A SURVEY STUDY ON ADDICTION LIABILITY TO PHYSICAL TOLLS IN UNDERGRADUATE STUDENTS.

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ABSTRACT
Addiction is a persistent and compulsive condition towards things or substances leading to affect person’s physical health, mental health, and social health. It is a medical condition characterized by compulsive engagement in rewarding stimuli, despite adverse consequences. Addiction often involves cycles of relapse and remission, without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. Feel good, feel better, do better, curiosity are the reasons behind addictions. The present study highlighted on addiction by social networking sites, various application, gaming and food articles. Survey on addiction to physical tools (including social networking sites and applications) was conducted amongst the students of Government College of pharmacy, Aurangabad (Maharashtra), India. The students between ages of 19-20 are having more addiction to physical tools. Applications like, Whatsapp, Hike, Instagram, Facebook and Twitter are most addict forming in young adults. The study reveals that the main reason for addiction in students for entertainment purpose, pleasure purpose and due to surrounding effects. The most of the way to fit addiction among the students was found to be self-control method.

KEYWORDS: Addiction to physical tools, Applications like, Whatsapp, Hike, Instagram, Facebook and Twitter.

INTRODUCTION
Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Addiction affects neurotransmission and interactions within reward structures of the brain, including the nucleus accumbens, anterior cingulate cortex, basal forebrain and amygdala, such that motivational hierarchies are altered and addictive behaviors, which may or may not include alcohol and other drug use, supplant healthy, self-care related behaviors. Addiction also affects neurotransmission and interactions between cortical and hippocampal circuits and brain reward structures, such that the memory of previous exposures to rewards (such as food, sex, alcohol and other drugs) leads to a biological and behavioral response to external cues, in turn triggering craving and/or engagement in addictive behavior. Addiction often involves cycles of relapse and remission, without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. According to Nestler E J (Dec 2013) addiction is a medical condition characterized by compulsive engagement in rewarding stimuli, despite adverse consequences. Despite the involvement of a number of psychosocial factors, a biological process – one which induced by repeated exposure to an addictive stimulus – is the core pathology that drives the development and maintenance of an addiction. The two properties that characterize all addictive stimuli are that they are reinforcing (i.e., they increase the likelihood that a person will seek repeated exposure to them) and intrinsically rewarding (i.e., perceived as being positive or desirable).

Table 1: risk and protective factors responsible for addiction.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Protective factors</th>
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</thead>
<tbody>
<tr>
<td>Aggressive behavior in childhood</td>
<td>Good self-control</td>
</tr>
<tr>
<td>Lack of parental supervision</td>
<td>Parental monitoring and support</td>
</tr>
<tr>
<td>Poor social skill</td>
<td>Positive relationship</td>
</tr>
<tr>
<td>Drug experimentation</td>
<td>Academic competence</td>
</tr>
<tr>
<td>Availability of drugs at school</td>
<td>School antidrug policies</td>
</tr>
<tr>
<td>Community poverty</td>
<td>Neighborhoods pride</td>
</tr>
</tbody>
</table>
Brain imaging studies of drug addicted individuals show changes in areas of the brain that are critical to learning, judgment, decision-making, stress, memory, behavior. Despite being aware of these harmful outcomes, many people who use drugs continue to take them, this is the nature of addiction.

REASONS OF ADDICTION

- **Feel good:** Most abused drugs produce intense feelings of pleasure. This initial sensation of euphoria is followed by other effects, which differ with the type of drug used. For example, with stimulants such as cocaine, the “high” is followed by feelings of power, self-confidence, and increased energy. In contrast, the euphoria caused by opiates such as heroin is followed by feelings of relaxation and satisfaction.

- **Feel better:** Some people who suffer from social anxiety, stress-related disorders, and depression begin abusing drugs in an attempt to lessen feelings of distress. Stress can play a major role in beginning drug use, continuing drug abuse, or relapse in patients recovering from addiction.

- **Do better:** Some people feel pressure to chemically enhance or improve their cognitive or athletic performance, which can play a role in initial experimentation and continued abuse of drugs such as prescription stimulants or anabolic/androgenic steroids.

- **Curiosity:** “In this respect, adolescents are particularly vulnerable because of the strong influence of peer pressure. Teens are more likely than adults to engage in risky or daring behaviors to impress their friends and express their independence from parental and social rules.”

Lifestyle factors those are responsible for drug addiction includes High Stress Levels, Having a parent with a history of addiction, Severe Trauma or Injury, Exposure to substance abuse at a young age, Mental health conditions, especially mood disorders such as chronic anxiety and depression, Psychological trauma, including loss of a loved one or chronic loneliness.

