration is felt when it's not ringing or vibrating, in phantom vibration syndrome.[4]

Our mind or body tells us the phantom vibrations in belts, pockets, and even purses, which may be the consequence of actual nerve damage, a mental health issue, or both, according to an article published in the New Pittsburgh Courier in 2003.[5] In this information era, electronic gadgets such as pagers and cell phones have become habitual tools. In quiet places, users place phones on vibration mode to retain access. Using the electronic devices in vibration mode frequently, one may create the illusion that the device is vibrating when it isn't.[6] This phenomenon is called as "phantom vibration syndrome. Stress is proportional to the phantom vibration syndrome, according to the recent studies. Phantom vibration syndrome can cause sleep problems in some people which further affects the daily living.[7] People with severe phantom vibration syndrome have been associated with cognitive and affective depression in some studies.[8]

PVS affects university faculty lifestyles in terms of vibration sensitive and joint position sense in university faculty aged 28 to 40 years. Young adults have been found to cope with such stressful experiences by increasing their time spent on mobiles. Several options like privacy, portability and accessibility becomes easier with mobile phones even in public settings that eases negative reaction to the stress and offers a security blanket effect. However, pervasive use of this coping strategy is unlikely to remain beneficial in the long-run, with resultant adverse mental health /impact. [9] Phantom perceptual experiences cannot be explained by stress alone. A multitude of factors such as personality traits of anxiety and avoidance, and situational ones like expecting a call or message and being concerned about an issue that one may be contacted about at a given time may also influence the experience.[10] PVS is a common phenomenon at global level. Excess use of mobile phone is making PVS become an emerging disorder. It is associated with psychological diseases.[11]

AIM- A study on Phantom Vibration Syndrome on teacher and student during classes.

OBJECTIVES-

1. A study on phantom vibration syndrome when teacher taking the class.

2. A study on phantom vibration syndrome when students taking the class.

HYPOTHESIS-

Null Hypothesis (Ho)- No effect of phantom vibration syndrome on teacher & students during classes.

Alternate Hypothesis (H1)- Seen the effect of Phantom vibration syndrome on teacher and student during classes.

METHOD AND METHODOLOGY-

Sampling Method- Purposive Method

Study Design- Cross sectional study

Study Location- Kanpur City

Data Collection- Survey method

Sample Size- 363

Using 95% CI and keeping Z-alpha value as (1.96) and prevalence rate of 70%. The sample size for cross- sectional study, with 5% d value (?) was calculated to be 330 and adding 10% drop out to the sample, the final sample was calculated to be 363.

PREVALANCE OF PHANTOM VIBRATION SYNDROME - PVS is a disorder of emerging technology. There were lots of studies conducted to assess the prevalence of PVS. In 2010, Rothberg et al conducted a study on PVS among medical staff. Nearly 70% people experience PVS during activity of daily living. PVS was common among mobile phone and Pagers uses.[12] During 2013 Michelle Duouin et al conducted a study among 290 undergraduate students. The study revealed that, PVS was experienced by the 89% respondents.[13] Lin YH et al (2013), reported that 78% subjects had perceived phantom vibration syndrome.[14]

Sign and Symptoms of Phantom vibration syndrome-

1. Worsening mental health
1. Anxiety
2. Over-vigilance
3. Emotional disturbance
4. Attention deficit.

Causes of Phantom vibration syndrome-

1. Switching the vibration capability off
2. Vibration mode of cell phone
3. Cell phone dependency
4. Reducing time spent on mobile phone.
5. Keeping cell phone in same pocket for long duration.

RESULT-

Kolmogorov -Smirnov's test was used to analysed the normality.

