



SUNADA

Music, Therapy and More...

Volume X, October, 2017



From the Editor's Desk...

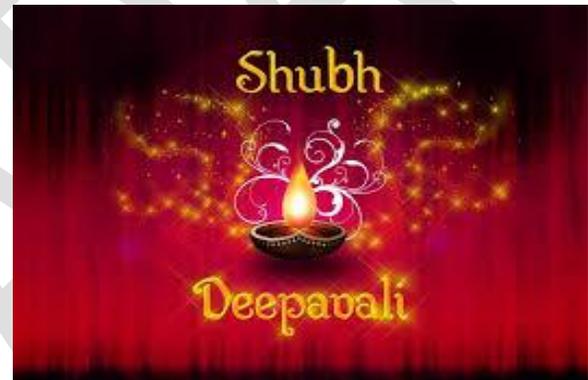
Its Deepawali time and the noise of crackers and festivities is very much in the air. Beg your pardon....no noise of fire crackers this year. Yet, having put up with the tremendous noise pollution till now, the absence of Noise has a strange effect. For those who believe that Goddess Lakshmi has to be ushered in by bursting fire crackers, it must feel like blasphemy. But it is not so. A community event for fire works display similar to Dussera should be fun. It would be interesting to see our readers' reactions to this issue.

Founder & Editor

KSVasanthaLakshmi

"Never underestimate the healing power of the following -

*Music
The Ocean
Stars"*



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NOISE – WHY IS IT DISAGREEABLE

By

KS Vasantha Lakshmi

The world around us is filled with sounds as well as noises. The word 'Noise' is derived from the Latin word 'nausea' which means feeling of sickness at the stomach with an urge to vomit. Given below are some other definitions of noise.

In acoustics, noise is defined as unwanted, unpleasant and annoying sound. Noise can be defined as unwanted, unpleasant, disagreeable sound that causes discomfort. Noise can be defined as the wrong sound, in the wrong place at the wrong time. Noise is an incidental, random sound and almost an undeniable part of our civilization and is without agreeable musical quality. The human ear is designed to withstand a certain sound level which is measured in decibels.

What is melody to some could be the cause of malady to others. That is why a particular

sound, which is musical to someone, may sound like noise to another. However, if the sound of even music is loud and it prolongs for a longer period of time, it becomes a noise. Sometimes, a soothing song can also act as noise to a person who is working on something and really needs silence to deeply focus and concentrate.

One of the best examples of noise is what we call as the everyday noise. Noises are usually made unintentionally by different mediums like vehicles, trucks, unnecessary honking, people, air, object, environment factories, trains etc. on a random basis without any structured way or in other words it doesn't have any arranged pitch/rhythm/beat etc. one may say that it is any noise that can be heard while walking through the street. The urban environment which represents high decibels of noise is formed from a wide range of sources. One of the most ubiquitous and least studied of these is the ear-piercing noise of the fire crackers as part of Deepavali celebrations. The sound can startle the young and the old, the ailing and babies alike. It is

also potentially dangerous, as excessive noise from any source is an important health risk factor causing adverse effects like hearing loss. This perhaps is the reason why some factories provide sound mufflers to protect their workers as it is a potential health hazard. This year, the decision of the government to ban the use of fire crackers in Delhi and NCR area is a welcome move.

The quality of any noise is based on the following elements -

Pitch - (associated with frequency), the perception of a high or low sound.

Loudness - (known as an amplitude), the intensity of a sound.

Phase - the increase and decrease in pressure cycle in any single vibration.

Direction - hearing with two ears creates left/right, high/low, front/back qualities; first come first heard by one ear or the other.

Distance - associated with reverberation, perception of

how near or far away a sound's source is.

Timbre - also called tone color, with the perceived quality of any sounds' multiple frequencies changing through time.

Sound quality is the degree to which the sum of all the individual demands made on an auditory event is satisfied. Generally the high levels of sound quality is negative when sound events lead to auditory events perceived to be unpleasant, annoying or disturbing or produce negative emotions, irritation to name a few. Likewise, the sound quality is positive if auditory events are not perceived as negative and do not produce disturbance. It may be surprising to note that the leading cause of hearing loss is not aging but noise.

Excessive noise can lead to a whole host of other serious health problems. These include coronary artery disease, high blood pressure, stress-related health conditions such as migraine, colitis, stress, hypertension, heart diseases and ulcers, and

sleep disorders and even the quality of sleep.

Excessive noise is also linked to emotional problems such as mental fatigue, anxiety, and aggression. The reason is that excessively high levels of noise cause a stress response as the human ear is not designed to process such high decibels. When one hears a loud sound, a stress cascade begins resulting in high adrenalin release. Then the blood vessels automatically constrict, muscles tense up, and blood pressure rises. We are not fully in control of this stress response: "Even though noise may have no relationship to danger, the body will respond automatically to noise as a warning signal."

