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Health Implications of Internet Addiction among In-School Adolescents in Ogbomoso North Local Government Area of Oyo State, Nigeria

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Abstract
The Internet has positive impacts on modern day society despite its link to societal concerns about pornography, sexual laxity, sleeping problem and occurrence of sexually transmitted infections (STIs). Its easy accessibility poses greater risks and dangers to adolescents as compared to other forms of media. The study is on health implication of Internet addiction among in-school adolescents in Ogbomoso North Local Government Area of Oyo State, Nigeria. The study was carried out using descriptive survey research design. One thousand and eighty (1,080) respondents were selected as sample for the study using simple random sampling technique. Self-developed questionnaire with reliability coefficient of 0.74 was used as an instrument for data collection. Four hypotheses were raised and analysed using inferential statistics of Chi-square at 0.05 level of significance. All the four hypotheses were rejected. The result of the study shows that Internet addiction significantly influences occurrence of teenage pregnancy, abortion, sexually transmitted infection and sleep disorder. The study therefore recommended that the government, NGOs, educators and religious groups should intensify efforts to educate the youths and the adolescents on the positive use of Internet through workshops, symposia, conferences, and health talks.

Introduction
The Internet is a system of enormous technical and social complexity. It comprises a massive but almost invisible universe that includes thousands of networks, millions of computers and billions of users across the world. Vast
amounts of information are transmitted from one network to another and it knows no boundaries for it can be accessed all over the world (Greenfield & Yan, 2006). The Internet has reduced the world to a global village and it is now possible to have immediate access to information that is located far away from the immediate environment. Access to information is no longer constrained by time and space. Therefore, Internet has become a gateway to information, communication and commerce (Robin, 2001).

The Internet has become an essential part of daily life. Robin (2001) defined the Internet as a system of systems, a catalyst for thinking that enables integrated collaborative yet personalized intellectual activity. The Internet offers a wide range of facilities and services which include e-mail, browsing, teleconferencing and telecommunicating. Two major modes of communicating on the Internet were identified by Tiamiyu (1999) as electronic mailing and Internet browsing. He submitted that virtually all the other more specific types of Internet are based on either or both of the modes. It presents unprecedented opportunities for rapid and efficient access to information, entertainment and social interaction which also affect the health and well-being of users (Genius & Genius, 2005).

Adolescence, as a stage of human development, has different definitions from various perspectives. This is a period between 10 and 19 years of age. It is a transitional period between childhood and adulthood. It is also a period in which the adolescents experience transformation in their physique, emotions, cognitive and social interaction (Fayombo, 2004; Fieldman, 2000). According to Bamgbose (2002), adolescents constitute about 43% of the Nigerian populace. With the high birth rate in a developing country like Nigeria, it is expected that the number of adolescents will continue to increase over the next several decades.
Many adolescents reportedly prefer being online to other media such as the telephone, television and radio. It is observed that so many adolescents spend so much time on the Internet, it is therefore essential to be aware of its impact on adolescents' behaviour, wellbeing and development (Lenhart, Madden & Hitlin, 2005). Many young people across the world use the Internet for academic and social interaction with people in sharing ideas about various issues. However, it has also been reported that youths who spend time online are exposed to varieties of social and violent materials including the risk of meeting dangerous people. Youth online behaviour includes blogging, Internet harassment or bullying, and pornography (Mitchell, Wolak & Finkelhor, 2008).

Although, the Internet has consistent positive impacts on modern society, it has caused various societal concerns about privacy, security, pornography, Internet crime, and virtual community (Greenfield & Yan, 2006). Its easy accessibility poses greater risks and dangers for youths as compared to other forms of media. In a survey by Common Sense Media (2006), 85% of parents reported that, among all forms of media, the Internet posed the greatest risk to their children. Besides, the Internet has become a highly effective and profitable means of distributing sexually explicit materials as well as a sophisticated channel for compulsive sexual behaviour, sex trafficking, and sex crimes (Galbreath & Berlin, 2002). Free access and exposure to information on the Internet by adolescents could pose negative impacts on their development and could potentially manifest in the social interactions with peers, their sexual activity and their emotional development.

The Internet has encouraged sending mixed messages and exposure to some sexually explicit materials like pornographic films, nude photographs which
may also contribute to high incidence of teenage pregnancy. Intimate bonds are quickly formed among on-line users and this encourages sharing of ideas. Consequently users make more emotional risks by voicing controversial opinions about abortion, religion, and other laden issues in which they may not be able to share even with their closest confidant (Dangal, 2005). In order to avoid stigma and shame associated with teenage pregnancy, the adolescent may source for information on how to procure abortion through friends on the Internet.

Adolescence is a stage of experimentation and this also affects their sexuality as some of them may try to experiment with what they see on the Internet thereby leading to teenage or unwanted pregnancy. According to Dangal (2005), popular media culture that simulates sexual activity promotes promiscuity. Engaging in illicit sexual act especially with multiple sexual partners may expose the adolescent to sexually transmitted infections including HIV/AIDS.