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A survey study on phantom vibration syndrome was conducted using questionnaire survey methods, against which 363 responses were recorded that compared the activity of students and the faculties. On assessing Spearman's correlation coefficient, between these variables,

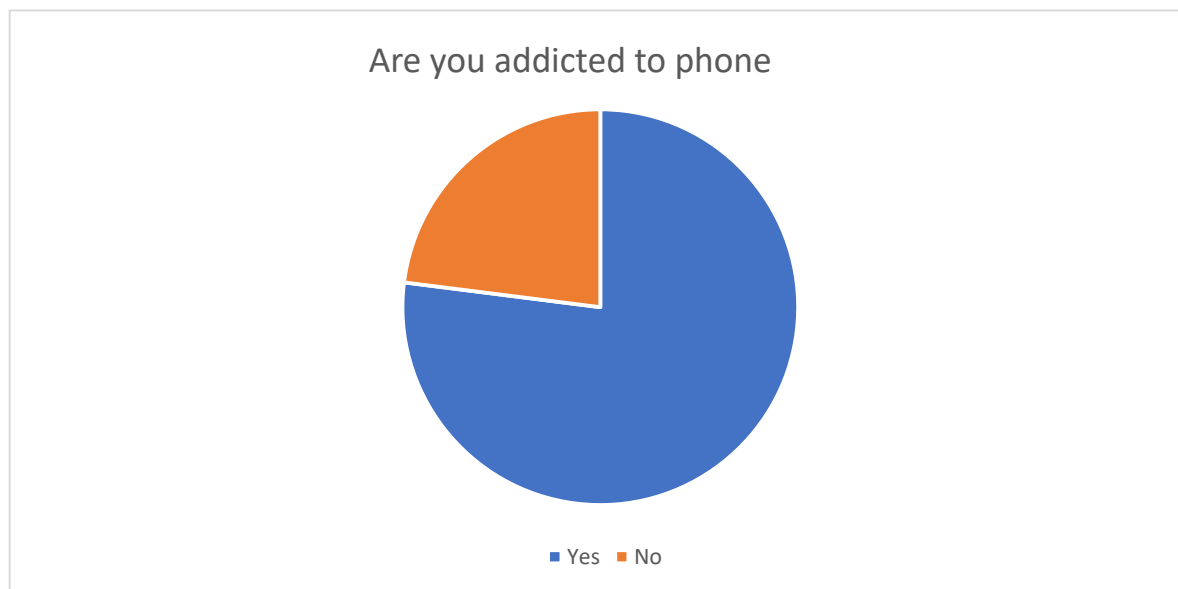
we obtained the following, Correlation b/w Addiction+ Attention deficit, and Addiction+ Over – vigilance, Addiction+ Worsening mental health, and Attention deficit+ Anxiety, Over-vigilance+ Worsening mental health given in table (1).

Spearman's correlation-

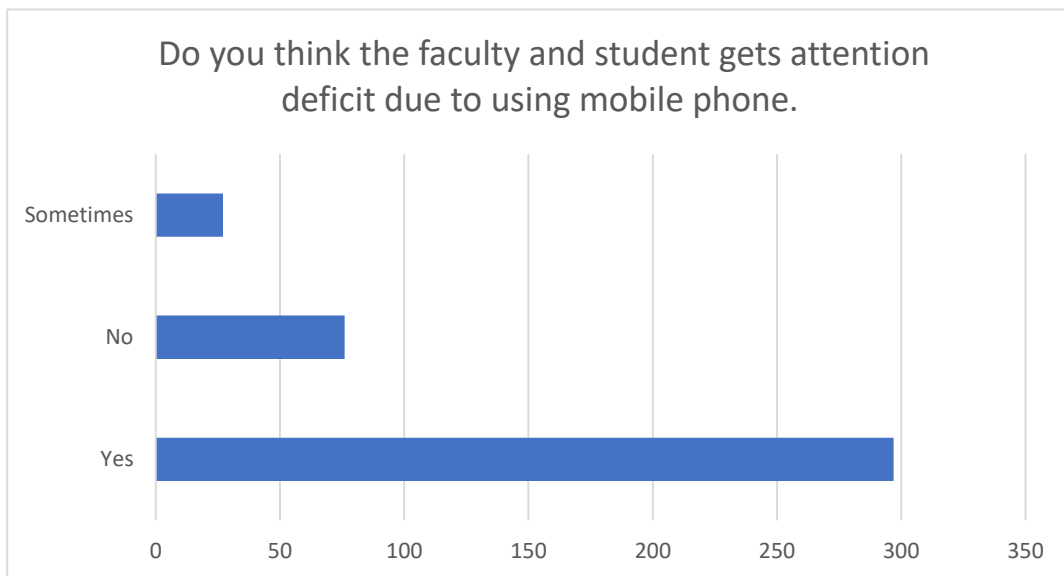
S. No.	Correlation b/w variable	r_s	P - value
1.	Addiction+ Attention deficit	0.371	0.0001
2.	Addiction+ Over - vigilance	0.081	0.123
3.	Addiction+ Worsening mental health	0.008	0.883
4.	Addiction+ Attention deficit	0.291	0.0001
5.	Addiction+ Worsening mental health	0.335	0.0001
6.	Addiction+ Anxiety	0.400	0.0001
7.	Addiction+ Emotional disturbance	0.400	0.0001
8.	Addiction+ Over- vigilance	0.323	0.0001
9.	Anxiety+ Attention deficit	0.340	0.0001
10.	Attention deficit+ Anxiety	0.560	0.0001
11.	Attention deficit+ Over- vigilance	0.448	0.0001
12.	Over-vigilance+ Worsening mental health	0.013	0.806
13.	Over- vigilance+ Attention deficit	0.151	0.004

