

The smartphone role in the era of information technology

Alireza Atarodi ^{1,*} and Hamidreza Atarodi ²

¹ Department of Knowledge and Information Science, Paramedical College and Social Development & Health Promotion Research Center, Gonabad University of Medical Sciences, Gonabad, Iran.

² Department of Chemistry, Faculty of Sciences, University of Gonabad, Gonabad, Iran.

International Journal of Scholarly Research in Medicine and Dentistry, 2022, 01(01), 036–039

Publication history: Received on 21 June 2022; revised on 29 July 2022; accepted on 03 August 2022

Article DOI: <https://doi.org/10.56781/ijsrmd.2022.1.1.0025>

Abstract

The world today is faced with huge achievements in development of technology and this enforce and speed up the process we wish for life. Using technology is a coin with two different sides of positive and may negative that should be cared not to make something worse than it is, then we should be aware of the advantages and disadvantages of the things we use to decrease the possible damages that can be resulted. Smartphone one of the technology era tools can make the best opportunity if it is understood well, mostly by the youth to get the best use of it, however, its properties and capabilities with various functions is beyond the scope of the youth understanding in some parts. The parents, teachers, society and the rulers' duties should come to view and manage the status with a look toward the future. Neglecting the field, we are talking about something that may result more negative and destructive outcomes for all individual in our planet soon or late, then an effort to manage and or control the problem seems more necessary than ever.

Keywords: Internet; Information; Smartphone; Technology; Web

1 Introduction

Information Technology (IT) and its impact on modern society is revealed to everyone. IT through its elements enables wide and seamless integration and communication all over the world. IT systems running anyway can produce good and bad results. IT impacts the environment, people and the society as a whole. The way we use IT determines if its impacts are positive to the society or negative. For example, we can use our best from the Smartphones and Web on the Internet to make our societies developed, make it new and modern. Computers based on internet relationship have changed the way and the style people relate to one another and making their living environment well, organize their work, their communities, and their time and place faster, easier and cheaper than yesterday. IT mostly in the form of Smartphones and available web are produced in great size and prevailed everywhere easily and even for children, too. A smartphone is a cellular telephone with an integrated computer and other features not originally associated with telephones, such as an operating system, web browsing and the ability to run software applications.

* Corresponding author: Alireza Atarodi

Table 1 Worldwide smartphones producers market share

Worldwide smartphones producers market share								
Source	Date	Samsung	Huawei	Apple Inc.	Xiaomi	Oppo	Others	References
Huawei Inc.	Q2 2018	19.3%	13.3%	11.9%	8.8%	7.6%	39.0%	[1].
Apple Inc.	Q2 2018	21.0%	15.9%	12.1%	9.5%	8.6%	32.9%	[2].
Market Monitor Service	Q2 2021	18%	-----	15%	16%	10%	31%	[3].

Table 1 shows [1-3] some worldwide smartphone producers market share in the world we live in today. How the said companies run the markets and are in competition with each other to produce more as it is the nature of economic world, but we should have a look at the effects they may have, negative or positive, and learn to know how to cope and deal with it to make the best use of it anyway.

The studies show that excessive mobile phones use can be associated with different aspects or problems of mental health. For example, studies showed that mobile phone addiction could be related or effective on impulsivity and addiction, low self-esteem and depression, control problems and the symptoms of depression, anxiety and Internet addiction and lower self- confidence, high impulsivity, feeling of loneliness and social anxiety, extroversion and self-esteem, depression, distractibility, lack of tolerance, withdrawal, and escape, impulsivity and loneliness and negative consequences such as emotionally-damaged relationships and also reduction of academic achievement, family relationship decrease, social isolation, loneliness and depression [4]. Some studies also revealed that Smartphone empowered by the Global System of Mobile Communication (GSM) protocol has emerged as the most prevalent means of voice communication and used for many other reasons mostly by college students form example in Nigeria. The results showed that 38.2 percent of students spent between 1 and 5 hours per day on their phones. Majority of the respondents (98%) used their phones to communicate with their family and friends. About 75% used their smartphones for social networking. Only 24% of the students engaged their smartphones for academic activities. The study concluded that although there was widespread use of smartphones among college students, they tended to use smartphones more for social activities than academic activities [5]. Now, we believe that academic activities can be a more useful activity, one of the many properties of Smartphone and Web that they potentially can provide.