Social Networking Sites (SNS): are virtual communities where users can create individual public profiles, interact with real-life friends, and meet other people based on shared interests. Researchers have suggested that the excessive use of new technologies (and especially online social networking) may be particularly problematic to young people. In accordance with the biopsychosocial framework for the etiology of addictions and the syndrome model of addiction, it is claimed that those people addicted to using SNSs experience symptoms similar to those experienced by individuals who suffer from addictions to substances or other behaviors. This has significant implications for clinical practice because unlike other addictions, the goal of SNS addiction treatment cannot be total abstinence from using the internet it is an integral element of today’s professional and leisure culture.

Instead, the ultimate therapy aim is controlled use of the internet and its respective functions, particularly social networking applications, and relapse prevention using strategies developed within cognitive behavioral therapies. To explain the formation of SNS addiction, recently summarized three overarching theoretical perspectives that may not be mutually exclusive.

Cognitive behavioral model: This model emphasizes that ‘abnormal’ social networking arises from maladaptive cognitions and is amplified by various environmental factors, and eventually leads to compulsive and/or addictive social networking.

Social skill model: This model emphasizes that ‘abnormal’ social networking arises because people lack self-presentational skills and prefer virtual communication to face-to-face interactions, and it eventually leads to compulsive and/or addictive use of social networking.

Socio-cognitive model: This model emphasizes that ‘abnormal’ social networking arises due to the expectation of positive outcomes, combined with internet self-efficacy and deficient internet self-regulation eventually leads to compulsive and/or addictive social networking behavior. Games addiction: For most adolescents, gaming is a pleasurable pastime activity. However, research suggests that excessive online gaming may in extreme cases lead to symptoms commonly experienced by substance addicts, namely salience, mood modification, craving, and tolerance Particularly excessive engagement with both online and offline games appears to lead to addiction in a small minority of players. Since video gaming is particularly appealing to children and adolescents, it appears reasonable to suggest that these groups may be particularly at risk (i.e., more vulnerable and susceptible) developing gaming addiction. Furthermore, it has been argued that because of the 24/7 nature and almost mandatory excessive play required in playing online games, online gaming may be more problematic for ‘at risk’ individuals than offline gaming.

Gaming Addiction

Assessing online gaming addiction in children and adolescents is relevant for several reasons. With regards to developmental psychopathological findings, it appears that addictions tend to have precursors during adolescence also; it is relatively common that most dependencies develop in early adulthood Therefore, prevention efforts must be established that target adolescents who have their first experiences with addictive substances and behaviors during puberty.

Parental influence is diminished whereas the peer group gains more importance. Peer pressure may lead to a
variety of problems that may result in the development of pathological behaviors, such as chemical and behavioral addictions.\textsuperscript{[10]} Adolescents may use online games as a way of coping with stressors and gaming can become a dysfunctional media-focused coping strategy\textsuperscript{[9], [10]} Similarly, relationships between problematic gaming and the ways in which adolescents cope with stressors and frustrations have been reported \textsuperscript{[9], [11]} For instance, problematic gamers play games significantly more frequently than no problematic gamers as a reaction to anger and frustration.\textsuperscript{[12]}

**MATERIAL AND METHODOLOGY**

Survey on addiction to physical tools (including social networking sites and applications) was conducted amongst the students of Government College of Pharmacy, Aurangabad (Maharashtra), India during the period of October, 2016.

Survey was conducted in the college by the ‘survey form filling’ method. These survey forms consisting proper questionnaires according to the objective of survey conduction. Although, the addiction is the personal issue of everyone and may be a critical issue for someone, so for that following things are followed:

- Informed verbal consent was obtained from participants. Those who do not want to participate were not forced to do so.
- The atmosphere of class maintained free minded so that students can fill the private data in the forms.
- In the survey forms, anonymity of the students is maintained for preventing identification of any students with their private information.
- Cardboard box were placed in the classroom for the collection of forms so that, further identification of the students were avoided; Providing the safety and security of the personal information of the students.

The forms from the students were collected, well numbered and data from the forms was tabulated in sheets and analyzed.

- Data was collected on the basis of basic five types of addiction.
  1. Physical tool addiction (including social networking sites and applications).
  2. Games addiction.
  3. Food articles addiction.

**RESULTS AND OBSERVATIONS**

**General Information**

- There were total 280 students participants, among them 122 were males and 144 were females, females participated more than males in survey, during survey 14 students did not provide proper information about their gender.
- Out of these 280 students, 74 belong to rural area and 165 belong to urban area. It states that, in survey urban participants are more than rural participants.

