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Full Length Research Paper

Effect of geopathic stress zone on human body voltage and skin resistance

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Geopathic stress zones are places on the surface of the Earth known to cause health problem. Empirical knowledge of the existence of geopathic stress is probably as old as mankind. The aim of this study is to evaluate the effect of geopathic stress on human body. It further tries to scientifically evaluate dowsing phenomenon by measuring body voltage, skin resistance, using V-20 bio voltmeter, GSR-2 biofeedback system(R) respectively in and around the pre-detected geopathic stress zones on the Mumbai-Pune express way and some residential areas of Pune city (India). Healthy male volunteers were subjected to the stress in prospective study. The observations indicate a change in body voltage, skin resistance in geopathic stress zones as compared to non-stress zone.

Key words: Geopathic stress, skin resistance, body voltage.

INTRODUCTION

The occurrence of stress as a factor in ill health is now widely accepted and its effects on the body are relatively very well-documented. Geopathic stress is always neglected and considered as a causal syndrome to ill health and has been always ignored because most of the people are unaware of its occurrence in the selected location (Freshwater, 1997). In ancient times, people were aware of geopathic stress associated with specific areas and were very particular in selecting location for civilizations and sites for construction of any structure and dwelling. Those people used to carryout elaborate tests to consider suitability and sustainability of site for structures required for dwelling. The archaic method for selecting a site for dwelling considered the presence of bushes, color of land, presence of water bodies and the development of trees. Housing animals on the proposed site and observing their behavior for certain period was also one of the tests (Bradna, 2002).

In contrast, the modern world with growing population, construction companies hardly give any choice for selection of a site for their clients, hence the opportunity to select site for construction of any structure and dwelling by an architect is also minimum (Saunders, 2003). In majority of the cases the role of architect ceases, the moment a structure is completed. This results in the occupant occupying the built structure ,to slowly get a feel of the building and he start comparing it with the previous site in term of health, compatibility with relatives and others, and progress in careers, business and other social activities. There are numerous disease of which aetiology is not known, prominent among these are the disease related to human body because of impact of Geopathic Stress (Derek, 1994).Energies from earth at specific location that have ability to change the normal body function may be termed as geopathic stress (Kharat, 2000) or in other words geopathic stress is the effect of detrimental earth radiation and electromagnetic radiation on the health of human body (Gerhard, 2005). Geopathic stress are as a result of certain natural or spontaneous potentials generated in the subsurface due to movement of groundwater and its mechanical friction as it flows through fissures, faults, joints and lineaments etc (Geldart, 1976; Morrison et al., 2004).

These potentials are associated with electric currents in

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the ground and are observed to rise vertically from the groundwater to the surface of the earth and above it, to a distance of 220 km (Rolf, 2005). The subterranean groundwater flows at various depths and is the most important source that generates the geopathic stress zone (Creightmore, 1997; Thurnell-Read, 2006). In the ancient time, location of subterranean groundwater was done with the help of dowsing rod which is an old unscientific and well-known practice. Many of the spas were discovered by dowsing method. Professor Benedict explains dowsing as a phenomenon of combination of Bio-physics. According to him the bipolar (positive and negative) sides of the body are closed in an 'emanation stream' through the dowsing rod. The characteristic 'turning of the rod' occurs at the moment the dowser walks over the geopathic stress zone (Bachler, 1989). Though this technique has been very successful based on its statistical success ratios, and is also simple, fast and inexpensive; there is a continued skepticism as regards its acceptance by the scientific community (Betz, 1995). Also dowsing is a very crude technique and does not give any numerical value or a reading; hence there is need to study scientific way in which effect of geopathic stress on human body can be quantified.

Extensive work has been published by various researchers to understand the effect of geopathic stress on the built environment (Bachler, 1989; Thomas, 1993; Gregory, 2002). Possible influences attributed to geopathic stress phenomena have been widely reported by the mass media, albeit without scientific proof. Apparently, geopathic stress does not only influence humans but all kind of animals, plants, fungi and bacteria (Gerhard, 2008; Dubrov, 2008; Von Pohl, 1993; Gak, 2008). The effects of geopathic stress on human body have not yet been proven by scientifically accepted techniques except a few (Dharmadhikari, 2010). The existence of the phenomenon is archaic. At present, electronic devices such as bio-voltmeter and GSR-2 biofeedback system can easily measure the changes happening in human body. This paper attempts to correlate the changes in human body voltage and skin resistance on location of GS and non-GS zones. It further tries to scientifically evaluate dowsing phenomenon.

