A survey on prevalence and affect of earphone usage among adolescents

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Abstract

Gadgets have become the most common and preferred way of spending time and it is now an ever-present companion to people's everyday lives. With the introduction of portable audio technologies, listening to music has become easy without disturbing others. Earphone is one such portable device which helps individual to enjoy their unique soundtrack. Although earphones have been employed as a best companion for music it may disrupt interactions and create feelings of being disconnected with others. It is believed that using earphone has a tendency to distance those around the individual who are regularly put off from making discussion causing psychological separation from others. Thus, this survey examined several areas like dependence on earphones, its psychological impact on individuals and health issues people experienced after using headphones. Sample consisted of 84 men and 83 women between the age group of 15 to 24 years. Ex post facto research design with convenient sampling technique was used. A self-constructed questionnaire was framed consisting of 9 questions. The responses obtained from the samples were analyzed and percentages were then calculated and the results were also presented in the pie chart and bar graphs and interpretations were made corresponding to the results that were obtained.

Keywords: Earphone, psychological separation, health issues, psychological distress

Introduction

Innovation is turning into an imperative part of an advanced every day way of life and, all things considered, it also presents a negative side effect (i.e. more social separation or an absence of close and personal associations with others). As youthful grown-ups spend additional time occupied with utilizing portable technologies, they are investing less energy cooperating with parents, siblings and friends. Even if these exercises are performed within the sight of others, the center of the individual has all the earmarks of being with these devices. One such device is the earphone.

Earphone is a device that is used for listening to a music or radio without having other people to hear it (Merriam Webster, 2017) [3]. Despite the type of innovation, it has been accounted that these convenient sound innovation gadgets result in separation from interactions with individuals while adding to an association toward lifeless (yet engaging) objects. The nature of social, eye to eye connection is weakened. This absence of close and personal contact may result in feeling of social separation especially in young adults. These gadgets can possibly keep us engaged or potentially occupied from reality as we advance as the day progressed. The number of individuals in agony or demise while wearing earphones for electrical gadgets, for example, MP3 players has tripled in six years, as per a US study (Alexandra Topping, 2012) [1]. It was also found that most victims who got injured or died were men (68%), under the age of 30 (67%) and about one in 10 of all cases under the age of 18 (Alexandra Topping, 2012) [1]. Of the mishaps considered, 89% happened in urban territories, and the greater part of the casualties – 55% – were struck via trains. According to the study, published online in the journal Injury Prevention, 81 of the 116 incidents, or 70%, brought about death. It was also found that the wearing of earphones in many cases have had an immediate influence in the incident, as the clients couldn't hear warnings that they were in threat. In 29% of the cases, an unequivocal warning – for example, a yell, a horn or a siren – had been sounded before the mishap says (Alexandra Topping, 2012) [1]. Though using earphones helps individual to relax or stay calm they are also practicing absent presence. Individuals pay little or no attention to the environment around them.
A 21-year-old student Priya Jain was hit by a bike and then a bus, since she had her earphones on and couldn't hear approaching traffic – Report by times of India (Garima Sharmal, 2012) [4]. Despite the increased prevalence of using earphones, there are limited studies being done so far in Chennai to assess the risk factors profile of people responsible for the same. So to start with, an initiative was taken to collect the demographic details of the individuals and their experience on using earphones in Chennai. Thus, this survey examined several areas like dependence of earphones, health issues people experienced after using headphones, its psychological impact on individuals.

Methodology
A survey was done among 150 earphone user individuals consisting of both men and women in the age of 15-24 years in Chennai city. The individuals were administered a predesigned survey questionnaire designed by the author. The questionnaire comprises of 9 items on general demographic details and experiences on several other factors involved while using earphones. They were asked to fill in the required details and informed that there were no right or wrong answers. The collected data was then subjected to statistical analysis.

Results and interpretation
Percentage analysis shows the following:
Of the 167 participants, 81 were males (49%) and 86 were females (51%).

33 of them are 1st years (20%), 50 of them are 2nd Years (30%), 55 of them are 3rd years (33%), 29% of them are PG (17%),

101 participants (61%) seem to use earphones every day, 47 (28%) few days in a week and 19 of them (11%) few days in a month and none reported that they never use earphones.

73 participants (44%) of them look for sound quality when they buy earphones, 11 of them (7%) responded that they see their affordability when buying earphones, 2 of them (1%) said that they look for size when they buy earphones, 81 of them (48%) said that they see all the characteristics mentioned when they buy earphones.
74 of them (45%) have 1 pairs of earphones, 61 of them (37%) have 2 pairs of earphones, 19 of them (11%) have 3 pairs of earphones, 12 of them (7%) have more than four pairs of earphones.

Participants (40%) of them use earphones for 0-1 hour per day, 72 of them (43%) use earphones for 1-2 hours per day, 28 of them (17%) use earphones more than 3 hours per day.

60 participants (51%) of them agreed to the notion of using earphones when alone, 85 of them (36%) agreed to an extent of using earphones when alone, 22 of them (13%) did not agree to the idea of using earphones when alone.