**Observations**

Out of 280 students participants 273 students knew what addiction is; only 5 students are not aware of this and 4 students not provided proper information. Amongst them 136 students accepted that they have some kind of addiction, while 132 students denied for it. Nevertheless, most of them found that are taking the addiction liability as per subsequent questioner. There were total 144 females participants in survey out of which 71 females accepted that they were addicted for physical tools. Were as out of 122 males participants 59 males accepted they were addicted for some kind of physical tools. Data denotes that, 73 students belongs to rural area, 163 students were from urban area and 44 students did not mentioned about theirs belonging place. It is observed that, 38 students among 73 students of rural area accepted they were addicted while 76 students among 163 of urban area accepted they were addicted. In survey students of age between 17-34 years were participated. The average age of students was 20 years.

**Table 2: Distribution of participants.**

<table>
<thead>
<tr>
<th>Place</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Urban</td>
<td>67</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>126</td>
</tr>
</tbody>
</table>

**Physical Tools Addiction:** It includes addiction of television, mobile, internet and social sites etc. In data analysis, we found that.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Television</th>
<th>Mobile</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-18</td>
<td>20</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>19-20</td>
<td>33</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>21-24</td>
<td>16</td>
<td>35</td>
<td>30</td>
</tr>
<tr>
<td>25 onwards</td>
<td>4</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Above table shows that, Students between age of 19-20 years are most addicted to the all-physical tools. While students with age of 25 years and onwards are least addicted.

**Figure 1: Area wise distribution of physical addiction.**

In case of television and mobile addiction, rural students don’t lag behind. They are nearly equally addicted as compare to urban. But internet addiction bar shows that urban were more addicted that rural ones. In the internet addiction, the major part is addiction of social sites thus we analyzed data on it separately.
Table 4: Addiction liability of different groups of individuals for social tools.

<table>
<thead>
<tr>
<th></th>
<th>Whatsapp</th>
<th>Hike</th>
<th>Instagram</th>
<th>Facebook</th>
<th>Twitter</th>
<th>others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>62</td>
<td>29</td>
<td>16</td>
<td>43</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>62</td>
<td>41</td>
<td>10</td>
<td>27</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Rural urban</td>
<td>35</td>
<td>19</td>
<td>3</td>
<td>23</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>rural urban</td>
<td>88</td>
<td>40</td>
<td>19</td>
<td>40</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>247</td>
<td>129</td>
<td>48</td>
<td>133</td>
<td>6</td>
<td>33</td>
</tr>
</tbody>
</table>

Students are highly addicted to whatsapp then after to facebook, hike, instagram others and twitter sequentially. Males and females are equally addicted to whatsapp. From rural area 47.29% students are addicted to whatsapp while 53.33% of urban region are addicted to it. No student from rural area found to be addicted to twitter. Further we analyzed data according to causation of addiction. Multiple addiction liability was found for social tools.

Figure 2: Reasons of addiction.

Above pie chart represents that, the major reason towards physical tool addiction is just to get entertained. Second major reason was observed to get out of stress other reasons found to be for pleasure, as a fashion trend and least was found to be by peer pressure.

Among these students, 46.37% students were satisfied while 33% students were not for the reason they were addicted.

Table 5: Frequency of exposure to the physical addictions.

<table>
<thead>
<tr>
<th>Frequency of exposure</th>
<th>% of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many times a day</td>
<td>31.40</td>
</tr>
<tr>
<td>Thrice a day</td>
<td>11.11</td>
</tr>
<tr>
<td>Twice a day</td>
<td>12.07</td>
</tr>
<tr>
<td>Once a day</td>
<td>12.07</td>
</tr>
<tr>
<td>Weekly</td>
<td>05.00</td>
</tr>
<tr>
<td>Monthly</td>
<td>21.00</td>
</tr>
</tbody>
</table>

Above table, representing about frequency cites that addicted most of the students expose themselves daily many times while monthly exposure of students also in much amount.

Figure 3: Physical effect of physical addiction on human body.

Figure 4: Mental effect of physical addiction on human body.

Eye irritation noticed most of the student addicted to physical tools. Acidity, weakness and mouth ulcers are also observed but in less number. Mental effects are highest with insomnia, frustration, hangover and others sequentially. Others may include, increased daytime sleepiness, lack of concentration etc.

Figure 5: Social effects of physical addiction on human body.

Loss of confidences is cited much more in physical tool addicts and as they are very much engaged in virtual life, social withdrawal is observed in their real life.
Figure 6: Economical of physical addiction on human body.