Human body voltage and skin resistance

The human system contains tissues, the electrical properties of which depend on the ions dissolved in water molecules that have electric dipoles. The cells in the tissues maintain a high concentration of potassium (K^-) and sodium (Na^+) ions, exhibiting an active transport mechanism, termed as the sodium-potassium pump. The nerve impulse is a wave of electro-chemical activity. When large number of tissues contract, a large electrical signal is produced through various motor points on the body surface. The human body reacts to the nervous tension and stress through skin, this is termed as galvanic skin resistance (GSR). The GSR is a reflection of variation in sweat gland activity and pore size, which are controlled by the sympathetic nervous system. GSR and body voltage levels get changed when human body becomes excited, frightened or disturbed.

The system activates chemical and physical changes all through the human body. "Reversal theory" has shown in biofeedback research, that meditation and relaxation procedures cause a rise in skin resistance. It has therefore been assumed that high and low skin resistance correlate directly with relaxation and stress respectively, and that a high resistance indicates a pleasant relaxed state of mind, whereas low resistance indicates tension. The aim of this study is to detect the effect of geopathic stress (GS) on human body by measuring body voltage, skin resistance using V-20bio-voltmeter(R), GSR2-biofeedback system(R) in and around the predetected geopathic stress location on the Mumbai-Pune expressway and some residential areas of Pune city (India).

EXPERIMENTAL DETAILS

Geopathic stress zones were identified with the help of dowsing. Five locations were selected for this study. The presence of groundwater vein was confirmed by resistivity technique. Over each location, body voltage (Figure 1) and tone intensity of GSR-2 biofeedback system was measured (Figure 4). On each location, healthy volunteers of age group 19 to 36 years were tested. The readings were observed and suitably plotted (Figures 2 and 3). Each subject was tested for more than 20 min on each location. For skin resistance, measurement was studied by recording tone intensity of GSR-2 biofeedback system. The GSR-2 biofeedback system was turned on and the fingers were placed on the sensing plates. The dial was then turned very slowly until a tone was heard, that is output of GSR-2 biofeedback system was recorded using sound level meter (SL-4010) in dB. With respect to time spent by each volunteer on geopathic stress zone, the tone intensity of GSR unit was recorded in calm and relax position (Figures 5 and 6). After 20 min, the stress zone GSR-2 biofeedback system was shut off automatically as soon as the fingers were removed from the sensing plates. For body voltage measurement, one end of the instrument was grounded in the earth and the other end, which has the golden plate electrode, was kept in the hand of the person. The body voltage was measured.

Observations

Readings of the all volunteers show that body voltage increased on geopathic stress zone (Figure 1). It was further observed that with the increase in age body voltage on geopathic stress zone was much higher (Figures 2 and 3).

Observation of skin resistance measured by GSR-2 biofeedback system, shows that the tone intensity changes on geopathic stress zone as compared to normal zone(Figure 4). It was further observed that tone intensity increases with age of the volunteers (Figure 5 and 6).

Average body voltage and tone intensity measurement for 14 different age group candidates were tested by paired t-test and ANOVA f-test statistically inside and outside geopathic stress zone. The result shows highly significant change in body voltage (Tables 1 and 2), and significant change seen for tone intensity of GSR-2

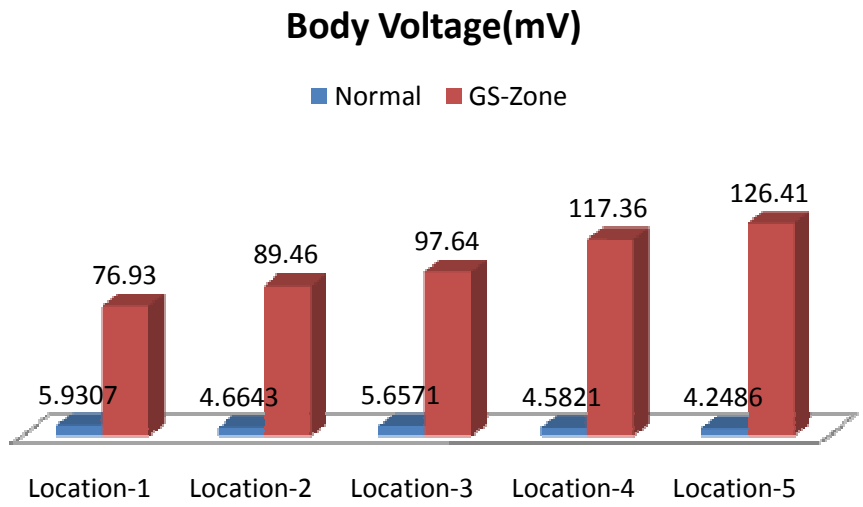

Figure 1. Location wise variation in human body voltage (mV).

