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Research Article

Detection and Evaluation of Effective of Digital Communication of Drug on Human Body

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ABSTRACT

Nowadays, there is a wide using of mobile and internet from various ages, due to some bad systems which they work to send signals (sound wave frequency) within the music or will be spread to affect the brain of the humankind. Therefore, this paper expresses the detection and evaluation of (the signal of sound frequency) which influence the human brain, it has been measured some frequency by programming in the mobile and found a trend to detect such frequencies and a way to produce a human being from it.

Keywords: Digital communication, digital drug, electromagnetic radiation

INTRODUCTION

The updated technology of communication (mobile and network) makes our social life more easy for communication and it will be active, but at the same time, it causes our lives many dangerous issues (such as electromagnetic radiation and sound pressure, especially ultrasonic waves) for all ages as well. Meanwhile, we need to point to specify the negative side of this new technique equipment and define all the waves with their bad usages. As we know the ear is a sound pressure receptor (or sensor) that influences our behavior (physically or physiology) because these techniques are getting inside houses without any our permission or observations. Whereas, the sense of hearing counts on the sensory receptors of the inner ear known as hair cells and the hair cells are extremely vulnerable and can be affected by disease, ageing and over-exposure to loud noise. Once destroyed, they do not regenerate.

Sound Properties and Characteristics[1]

It is the compression wave traveling down material bar. It is a physiological sensation of hearing and it looks like mechanical motion which is considered as longitudinal waves (number of consecutive rarefaction and consecutive compression as shown in Figure 1).

CHARACTERISTICS OF SOUND

Amplitude, Pitch, Frequency (n) =1/T, Period (T) =1/f, Wavelength (λ).

Speed (v), Quality, Tone, and A note.

Amplitude (A): It is a maximum displacement of particles vibration from their meaning poison and it is two types: (A) Louder sound (higher energy) and (B) soft sound. (It counts on wave distribution). Wavelength (λ): It is a distance between two consecutions compression and two consecutions rarefaction in the longitudinal frequency (n): It is a number of waves produced by a unit time and its unit is (hertz) n=1/T. Pitch: It is an interpretation of the frequency of a sound by the brain. It affects on the wave shape where the high pitch that means high frequency and amplitude and short wavelength (which gives a loud sound [or pitch]).

Period (T): It is a time duration of the wave (frequency) T=1/n or it is sound propagate on an intervals between two successive consecutions compression and two consecutions rarefaction.

Quality (Timbre) of the sound: It is a character helps us to make a different between two sound different sources but same pitch or loudness. Tone, it is a sound wave of single frequency. A note, it is a sound wave of the number of frequencies.

Speed (v): It is the ratio between distance (wavelength) and the time.

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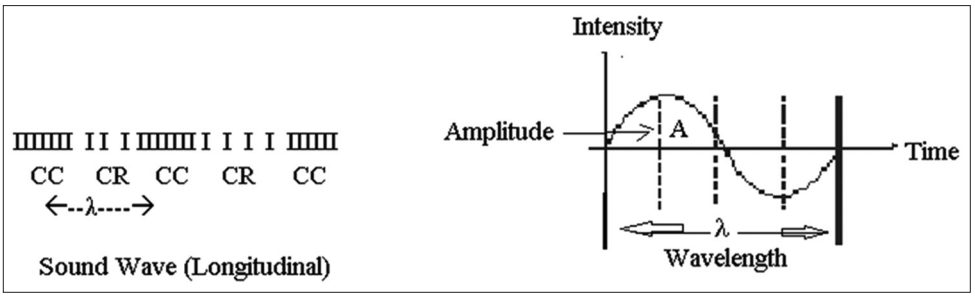

Figure 1: Characteristics of sound wave

Speed of sound v =Dis./Time = λ/T but n=1/T, then v=n λ

Wavelength: The distance between two consecutive compressions and two consecutive rarefactions in the long of the wave moving. The speed of the sound depends on type of the medium (material). There are several effectives of the sound (depending on sound pressure level as shown in Table 1) on humankind such as physic scaly, physiology, and behaviors.

Sound Effects

Digital communication affects humankind's body in many various methods such as drug detection, wireless communications, and various channels including several quantities of e-posts, email newsletters, social, targeted outreach to media, and health-care professionals in a bad way. These messages and communications announcement among people can be changed from new or appear risks related to concurrent conditions (for example, pregnancy or existing liver or kidney disease) or attentions about potential medication errors. Moreover, digital communication including issues influencing a great deal of patients, potentially serious or life-threatening injuries events, or medication errors that may result in serious or life-threatening conflicting answers. Whereas the digital communication influences directly on the behaviorism, mental and psychology of the person without feeling it because he/she will be detected automatically and this will affect humankind's mentality and it may lead to commit suicide as well.

The arriving narrative forms of communication increase information processing and increase the persuasiveness of messages and people become transported into a situation that can enhance emotions, attitudes, and behaviors.

As a result, it will be not easy to get rid of this detection which became part of his/her life everywhere and anywhere.

Digital Drugs[2]

More accurately called binaural beats which are sounds that can be capable of changing brain wave patterns and inducing an altered state of consciousness similar to that affected by taking drugs or achieving a deep state of meditation. Binaural beats occur when two tones with slightly different frequencies are played together. Without headphones, the slight difference in the two frequencies is perceived by the listener as a single tone that wavers slightly. Hence, headphones, however, the two tones are isolated and the listener hears each frequency clearly in a different ear. As the brain processes the two tones, it must take into account that the slight difference among the frequencies. As for the listener, this difference is perceived as rhythmic beats inside the head.