**Statement of problem**

Adolescents constitute one of the most dynamic human resource bases and the period of adolescence is a very critical stage in the life of every individual. However, the axis of adolescence problems remain sexual and reproductive behaviour as this period is highly characterized by high risk of premarital sexual activity, unintended pregnancy and the alarming increase in the numbers of HIV-infected youths. The increasing pervasiveness of the Internet on the lives of the adolescents is by now well established as a result of which they are exposed to a lot of unwanted information on the Internet which has exposed them to social vices. There is an urgent need for health educators to check and create awareness on some of the social implications of Internet use
on adolescents. Therefore, theses researchers examined the health implications of Internet addiction among in-school adolescents in Ogbomoso North Local Government Area of Oyo State, Nigeria.

Methodology

The study was grounded on the descriptive survey research design. One thousand and eighty (1080) respondents were selected using simple random sampling technique. A self-developed and validated instrument with reliability coefficient of 0.74 was used for data collection. Inferential statistics of regression was used to test the hypotheses at 0.05 Alpha level.

Results

Table 1

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>X²-cal</th>
<th>X²-crit</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information gotten on the Internet can influence promiscuity and teenage pregnancy</td>
<td>331</td>
<td>326</td>
<td>209</td>
<td>147</td>
<td>33.777</td>
<td>16.919</td>
<td>9</td>
<td>.000</td>
</tr>
<tr>
<td>Some information on the Internet encourages adolescents to engage in sex which may lead to teenage pregnancy</td>
<td>377</td>
<td>374</td>
<td>182</td>
<td>87</td>
<td>16.919</td>
<td>16.919</td>
<td>9</td>
<td>.000</td>
</tr>
<tr>
<td>Teenage pregnancy is directly related to Internet addiction</td>
<td>106</td>
<td>268</td>
<td>392</td>
<td>216</td>
<td>16.919</td>
<td>16.919</td>
<td>9</td>
<td>.000</td>
</tr>
</tbody>
</table>

The above table shows that Internet addiction significantly influences the occurrence of teenage pregnancy (X²-cal=33.77, X²-crit=16.919, df=9 and p<0.005). The table also revealed that X²-cal is greater than X²-crit, therefore the hypothesis is rejected. This is in line with the opinion of Ginman (2000) who stated that adolescents are exposed to some negative information on the
Internet such as pornography and other films that arouse their sexuality thereby making them to experiment with sex which may lead to teenage pregnancy. Dangal (2005) asserted that sending mixed messages to teenagers may also contribute to incidence of teenage pregnancy.

**Hypothesis 2:** *Internet addiction will not significantly influence the occurrence of STIs among in-school adolescents in Oghomoso North Local Government Area of Oyo State, Nigeria.*

**Table 2**

*Sexually Transmitted Infections and Internet Addiction*

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>X²cal</th>
<th>X²crit</th>
<th>Df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most adolescents contact STIs as a result of sexual relationship resulting from exposure to pornographic films on the Internet</td>
<td>375</td>
<td>354</td>
<td>154</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36.8%</td>
<td>34.7%</td>
<td>15.1%</td>
<td>12.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescent are infected with STIs as a result of illicit sexual act resulting from their exposure to Internet</td>
<td>268</td>
<td>423</td>
<td>240</td>
<td>89</td>
<td>63.94</td>
<td>21.026</td>
<td>12</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>26.3%</td>
<td>41.5%</td>
<td>23.5%</td>
<td>8.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most adolescents Internet addicts are involved in multiple sexual activities which expose them to STIs</td>
<td>213</td>
<td>485</td>
<td>230</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.9%</td>
<td>47.5%</td>
<td>22.5%</td>
<td>8.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet addiction does not encourage STIs</td>
<td>206</td>
<td>339</td>
<td>301</td>
<td>131</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.2%</td>
<td>33.2%</td>
<td>29.5%</td>
<td>12.8%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table shows that Internet addiction significantly influences the occurrence of teenage pregnancy ($X^2_{cal}=63.94$, $X^2_{crit}=21.026$, df=12 and $p<0.05$). The table also revealed that $X^2_{cal}$ is greater than $X^2_{crit}$, therefore the hypothesis is rejected. This corroborate the view by Genius and Genius (2005) which stated that as a result of illicit sexual relationship among adolescents, they are prone to contract sexually transmitted infections including HIV/AIDS.
Hypothesis 3: Internet addiction will not significantly influence the occurrence of abortion among in-school adolescents in Ogbomoso North Local Government Area of Oyo State, Nigeria.