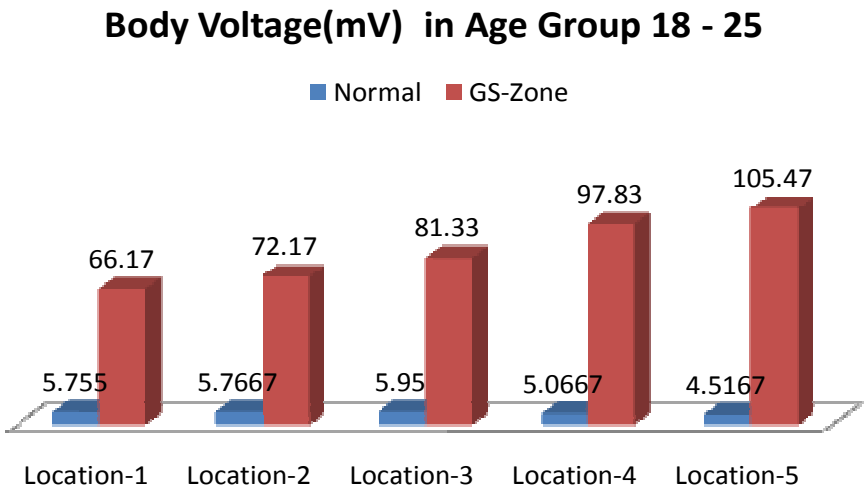

Figure 2. Variation in body voltage (mV) for different location in age 18-25 year group.

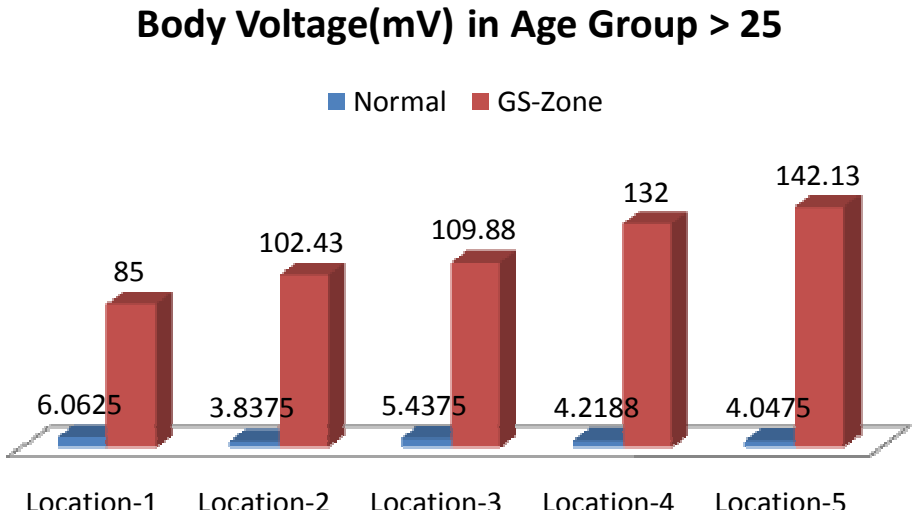

Figure 3. Variation in body voltage for different location in age above 25 year group.