66 participants (40%) of them use earphones during free time, 140 of them (84%) use earphones while travelling, 3 of them (2%) use earphones during parties or social gathering, 49 of them (29%) use earphones while exercising, 10 of them (6%) use earphones to get going in the morning, 21 of them (13%) use earphones to avoid silence, 54 of them (33%) of them use earphones to get sleep, 7 of them (4%) use earphones to make maximum use of their time, 30 of them (18%) use earphones to feel comfortable in the place they are, 13 of them (8%) use earphones while studying, 34 of them (20%) use earphones to ignore the environment, 17 of them (10%) use earphones to tune out extraneous noise, 28 of them (17%) use earphones while driving, 82 of them (49%) use earphones to relax themselves, 22 of them (13%) use earphones to avoid talking to strangers.

44 participants (26%) of them experienced headache after using earphones, 50 of them (30%) experienced ear pain after using earphones, 5 of them (3%) was involved in accident while using earphones, 19 of them (11%) experienced attention and concentration problems after using earphones, 9 of them (5%) felt irritations after using earphones, 57 of them (34%) felt good after using earphones, 69 of them (41%) felt no difference after using earphones.

<table>
<thead>
<tr>
<th>When I am using earphones</th>
<th>All the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>People around me seem to disappear</td>
<td>12 (7%)</td>
<td>37 (22%)</td>
<td>87 (52%)</td>
<td>32 (19%)</td>
</tr>
<tr>
<td>I am invincible(powerful)</td>
<td>18 (11%)</td>
<td>46 (27%)</td>
<td>62 (37%)</td>
<td>42 (25%)</td>
</tr>
<tr>
<td>People around me seem uncomfortable</td>
<td>4 (2%)</td>
<td>12 (7%)</td>
<td>80 (48%)</td>
<td>71 (43%)</td>
</tr>
<tr>
<td>I feel like I fade into the surroundings</td>
<td>13 (8%)</td>
<td>36 (22%)</td>
<td>75 (45%)</td>
<td>42 (26%)</td>
</tr>
<tr>
<td>I can be comfortable in crowds/around strangers</td>
<td>35 (21%)</td>
<td>52 (31%)</td>
<td>59 (35%)</td>
<td>21 (13%)</td>
</tr>
<tr>
<td>I am able to think clearly</td>
<td>25 (15%)</td>
<td>71 (42%)</td>
<td>45 (27%)</td>
<td>26 (16%)</td>
</tr>
<tr>
<td>I am able to pay attention to others conversations</td>
<td>8 (5%)</td>
<td>41 (25%)</td>
<td>62 (37%)</td>
<td>56 (33%)</td>
</tr>
</tbody>
</table>

When I am using earphones people around me seem to disappear: 12 participants (7%) felt people around them seem to disappear while using earphones, 37 of them (22%) felt people around them seem to disappear most of the time while using earphones, 87 of them (52%) felt people around them seen to disappear some of the time while using earphones, 32 of them (19%) did not feel so.
When I am using earphones I am invincible (powerful): 18 participants (11%) felt invincible all the time while using earphones, 46 of them (27%) felt invincible most of the time while using earphones, 62 of them (37%) felt invincible some of the time while using earphones, 42 of them (25%) did not feel invincible while using earphones.

When I am using earphones people around me seem uncomfortable: 4 participants (2%) indicated that others around felt uncomfortable all the time while the participants used earphones, 12 of them (7%) reported that others around them felt uncomfortable most of the time while participants used earphones, 80 of them (48%) said that others around them felt uncomfortable some of the time. 71 of them (43%) indicated that people around them did not feel uncomfortable.

When I am using earphones I feel like I fade away into the surroundings: 13 participants (8%) feel like they fade away into the surrounding all the time while using earphones, 36 of them (22%) feel like they fade away into the surrounding most of the time while using earphones, 75 of them (45%) feel like they fade away into the surrounding some of the time, 42 of them (26%) did not feel like they fade away into the surrounding.

When I am using earphones I can be comfortable in crowds/around strangers: 35 participants (21%) felt comfortable among crowds/strangers all the time while using earphones, 52 of them (31%) felt comfortable among crowds/strangers most of the time while using earphones, 59 of them (35%) felt comfortable among crowds/strangers for some of the time, 21 of them (13%) did not feel comfortable among crowds/strangers while using earphones.

When I am using earphones I am able to think clearly: 25 participants (15%) reported being able to think clearly all the time while using earphones, 71 of them (42%) are able to think clearly most of the time while using earphones, 45 of them (27%) are able to think clearly some of the time, 26 of them (16%) are not able to think clearly while using earphones.

When I am using earphones I am able to pay attention to others conversations: 8 participants (5%) reported that they are able to pay attention to others conversations all the time while using earphones, 41 of them (25%) are able to pay attention to others conversations most of the time, 62 of them (37%) are able to pay attention to others conversations some of the time and 56 of them (33%) are not able to pay attention to others conversations while using earphone.