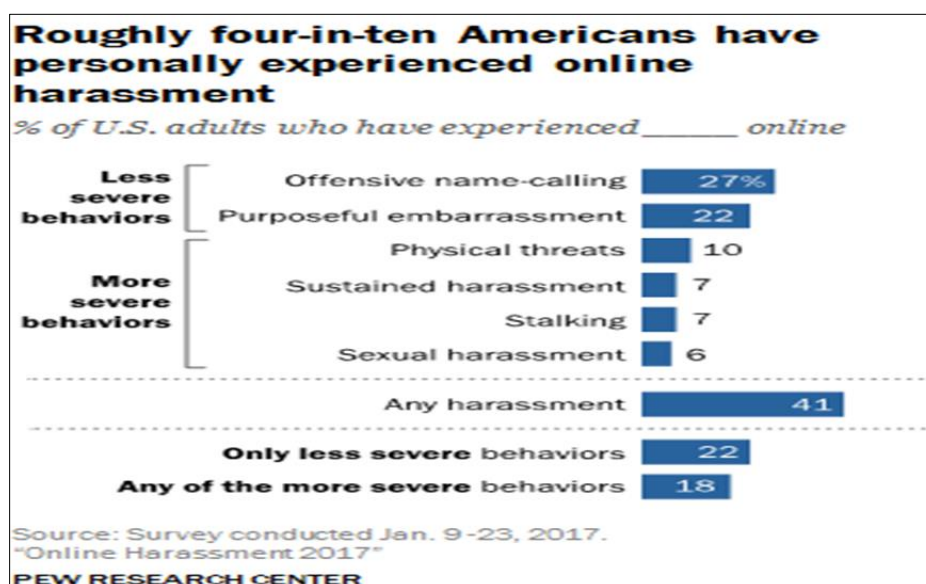


Figure 1 The percent of some online effects on people's behaviors

A 2012 University of Southern California study also found that unprotected adolescent sexual activity was more common among owners of smartphones and also through Internet communication or any backlit devices, overdose of using them improperly also can seriously affect sleep cycles, anxiety when separated from the devices. "smombie" (a combination of "smartphone" and "zombie") is a walking person using a smartphone and not paying attention as they

walk, possibly risking an accident in the process, an increasing social phenomenon. The issue of slow-moving smartphone users led to the temporary creation of a "mobile lane" for walking in Chongqing, China. The issue of distracted smartphone users led the city of Augsburg, Germany to embed pedestrian traffic lights in the pavement [6].

The Natural Resources Defense Council observes that Lead, Mercury and Cadmium found in personal electronic devices such as mobile phones can "release dangerous toxins into our air and water when burned or deposited in landfills improperly." In these situations, there can be significant environmental impacts. People's smartphone addiction could be causing an important imbalance in the brain and the way their brain works, severe anxiety and tiredness. Some other symptoms are also typical of online addicts such as: Feelings of guilt, anxiety, depression, dishonesty, euphoric feelings when in front of the computer, unable to keep schedules, no sense of time, isolation, defensiveness, avoiding doing work, agitation, backache, headaches, weight gain or loss, disturbances in sleep, carpal tunnel syndrome, blurred or strained vision, RF-EMFs via wireless, changes in brain activity, reaction times, and sleep patterns, tired and stinging eyes [7]. But it should be considered and a big concern for human being to be aware of using IT today and we should educate and train people and mostly youth to get the best use of IT and keep it away from our children access when and where it must be so, and also, we should not neglect the necessary and the varieties of IT useful applications to make a healthy and developed society based on IT power and ability.

One of the biggest things smartphones have changed is the way of searching to find information. With smartphone you can gain instant access to unlimited knowledge anytime, anywhere and at any speed. We can have access to collective knowledge on social networks and of the web on smartphone. Viber is popular with smartphone users (92%), but it is not widely used on other devices (the indicator does not exceed a quarter). Facebook messenger is used on both smartphones (62%) and other devices (laptop, desktop computer and tablets - 49%, 43% and 27%, respectively) [8].

Smartphone with its various functions has impacted almost all parts of the human life. The prominent areas, to observe the impacts of smartphones includes business, communications, education, research, health, and social life to cultural norms and individual behaviors at most of the fields and areas of living. Using smartphones impact is more shown on quality of life by changing health information behavior, as well [9]. Then, it seems that we shouldn't hate new technology illogically and throw it away and not do embrace it additionally, the best and logic way is to use it in a right way, right time, right aim, right user in a right place for right and correct reason and aim [10].

Some ideas and sayings of different individuals on Technology and Smartphone today we use anyway as the followings:

"An idea was born. "We thought, why not make use of a technology that millions of people carry around in their pockets anyway?" [11].