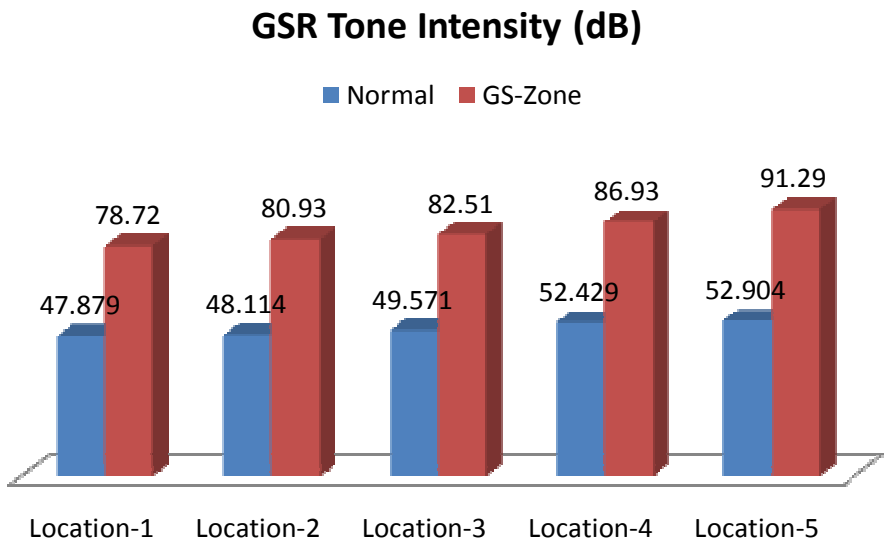

Figure 4. Location wise variation in GSR tone intensity (dB).

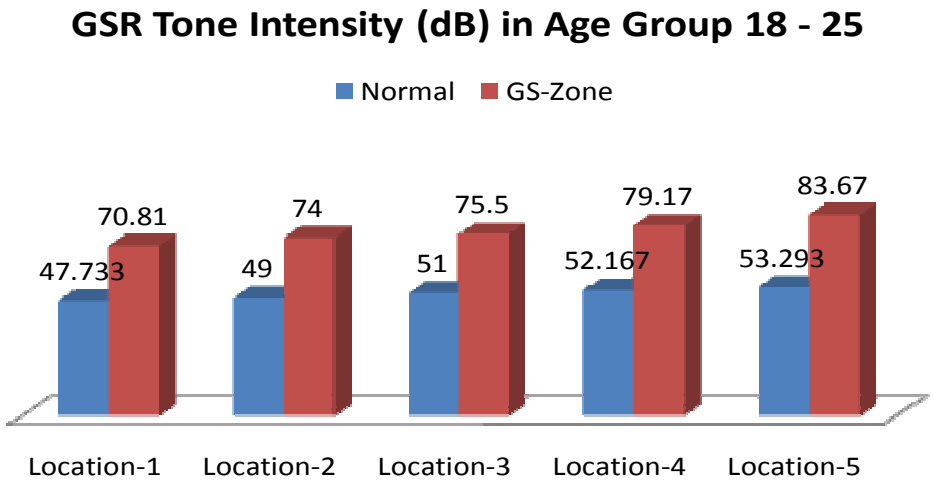

Figure 5. Variation in GSR tone intensity for different location in age 18-25 year group.

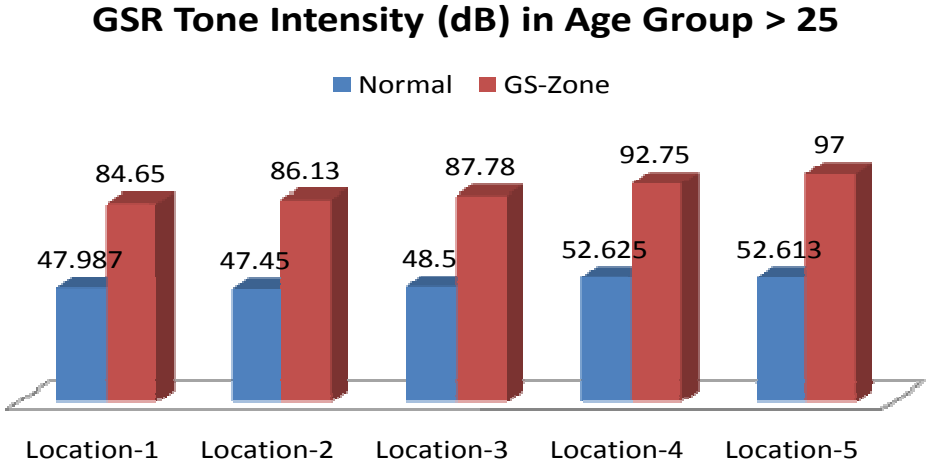

Figure 6. Variation in GSR tone intensity for different location in age above 25 year group.

Table 1. Location wise mean, SD body voltage, t-test and P value.