Table 1: Effective of sound level

Sound pressure level	Permissible exposure time
115 dB	0.468 min (≅30 s)
112 dB	0.937 min (≅1 min)
109 dB	1.875 min (<2 min)
106 dB	3.75 min (<4 min)
103 dB	7.8 min
100 dB	15 min
97 dB	30 min
94 dB	1 h
88 dB	4 h
82 dB	16 h

The brain processes rhythmic stimulus as electrical impulses. The goal of digital drugs is to purposely overcome the electrical impulses and encourage the listener's brain to synchronize its brain waves with the binaural beats. This synchronization which is achieved by selecting binaural tones within a particular frequency level is called frequency following response and is a part of a concept called entrainment. Entrainment, the synchronization of one biological rhythm to another is not a new concept. It forms the basis for many sorts of meditation and medical biofeedback.

Properties of Digital Drugs[3,4]

Frequencies are measured in units called hertz (Hz) by listening to two tones in difference falls within a particular Hz level, the listener hopes to achieve a particular mood or change in energy. For instance, if the listener wants to be very relaxed, he might choose to listen to a tone with 140 Hz in one ear and 145 Hz in the other. The listener's brain would perceive the viciousness between the two frequencies (5 Hz) and adjust the listener's brain waves accordingly. If the listener wants to be energized, however, he might choose to listen to 130 Hz in one ear and 150 Hz in the other. A difference of 20 Hz in frequencies would produce a various state of mind as shown in Table 2.

Sound Spectrum Measuring[5]

Using a special sound meter program (within mobile application) which has been measured by some frequency spectrum sound for ultrasonic to supersonic (where the range of humane hear from 20 Hz to 20,000 Hz), some frequencies are out of the hearing range, as shown in Figure 2, starting from 2A for frequency before 20 Hz to 2 D after 20,000 Hz.

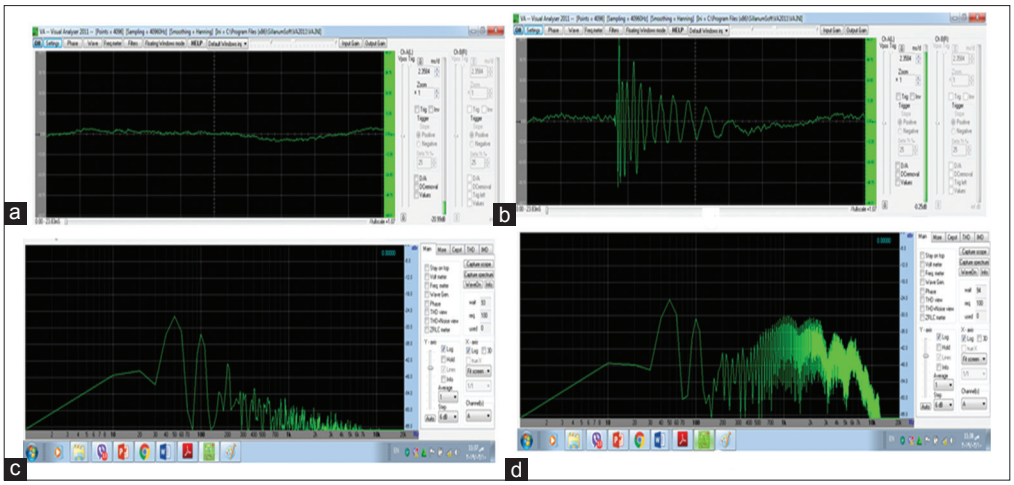

Figure 2: (a-d) Sound frequencies spectrum

Table 2: State of sound frequency

Type	Frequency range (hZ)	State of mind
Delta	0.5 Hz – 4	Deep sleep
Theta	4 Hz – 8	Drowsiness (also first stage of sleep)
Alpha	8 Hz – 14	Relaxed but alert
Beta	14 Hz – 30	Highly alert and focused

Table 3: Noises can cause damage to wear hearing

Type	Noise value (dB)	Period
A	85 dB	Regular and prolonged exposures to noise at or above 85 dB (averaged 8 h/day)
B	100 dB	Regular and prolonged unprotected exposures of more than 15 min/day risk permanent hearing loss
C	110 dB	Regular and prolonged unprotected exposures of more than 1.5 min/day risk permanent hearing loss

That means there are a lot of frequencies affect on human's body without hearing it.

RESULTS AND DISCUSSION[6,7]

1. Using mobile has a side effect which is the microwave radiation as well as the effect of ultrasound waves
2. The effective of microwaves is physically, but the effective of ultrasound is physiological, physical, and behavior
3. The output of microwave effective will appear after a long period while the effective of ultrasound will appear during a short period
4. Digital well-being considerations. When optimizing digital health, multiple health-relatedcomponents can be taken into consideration.[6]
5. The effective is usually different from person to other because it counts on the followingfactors:
   a. The time period that the person stay under the frequency of sound wave as shown in Table 3
   b. The behavior and situation of the person during the effective
   c. The power and pressure level of the sound. Table 1 shows the level and time of affecting (exposure time)
   d. Using headphone or without (because using headphone is effected more).

CONCLUSION

Digital well-being is a term used by health professionals, researchers, and device manufacturers to describe the concept of humans interact with technology. The experience should support mental and/or physical health in a measurable way. The goal of improving digital well-being is to design technology in such a way that it promotes healthy use and proactively assists the user to maintain a healthy lifestyle.[4,6]

Using a digital communication (mobile, laptop, and iPad) with internet, the user certainly will receive and affect the unwanted sound frequency wave; of course, the user effective counted on the factors that mentioned above.

We should observe the kids and children to be sure; they are using the digital instruments on right ways by:

a. They should use free beneficial programs of any digital drug
b. Control and check the children not to join or purchasing materials or playing games witha bad group
c. Observe the children's behavior in any serious forward motion (such as dancing, doing something, or chatting) and you should know in which programming he is busy with it.

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