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Table-1

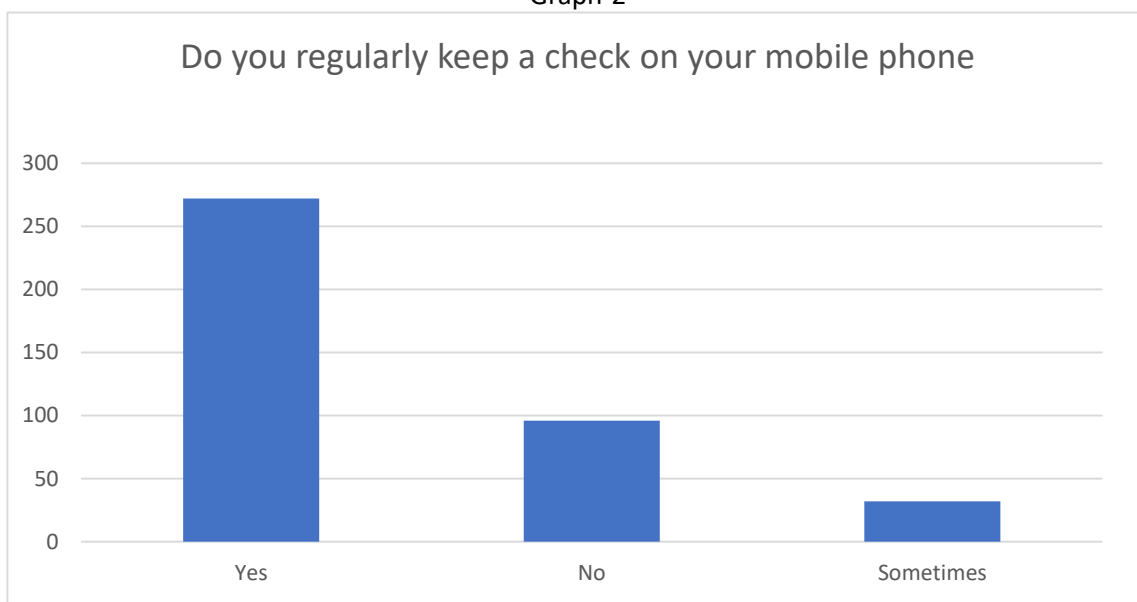


Graph-1