Location number	Location	No. of candidates tested	Mean voltage	SD	Paired t-test	P-value
1	Normal Zone	14	5.9307	1.39686	20.924	P<0.001 HS
	GS Zone	14	76.93	12.964		
2	Normal Zone	14	4.6643	1.84500	16.342	P<0.001 HS
	GS Zone	14	89.46	18.943		
3	Normal Zone	14	5.6571	1.67961	17.926	P<0.001 HS
	GS Zone	14	97.64	18.838		
4	Normal Zone	14	4.5821	2.02424	18.967	P<0.001 HS
	GS Zone	14	117.36	21.539		
5	Normal Zone	14	4.2486	1.65309	19.793	P<0.001 HS
	GS Zone	14	126.41	23.094		

HS = Highly significant.

Table 2. Normal zones/GS Zone ANOVA F-test.

Location no.	Location	No. of candidates	Mean voltage (mV)	SD	ANOVA F-test	P-value
1	Normal	14	5.9307	1.39686		
2	Normal	14	4.6643	1.84500		
3	Normal	14	5.6571	1.67961	2.506	0.051 NS
4	Normal	14	4.5821	2.02424		
5	Normal	14	4.2486	1.65309		
1	GS Zone	14	76.93	12.964		
2	GS Zone	14	89.46	18.943		
3	GS Zone	14	97.64	18.838	15.235	P<0.001 HS
4	GS Zone	14	117.36	21.539		
5	GS Zone	14	126.41	23.094		

NS = Not significant, HS = Highly significant.

biofeedback system (Table 4 and 5). Paired and unpaired t-test for different age groups (18 to 25 and 26 to 37 years) shows that agewise, body voltage (Table 3) and tone intensity of GSR-2 biofeedback system (Table 6) change significantly. Out of five locations, location number two, four and five had the body voltages which were highly significant as compared to normal zone.

RESULTS AND DISCUSSION

It is seen that the energy emitted by the earth at specific surface locations, affects the normal human body voltage and skin resistance. It is observed that on geopathic stress zone, the body voltage increases and skin resistance decreases as compared to the non- geopathic stress zone. As per Dr. Apter, if tone of GSR unit gets increased then skin resistance gets decreased, this means that the person becomes upset or agitated. It can be said that the human body is affected adversely by the geopathic stress zone. One of the arguments may be that as age increases, the effect of the geopathic stress zone also causes changes in the human electrical system. This may be one of the causes for induction of degenerative diseases like heart attack, cancer, etc as the age increases.

Conclusion

The work tries to bring out that the geopathic stress zone has some sort of subtle energy which affects the human system. This energy can be easily detected by dowsing. The subjectivity in dowsing can be removed by measuring changes in body voltage and electrical skin resistance. Thus, it can be concluded that the archaic method of using the human system to detect

Table 3. Age and location wise paired t-test and p-value.

Age group (in years)	Location	No. of candidate	Mean voltage (mV)	SD	Paired t-test	P-value
			Location - 1			
18 - 25	Normal	6	5.7550	1.24922	16.262	P<0.001 HS
	Zone	6	66.17	10.068		
26 - 37	Normal	8	6.0625	1.56929	26.296	P<0.001 HS
	Zone	8	85.00	8.124		
Diff. Body Voltage (mV) vol	Unpaired t = 3.921 , P=0.002 Sig					
			Location - 2			
18 - 25	Normal	6	5.7667	1.87581	16.695	P<0.001 HS
	Zone	6	72.17	9.579		
26 - 37	Normal	8	3.8375	1.40909	24.971	P<0.001 HS
	Zone	8	102.43	12.346		
Diff. Body Voltage (mV) vol	Unpaired t = 5.642 , P<0.001 HS					
			Location - 3			
18 - 25	Normal	6	5.9500	1.55145	27.192	P<0.001 HS
	Zone	6	81.33	6.919		
26 - 37	Normal	8	5.4375	1.84153	19.138	P<0.001 HS
	Zone	8	109.88	15.028		
Diff. Body Voltage(mV) vol	Unpaired t = 4.277 , P=0.001 Sig					
			Location - 4			
18 - 25	Normal	6	5.0667	.83106	17.546	P<0.001 HS
	Zone	6	97.83	12.608		
26 - 37	Normal	8	4.2188	2.60082	25.629	P<0.001 HS
	Zone	8	132.00	13.277		
Diff. Body Voltage (mV) vol	Unpaired t = 4.755 , P<0.001 HS					
			Location - 5			
18 - 25	Normal	6	4.5167	1.12324	16.459	P<0.001 HS
	Zone	6	105.47	14.839		
26 - 37	Normal	8	4.0475	2.01644	31.457	P<0.001 HS
	Zone	8	142.13	13.228		
Diff. Body Voltage (mV) vol	Unpaired t = 5.069 , P0.001 HS					

HS = Highly significant.

subterranean features such as groundwater disturbs the body voltage and skin resistance. People occupying such location for a long time are subject to the subtle changes of body voltage and skin resistance. It may be further concluded that ill health can be induced on geopathic stress zones.