As we are well aware that access to mobiles, internet social sites demands sufficient money, addicted students faces economic effects like loss of credit and overdue. Among 207 students, 71% desired to quit their addiction while 22.22% do not. The maximum students try to quit their addiction by self-control i.e. 72%, others about 7.24% try through meditation and remaining by other methods.

Game Addiction
Among 280 total students 179 (63.9%) students were addicted to games.

Figure 7: Percent students addicted to different types of games.

Above pie chart depicts that major game addiction is of candy crush. After that subway surf, angry bird, clash of clans and others are observed. Pokémon go addiction is least noticed. Out of this, 179 students 45.81% were females and 47.48% were males and 7.5% students addicted to gamed did not provide proper information about their genders. In this case, urban are more addicted (57.55 %) than rural (27.93%) and 15% students did not provided proper information about their place.

Graph represents that, students with age 17-20 years are much more engaged in game addiction that students with age of 21-23 years. The bar of place also reveals that, urban having more addiction than rural.

Figure 9: Reasons of addiction.

In Further analysis, we found that the main reason for addiction towards game was entertainment and pleasure. 41.89 % of students addicted to games for this reason mainly. Among all of these, 49.16% students are satisfied with their purpose of addiction but 28.49 % are not. While 22.34% students did not mention about their satisfaction level. The measure physical effect in game addicted student was eye irritation (40%) other minor effects include shaking of hands (3%) and acidity (13%). The measure mental effects were insomnia and mental confusion i.e. 18% and 13% respectively. Other effects include frustration (8%) and hangover (10%). About 8.37% students were observed with social withdrawal. Among this addiction 65% students desired to quit addiction and 25.69% do not. About 68% students take efforts to control their addiction by self-control.

Food Articles
Total 207 students out of 280 are addicted to food articles like tea, coffee and fast food (74%).

Figure 10: Addiction to food articles.

Food article addiction second most students like other than physical tools. The above pie, depicting that tea is the greatest addiction and fast food addiction is second highest. Coffee addiction is less than above two. Other food addiction found to be least and it may include street food, chaats which are taken to pamper taste buds.
Females participants are found to be more addicted to it than males while urban students leads to increased bar height than rural students. Students in between age group of 17-20 years were about 56% and 21-24 years students were 36% for food article addiction.

The diagram reveal that, students main reason to divert towards food addiction to relieve stress, 34% students are food addicted for pleasure purpose while remaining due to enhance wakefulness. But only 51% of students were satisfied while 30% students were not and 19% students did not provide proper information.

Exposure to the many times of day is found to be highest. One a day is found to be on second position. Thrice a day is least.

Acidity is major effect noticed in most of the students. No mental and social effects as such observed in food article addicts but as food requires money, economical effects are cited. The economic effect is also negligible (less than 5%) Out of these 207 students 142 students desired to quit the addiction while 51 students do not. Self-control was the measure way to control addiction (68%).

CONCLUSIONS

Students are very well known about what addiction is. Nearly about half of the surveyed students are engaged in some kind of addiction while other half may not be addicted but many of them are liable to addiction. From overall studies on addiction, it is resulted that, urban students are more addicted than rural. Students within the age range of 17-20 years are more susceptible to any type of addiction than the students of age within 21-24 years. In physical tool addiction, males and females are nearly equally addicted. In food addiction it is found to be females are higher addicted than males. In addiction of chemicals and medicinal products, males are highest and males are drastically low. Physical tool addiction and food article addiction are found to be highest among all.

In studies of physical tool addiction, additions of social sites are found to be greater in amount. In social site addiction whatsapp addiction was highest followed by facebook, hike, instagram and twitter. The study outcomes were supported by the findings of Kuss DJ, Griffiths MD (2011). Main effect of physical addiction was found to be eye irritation, insomnia, loss of confidence and loss of credit. In game addiction, candy crush addiction is highest and addiction of violent games such as clash of clans is fortunately less. In game addiction, females are more addicted to candy crush than males. Nearly about 185 of physical tool addicts, desired to quit their addiction and they are majorly taking efforts by self-control. Addiction to fast food and tea is common in students. Females and urban students are more involved in food addiction than male and rural students. Stress and pleasure are the leading cause forces them to go for fast food multiple times a day. Most of the participant experience acidity after having fast food.

The overall study on addiction reveals that the main reason for addiction in students for entertainment
purpose, pleasure purpose and due to surrounding effects.

- The most of the way to fit addiction among the students was found to be self-control method.
- Less but some students are trying to get out of addiction through some ethical ways like art of living, meditation, counseling, rehabilitation seminars and medicinal therapy.

REFERENCES