Table 3
Abortion and Internet Addiction

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>X²-cal</th>
<th>X²-crit</th>
<th>Df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most adolescents who are Internet addicts procure abortion as a result of some information gotten from the Internet</td>
<td>238</td>
<td>387</td>
<td>263</td>
<td>128</td>
<td>45.743</td>
<td>18.307</td>
<td>10</td>
<td>.000</td>
</tr>
<tr>
<td>Internet addiction promote abortion as a result of illicit sexual relationship resulting into unwanted pregnancy</td>
<td>199</td>
<td>301</td>
<td>343</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet addiction discourages abortion</td>
<td>158</td>
<td>312</td>
<td>280</td>
<td>166</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table reveals that Internet addiction by adolescents significantly influences the occurrence of abortion ($X^2$ Cal = 45.743, $X^2$ critical = 18.307, df = 10, $P = .000$). The $X^2$ calculated is greater than $X^2$ critical, therefore the null hypothesis is rejected. This is supported by Dangal (2005) who stated that intimate bonds are quickly formed among the on-line users and this encourages sharing of ideas thereby making more emotional risks through sharing controversial opinion about abortion and other laden issues. In order to avoid the strong and shame associated and teenage pregnancy, the adolescent may source for information on how to procure abortion through friends on the Internet.

Hypothesis 4: Internet addiction will not significantly influence the occurrence of sleep disorder among in-school adolescents in Ogbomoso North Local Government Area of Oyo State.
Table 4
Sleep Disorder and Internet Addiction

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>X²cal</th>
<th>X²crit</th>
<th>Df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescents often experience headaches when addicted to Internet</td>
<td>227</td>
<td>302</td>
<td>274</td>
<td>214</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.3%</td>
<td>29.6%</td>
<td>26.9%</td>
<td>21.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescents experience eye pains when they are addicted to Internet</td>
<td>221</td>
<td>395</td>
<td>221</td>
<td>170</td>
<td>43.32</td>
<td>21.026</td>
<td>12</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>21.7%</td>
<td>38.7%</td>
<td>21.7%</td>
<td>16.7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet addiction encourages intermittent sleep</td>
<td>148</td>
<td>308</td>
<td>364</td>
<td>178</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.5%</td>
<td>30.2%</td>
<td>35.7%</td>
<td>17.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most adolescents Internet addict are slight sleepers</td>
<td>227</td>
<td>280</td>
<td>295</td>
<td>215</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22.3%</td>
<td>27.5%</td>
<td>28.9%</td>
<td>21.1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result shows that Internet addiction significantly influences the occurrence of sleep disorders among in-school adolescents ($X^2$-Cal=43.32, $X^2$crit=21.026, df=12, P<.05). The calculated table value of 43.32 is greater than the critical table value of 21.026, therefore the null hypothesis is rejected. This is in line with the view by NIOSH (2001) that asserted that adolescents are addicted to the Internet; spending a major part of their time on the Internet. The use of the Internet has brought about the development of health concerns affecting the adolescents. Many of them develop ocular discomfort, muscular strains and stress as a result of being addicted to the Internet. Egger (1996) also ascertained that many adolescents suffer from sleep disorder, headaches, isolation and depression as a result of addiction.

Recommendations

Based on the above findings from this study and observations from various researches, the following recommendations are made:

➢ Efforts should be made by parents or guardians of adolescents to monitor their Internet habits and ensure positive use of the Internet.
Parents should be concerned about their children and be involved in their Internet life.

- Institutions of learning should incorporate media literacy into their curriculum in order to educate learners about the risks and benefits of Internet use.

- Awareness programmes and campaigns to educate the masses on the risks and benefits of Internet use, especially the adolescents, should be done in the media.

- Government should promulgate laws that prohibit access by youth to some sites on the Internet that promote social vices among adolescents. The law enforcement should monitor all the cyber cafes to enforce the rule.

- Government, NGOs, educators and religion groups should intensify efforts to educate the youths and the adolescents on the positive use of Internet through workshops, symposia, conferences, health talks.

- The media such as television, radio, newspapers and magazines should make concerted efforts in communicating and promoting positive sexual values and cultures among youths. Positive and accurate sexual information should be disseminated to foster healthy sexual behaviour among the youths. Programmes that centre on healthy sexual matters should be screened to ensure that positive moral value messages are passed across to the youths. Movies and music that can encourage sexual waywardness and promote nudity should not be displayed at all on the screen.

- Young ones should be educated on the importance and use of the Internet. Internet should be used for the purpose of obtaining information for enriching the knowledge and not to explore negative sexual information and experience that may be destructive. Internet
should be positively and relevantly explored to develop self and the environment.

Conclusion

Based on the research findings of this study, it was concluded that Internet addiction significantly influences the occurrence of teenage pregnancy among in-school adolescents in Ibadan North Local Government Area of Oyo State. Similarly, Internet addiction was found to significantly influence the occurrence of STIs and abortion among in-school adolescents. Furthermore, the study found that Internet addiction significantly influences the occurrence of sleep disorder among in-school adolescents in Ibadan North Local Government Area of Oyo State. Based on these findings, various recommendations were proffered as suggestions and possible solutions to curb the excesses of Internet addictions by adolescents in general.
References