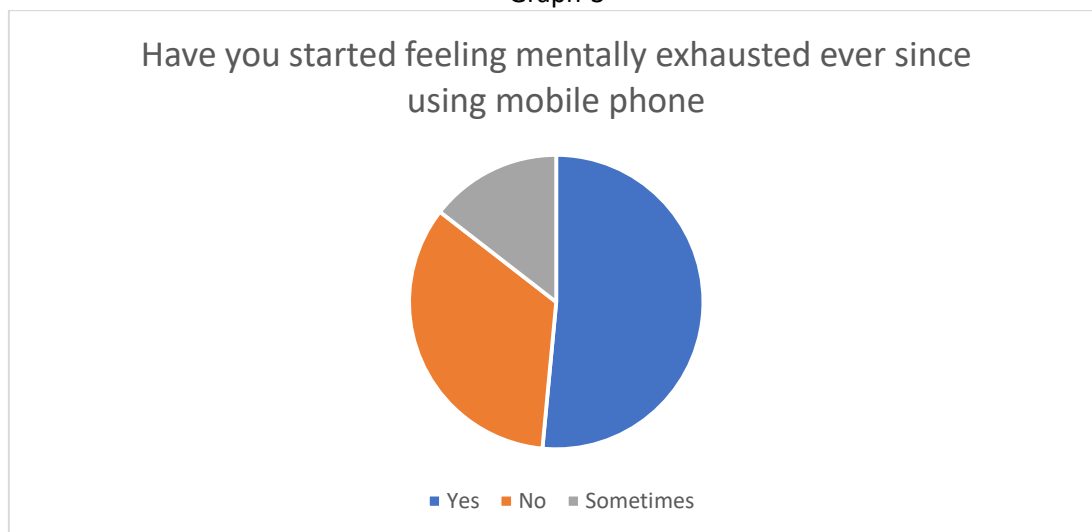


Graph-2

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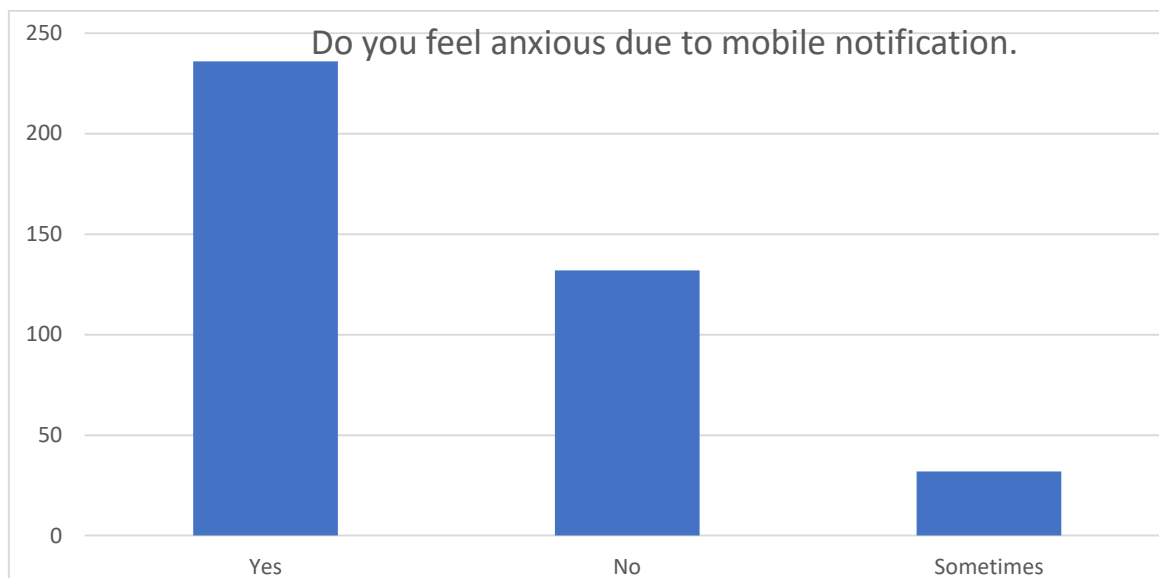