"My mom had to get a ride to the library to get what I have in my hand all the time. She reminds me of that a lot." (Girl, age 14)

"People can say whatever they want with anonymity and I think that has a negative impact." (Boy, age 15)

"Because teens are killing people all because of the things they see on social media or because of the things that happened on social media." (Girl, age 14)

"It has a negative impact on social (in-person) interactions." (Boy, age 17)

"It makes it harder for people to socialize in real life, because they become accustomed to not interacting with people in person." (Girl, age 15)

"It provides a fake image of someone's life. It sometimes makes me feel that their life is perfect when it is not." (Girl, age 15)" [12].

2 Conclusion

The total of the findings claims the positive and negative aspects of technology and more than ever smartphone widely available and in access mostly by the youth. Relevant research has proven that technology could change education negatively through four paths: deteriorating students' competences of reading and writing, dehumanizing educational environments, distorting social interactions between teachers and students and isolating individuals when using technology [13]. Not only the students but also everybody in the society is engaged with smartphone to say somewhat addicted to smartphones but did not use their smartphones for true and exact purposes. It is expected to help individuals everywhere in the society to better understand the patterns of smartphone usage and to reduce or control disruptive smartphone usage. Then, it is a duty of the men who are responsible, academic and educational centers, parents and

those who can and are capable to teach and learn the society to get the best use of it anyway, since it is the time and the era of technology and smartphone and no way out of it. However, it is a phenomenon tool to use for developing, improving, cost decline, speed, size, agility and so many other properties that can be discovered. Smartphone is very powerful, capable, flexible, small, nice, user friendly, no costly, almost all things in one. It's a good and an enormous platform to think more about it for all. To say the pros and cons of it or IT we use anyway is not to be against it but it is a warning and knowing ability to be alert and aware of results and outcomes forward.

Compliance with ethical standards

Acknowledgments

We should appreciate all those who helped us to write the present article.

Disclosure of conflict of interest

The Authors declare no conflict of interest.

References

- [1] Gartner Says Huawei Secured No. 2 Worldwide Smartphone Vendor Spot, Surpassing Apple in Second Quarter 2018". Gartner. Retrieved November 11, 2018.
- [2] Top Five Smartphone Vendors, Shipments, Market Share, and Year-Over-Year Growth, Q2 2018". International Data Corporation. Retrieved November 11, 2018.
- [3] Counterpoint T. Global smartphone market share: By quarter. Market Monitor Service, 2022. <https://www.counterpointresearch.com/global-smartphone-share/>
- [4] Tavakolizadeh J, Atarodi A, Ahmadvpour S, Pourghesiar A. Health Status and Demographic Factors Among the Students of Gonabad University of Medical Sciences in 2011-2012. *Razavi Intl J Med.* 2014 February; 2(1): e15527. DOI: 10.5812/rijm.15527.
- [5] Nwachukwu Ch, Onyenakeya K. Use of Smartphones among College Students in Nigeria: Revelations and Reflections. *J Communication*, 2017; 8(2): 171-182. DOI: 10.1080/0976691X.2017.1396007
- [6] Cheever, N. A., Rosen, L. D., Carrier, L. M., & Chavez, A. Out of sight is not out of mind: The impact of restricting wireless mobile device use on anxiety levels among low, moderate and high users. *Computers in Human Behavior*, 2014; 37, 290-297.
- [7] Hyeong Yoon. Kyun Park Sung. Environmental Exposures to Lead, Mercury, and Cadmium and Hearing Loss in Adults and Adolescents: KNHANES 2010-2012. *Environ Health Perspect*, 2017; Jun; 125(6): 067003. Published online 2017 Jun 8. doi: 10.1289/EHP565. PMID: PMC5743444.
- [8] Glushkova S, Belotserkovich D, Morgunova N, Yuzhakova Y. The role of smartphones and the internet in developing countries. *Revista ESPACIOS*, 2019; Aug 5; 40(27).
- [9] Ghahramani F, Wang J. Impact of smartphones on quality of life: A health information behavior perspective. *Information Systems Frontiers*, 2020; Dec; 22(6):1275-1290.
- [10] Atarodi A, Atarodi A. Smartphone addiction and its multifunctional concerns for teachers in academic classrooms. *Ment Health*. 2019;4:1-2. DOI: 10.15761/MHAR.1000184
- [11] Cartwright J. Technology: smartphone science. *Nature*, 2016; Mar;531(7596):669-671.
- [12] Anderson M, Jiang J. Teens, social media & technology 2018. Pew Research Center, 2018; May 31;31(2018):1673-1689.
- [13] Alhumaid K. Four ways technology has negatively changed education. *Journal of Educational and Social Research*, 2019; Oct 29;9(4):10-. <https://www.richtmann.org/journal/index.php/jesr/article/view/10526>