The range of human hearing is generally considered to be 20 Hz to 20 kHz, but it is far more sensitive to sounds between 1 kHz and 4 kHz. For example, listeners can detect sounds as low as 0 dB SPL at 3 kHz, but require 40 dB SPL at 100 hertz (an amplitude increase of 100).'



TABLE 22-1
Units of sound intensity. Sound intensity is expressed as power per unit area (such as watts/cm²), or more commonly on a logarithmic scale called *decibels SPL*. As this table shows, human hearing is the most sensitive between 1 kHz and 4 kHz.

	Watts/cm ²	Decibels SPL	Example sound
	10 ⁻²	140 dB	Pain
	10 ⁻³	130 dB	
↑	10 ⁻⁴	120 dB	Discomfort
	10 ⁻⁵	110 dB	Jack hammers and rock concerts
	10 ⁻⁶	100 dB	
	10 ⁻⁷	90 dB	OSHA limit for industrial noise
	10 ⁻⁸	80 dB	
	10 ⁻⁹	70 dB	
	10 ⁻¹⁰	60 dB	Normal conversation
	10 ⁻¹¹	50 dB	
	10 ⁻¹²	40 dB	Weakest audible at 100 hertz
	10 ⁻¹³	30 dB	
	10 ⁻¹⁴	20 dB	Weakest audible at 10kHz
	10 ⁻¹⁵	10 dB	
	10 ⁻¹⁶	0 dB	Weakest audible at 3 kHz
	10 ⁻¹⁷	-10 dB	
	10 ⁻¹⁸	-20 dB	

Music - Impact on Adolescents

By Prof. Bhavaraju Subhadra

Economist (USA)

We, the teachers were watching with awe, the senior school students listening to a music recital, that too classical Carnatic, in absolute silence. The boy rendering it belonged to their ilk. We were awe-struck because the boys and girls in the age group are normally skeptical about anything classical, especially in music and seem to appreciate and prefer more of filmy and pop songs. For the first time we realized children are willing to experience and enjoy any good music.

Adolescents in the ages between 15 and 17 years, are bursting with energies and dreaming of great things in life. To them life is nothing but fun with friends and freedom. Both boys and girls in the age group find themselves growing up very fast, physically as well as physiologically. Added to this, are the predominant psychological and behavioral changes. Their world now veers around themselves and their peers. They show signs of independence and seek to establish their own identity in the society. This phase of transformation can leave them highly confused with conflicting emotions and feelings. They look

around for proper help and guidance. This is the time when parents can step in and encourage them to participate in various activities, interests and hobbies. This goes a long way in harnessing their energies, both mental and physical and in shaping their personalities. Any form Music in any language, is one such instrument that helps towards sublimation of energies in young adults. They should be exposed to fine arts, especially music at a very young age so that they learn to appreciate it later on in life. Lullabies in infancy help in establishing bonding between mother and baby good music goes a long way in providing footing to adolescents into adult world. It helps them to gain recognition, to socialize and develop interpersonal skills and pick their friends based on their common tastes and preferences. They carry music with them to project their image and more importantly, their Identity in the society.

The role of music in impacting the psychology of adolescents as they transition into adults cannot be underestimated. It is a great source of strength to them in their developmental phase as it helps them to explore and take control of their lives, emotions, feelings and behavior. It is a palliative to the youth who in the present times

have to cope with pressures, importantly from two areas- multitasking and predominance of social media in their lives. While music ennobles the heart and mind, loud and raunchy music degrades the personality by arousing base and negative emotions and thoughts in the individual. Cultivating a taste for music is an essential prerequisite in planting positive attitudes and shaping the personality of an individual.

Music, good music as a therapeutic tool is picking up in recent times and is of immense value. The youth are very deeply connected to music whether as performers or listeners. It was found an individual spends a minimum of 3 to 4 hours per day listening to music. Even as performers they are totally committed. This helps them to purge their system of negative emotions including hatred, jealousy, fear or pity. Music acts as a mood elevator when one is in dumps. The powerful hold music has on young minds calls for researching and using the same as a support to clinical treatments of various psychological disorders among the adolescents.

WHAT YOU THINK



The content is very informative and precise, even for laymen like me.

B.S. Murthy, (USA)

Dear KS

Good job indeed! Keep it up!!

Regards

TVS

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Well written. For one undergoing therapy I think he or she does not have to know the intricacies of notes and ragas. 'Shisurvvetthi pasurvvetthi vetthi ganarasam phani' is well said in that context Mine is a very general statement and an assertion that a layman not knowing any music theory can still get the benefit of music therapy just by listening. My status is just that - a layman and a friend

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