Graph-3

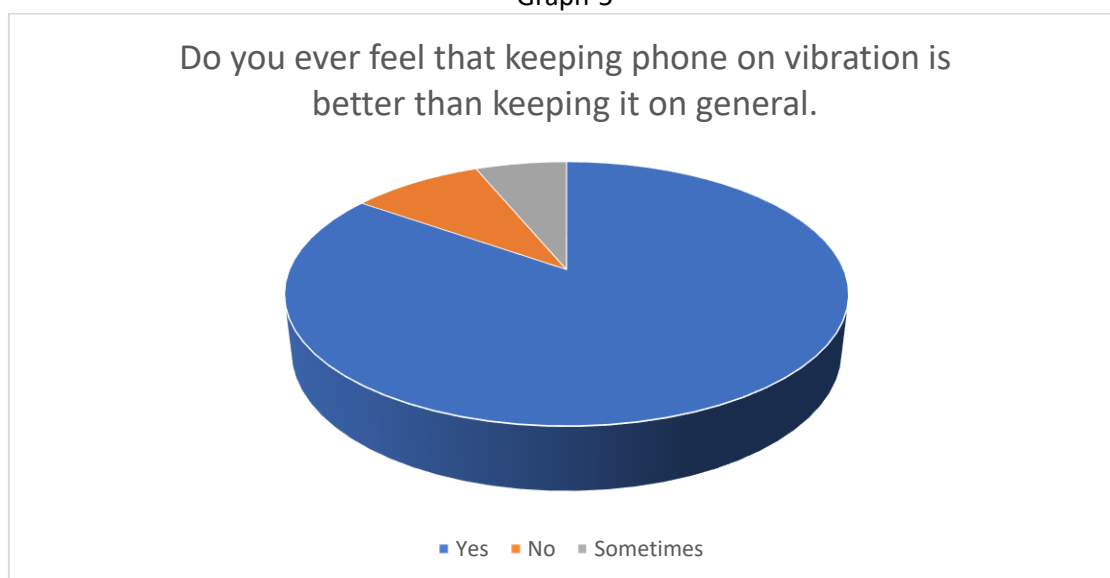


Graph-4





Graph-5



Graph-6

DISCUSSION-

Phantom vibration syndrome is an emerging disorder due to excessive use of mobile phones. People perceive that their cell phone is vibrating but in reality, it is not so. The goal of the present study was to determine, if phantom vibration syndrome affect lifestyle among faculty and student in terms of vibration sensitivity and joint position sense, as well as to analyse the physiological and psychological effects of the syndrome in the student and faculty. Higher smartphones use emanates from differing needs like productivity- enhancement, information-seeking, social information and interaction, diversion and relaxation, entertainment, monetary compensation, and personal

status.[15] Individuals are reliant on messages/ calls/ alerts to navigate their personal, professional, and social relationships and hence more likely to receive more messages, keep their phone in vibration mode to be alerted to those messages, and thus develop heightened sensitivity to mobile phone vibrations because of repeated exposure.[16] Higher smartphones use is often considered as a risk factor for developing anxiety, stress, and depression, indicating higher stress levels among such individuals leading to heightened sensitivity and predisposition to misinterpretation of sensory stimuli or imagined vibrations.[17] Mobile phones are important in our lives for a number of reasons. Cell phones gives us

access to family, friends, relatives etc, regardless of distance. Cell phones have improvised way of living in multiple ways like collecting information and resources, staying organized, keeping records and making schedules. Mobile phone ringing is prohibited in mostly offices areas and all now a day's so generally people use vibration mode for alerts. Phantom vibration syndrome (PVS) is also a part of mobile phone induced disorder. In 2003, Mr. Robert D. Jones described the term Phantom vibration syndrome. As per Mr. Robert, PVS is a psychological phenomenon.[18]

In our study we discovered that hallucinatory experiences are extremely common in some circumstances, and the results indicated that normal brain mechanisms are at work. These experiences may be determined by top- down psychological factors such as vigilance, which are aggravated by stress. There is a high degree of expectancy for such experiences, which could amplify top- down processing, producing these false precepts even in the absence of stress. At the same time, there are many negative impacts caused by mobile phone as people develop a habit of keeping it on ringing and vibration modes for messages and calls. Addressing the mental healthcare needs of sleep apnoea patients may be an important component of these efforts. Our study found that individuals with sleep apnoea were at substantially greater risk of having psycho-pathological disease.

CONCLUSION-

After the result and discussion the study showed positive impact on use of smartphones by revealing increase in Anxiety, over- vigilance, attention deficit, emotional disturbance during classes . Hence the present study concludes, Phantom vibration syndrome is more prevalent in the current scenario and thus it is important to educate people about phantom vibration syndrome.

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