Table 4. Location wise mean tone intensity of GSR (db), t-test and P value.

Location no.	Location	No. of candidates	Mean tone intensity of GSR (dB)	SD	Paired t-test	P-value
1	Normal Zone	14	47.879	5.3760	9.948	P<0.001 HS
	GS Zone	14	78.72	9.435		
2	Normal Zone	14	48.114	5.3716	11.923	P<0.001 HS
	GS Zone	14	80.93	7.691		
3	Normal Zone	14	49.571	5.7206	11.486	P<0.001 HS
	GS Zone	14	82.51	7.160		
4	Normal Zone	14	52.429	5.6223	11.954	P<0.001 HS
	GS Zone	14	86.93	8.380		
5	Normal Zone	14	52.904	7.3207	13.008	P<0.001 HS
	GS Zone	14	91.29	7.800		

HS = Highly significant.

Table 5. Normal zones/GS Zone ANOVA F-test and p-value.

Location no.	Location	No. of candidates	Mean tone intensity of GSR (dB)	SD	ANOVA F-test	P-value
1	Normal Zone	14	47.879	5.3760		
2	Normal Zone	14	48.114	5.3716		
3	Normal Zone	14	49.571	5.7206	2.232	0.075 NS
4	Normal Zone	14	52.429	5.6223		
5	Normal Zone	14	52.904	7.3207		
1	GS Zone	14	78.72	9.435		
2	GS Zone	14	80.93	7.691		
3	GS Zone	14	82.51	7.160	5.357	
4	GS Zone	14	86.93	8.380		0.001 Sig
5	GS Zone	14	91.29	7.800		

NS=Not significant, Sig.= Significant.

Table 6. Age and location wise mean tone intensity of GSR and its ,SD value, paired t-test, p-value.

Age group (in years)	Location	No. of candidates	Mean tone intensity of GSR (dB)	SD	Paired t-test	P-value
			Location – 1			
18 - 25	Normal Zone	6	47.733	3.4419	12.020	P<0.001 HS
	GS Zone	6	70.81	6.580		
26 - 37	Normal Zone	8	47.987	6.7217	8.652	P<0.001 HS
	GS Zone	8	84.65	6.370		
Diff. Tone Intensity of GSR (dB)	Unpaired t = 2.608 , P=0.023 Sig					

Table 6. Contd.

			Location – 2			
18 - 25	Normal Zone GS Zone	6 6	49.000 74.00	3.8471 5.329	15.309	P<0.001 HS
26 - 37	Normal Zone GS Zone	8 8	47.450 86.13	6.4682 4.190	11.288	P<0.001 HS
Diff. Tone Intensity of GSR (dB)	Unpaired t = 3.230 , P=0.007 Sig					
			Location – 3			
18 - 25	Normal Zone GS Zone	6 6	51.000 75.50	4.3818 4.037	11.202	P<0.001 HS
26 - 37	Normal Zone GS Zone	8 8	48.500 87.78	6.6332 3.127	11.949	P<0.001 HS
Diff. Tone Intensity of GSR (dB)	Unpaired t = 3.464 , P=0.005 Sig					
			Location – 4			
18 - 25	Normal Zone GS Zone	6 6	52.167 79.17	4.9160 5.193	11.211	P<0.001 HS
26 - 37	Normal GS Zone	8 8	52.625 92.75	6.4296 4.559	10.954	P<0.001 HS
Diff. Tone Intensity of GSR (dB)	Unpaired t = 2.768 , P=0.017 Sig					
			Location – 5			
18 - 25	Normal Zone GS Zone	6 6	53.293 83.67	6.7850 4.131	24.717	P<0.001 HS
26 - 37	Normal Zone GS Zone	8 8	52.613 97.00	8.1497 3.703	11.289	P<0.001 HS
Diff. tone intensity of GSR (dB)	Unpaired t = 2.978 , P=0.012 Sig					

HS = Highly significant.

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