<table>
<thead>
<tr>
<th>Feeling</th>
<th>All the time</th>
<th>Most of the time</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy/Content</td>
<td>22 (13%)</td>
<td>38 (23%)</td>
<td>74 (44%)</td>
<td>33 (20%)</td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>12 (8%)</td>
<td>34 (20%)</td>
<td>76 (45%)</td>
<td>45 (27%)</td>
</tr>
<tr>
<td>Frustrated/Anxious</td>
<td>6 (4%)</td>
<td>16 (10%)</td>
<td>64 (38%)</td>
<td>81 (48%)</td>
</tr>
<tr>
<td>Free</td>
<td>19 (11%)</td>
<td>35 (21%)</td>
<td>72 (43%)</td>
<td>41 (25%)</td>
</tr>
<tr>
<td>Sad/Depressed</td>
<td>9 (5%)</td>
<td>18 (11%)</td>
<td>67 (40%)</td>
<td>73 (44%)</td>
</tr>
<tr>
<td>Tranquil/Quiet</td>
<td>14 (8%)</td>
<td>24 (14%)</td>
<td>81 (48%)</td>
<td>48 (29%)</td>
</tr>
<tr>
<td>Nervous/Frightened</td>
<td>2 (1%)</td>
<td>11 (7%)</td>
<td>39 (23%)</td>
<td>115 (69%)</td>
</tr>
</tbody>
</table>

22 participants (13%) reported that they felt happy all the time, 38 of them (23%) felt happy most of the time without using earphones, 74 participants (44%) felt happy sometimes when they do not have earphones, 33 of them (20%) felt never happy when they do not use earphones. 12 participants (8%) felt uncomfortable all the time without using earphones, 46 of them (27%) felt uncomfortable most of the time without using earphones, 76 of them (45%) felt uncomfortable sometimes for not using earphones. 45 of them (27%) did not feel uncomfortable without using earphones.

6 participants (4%) felt frustrated all the time without using earphones, 16 of them (10%) felt frustrated most of the time without using earphones, 64 of them (38%) felt frustrated sometimes without using earphones, 81 of them (48%) did not feel frustrated without using earphones.

19 participants (11%) felt free all the time without using earphones, 35 of them (21%) felt free most of the time without using earphones, 72 of them (43%) felt free sometimes when without using earphones, 41 of them (25%) did not feel free without using earphones.

9 participants (5%) felt sad all the time without using earphones, 18 of them (11%) felt sad most of the time without using earphones, 67 of them (40%) felt sad sometimes without using earphones, 73 of them (44%) did not feel sad without using earphones.

14 participants (8%) felt quiet all the time without using earphones, 24 of them (14%) felt quiet most of the time without using earphones, 81 of them (48%) felt quiet sometimes without using earphones, 48 of them (29%) did not feel quiet without using earphones.

2 participants (1%) felt nervous all the time without using earphones, 11 of them (7%) felt nervous most of the time without using earphones, 39 of them (23%) felt nervous sometimes without using earphones, 115 of them (69%) did not feel nervous without using earphones.
6 participants (4%) of them said that they have no likelihood to use earphones after knowing the potential to cause hearing loss, 21 of them (13%) said that they are not very likely to use earphones after knowing the potential to cause hearing loss, 33 of them (20%) said that they are somewhat likely to use earphones after knowing the potential to cause hearing loss, 19 of them (11%) said that they are likely to use earphones after knowing the potential to cause hearing loss.

Conclusion
The responses obtained from the individuals indicate that almost all the individuals use earphones daily for at least 1-2 hours per day. It was also evident that majority of users:
- Own at least 1 pairs of earphones and many other users own more than 4 pairs of earphones.
- Look for sound quality, size, and affordability when they decide to buy a pair of earphones.
- Felt quiet and free while not using earphones.

The adverse factor which is found to be evident from the majority of earphone users is:
- They experienced ear pain, headache
- They were involved in accidents while using earphones
- They experienced irritation, attention and concentration problems.
- They feel like they fade away into the surroundings while using earphones.
- They feel frustrated, unhappy and uncomfortable when they do not use earphones.
- They are unable to think clearly and unable to pay attention to others conversation.
- They felt uncomfortable in crowds or around strangers.
- They felt people around them feel uncomfortable when they use earphones.
- These individuals seem to use earphones to get sleep, to ignore their surroundings, to feel comfortable, to avoid talking with others and to get going in the morning.
- They also earphones while driving, exercising, social gathering, to maximize their time utilization and to reduce noise.
- They felt the best way to spend time alone is by using earphones.

Thus, it is evident that majority of people are using earphones everyday which is affecting their health and psychological well-being causing them psychological distress and separation. They seem to use earphones indiscriminately even after knowing its potential harm.

Suggestions
It is evident that Individuals have risky patterns of using earphones for various purpose and they are more likely to use it even after knowing its potential harm. Therefore, planning educational awareness programs in this domain for adolescents especially in colleges is necessary, and many of these individuals should be motivated to change their patterns of using earphones. It would also be fascinating to discover how the people around earphone users feel in connection to the wearer of earphones. Limitations of this survey are that it was done with only 167 individuals in the city of Chennai. The survey could be done on large sample.

The study could be done with school children and with people in late adulthood.

References