Research Article

An Empirical Study on Occupational Stress and Health Hazards Among Medical Laboratory Technicians in Private Diagnostic Centres, Chennai City

R. Angayarkanni*, K.Thamarai Selvi**

*Assistant Professor, Dept of Commerce, Faculty of Science and Humanities, SRM University, Kattankulathur, Tamilnadu, India.

**Research Scholar, Dept of Commerce, Faculty of Science and Humanities, SRM University, Kattankulathur, Tamilnadu, India.

***Corresponding author's E-mail:** angayarkanni.r@ktr.srmuniv.ac.in

Accepted on: 27-10-2015; **Finalized on:** 30-11-2015.

ABSTRACT

Nowadays people's life in contemporary societies has become more challenging, complicated, motorized and determined. In the modern scenario work practices not only brings the remuneration and compensation in several types of occupation but it primarily lead to enormous level of health hazards and occupational stress among all the human beings. In medical laboratory technicians life we can identify some of the complications such as ever increasing need and targets, stiff competition, repetitive and monotonous work, pressures of meeting deadlines and uncertainty have made the life of majority of people highly stressful. The main equipment often used by the laboratory technicians is like analyzer, microscope, thyroid machine, centrifuge, syringe, acid and also chemicals to investigate the body fluids and tissues etc. So the mind set of these technicians leads to occupational stress and health hazards in their work place. Sometimes they may cause health injuries due to use of sharp needle stick, infection due to blood collection from symptomatic persons, prolonged standing while testing, continuous work in computer as well as microscope and also heavy pain in their body etc. An estimated 60 percent to 70 percent of all decisions regarding a patient's diagnosis and treatment, hospital admission and discharge are based on laboratory test results. The laboratory technician problems may also affect the reports of the patients. The inaccuracy of results will be converted into threaten the safety of the patients. Moreover it is important to bring into the attention of the management and diagnostic sector towards the issues of the employees in order to provide a suitable suggestion to prevent them from various level of stress. The study mainly concentrated on occupational stress and health hazards among medical laboratory technicians who support the hospital and healthcare professionals with special reference to Chennai city.

Keywords: Diagnostic centre, Medical lab technicians, occupational Stress, health hazard environment.

INTRODUCTION

Healthcare plays a tremendous role in delivering their remedial perception and measures to improve body functioning in an efficient and effective manner. Hospitals, clinics, public health facilities, and commercial laboratories are much helpful to a large extent of protecting the human beings from any hazardous cases. They also give proper guidance based on their body conditions to direct and serve the life of the people. Even though modern technological changes has brought several scientific instrument materials and methods, the patients who visits health care and medical laboratories are extremely high when compare to past decades. The study mainly concentrated on medical laboratory technicians who support the hospital and healthcare professionals to identify the report result of the patients. In laboratory, a highly skilled team of pathologists and medical technologists, technicians and specialists work together to solve the mysteries, put the puzzles together, and answer the critical questions of medicine.

In real fact, the practice of modern medicine would be impossible without the tests performed in the laboratory. Each laboratory has its unique environment and site-specific hazards which must be addressed by each supervisor/principal investigator when establishing proper work practices. The laboratory professional's duty is not only to conduct their work in a responsible manner but also to take all necessary precautions to protect themselves and others in the area from exposures to hazardous materials. Medical laboratory testing plays a crucial role in the detection, diagnosis and treatment of disease in patients. Laboratory tests help determine the presence, extent, or absence of disease and monitor the effectiveness of treatment. An estimated 60 percent to 70 percent of all decisions regarding a patient's diagnosis and treatment, hospital admission and discharge are based on laboratory test results. Therefore stress among healthcare professionals can be identified very clearly in the form of Sickness, absenteeism, serious neglect or clinical errors are commonly associated with work. Work related stress is pervasive in the healthcare industry due to inadequate staffing levels, unachievable targets or goals, long work hours, exposure to infectious diseases and hazardous substances, threat of malpractice, litigation and other factors related to specific areas of work. If the challenges of everyday life become too big and insurmountable, they can lead to stressful situations, which may be manifested in people's life and work.

The inflexible atmosphere of the employee workplace creates unsupportive environment in their workplace. They mainly involves in supporting medical, surgical and other paramedical groups to investigate several body fluids for testing and reporting in case of blood, serum, urine, sputum and muscle tissues to find the bacterial form of disease for finding the results. Technicians used

to handle variety of equipment for testing in both forms of electrical and electronic testing. The main equipments are analyzer, microscope, thyroid machine, centrifuge, syringe, acids and various chemicals to investigate the body fluids and tissues of the human beings. In such cases they may face stress while working with the equipments, sometimes it may causes injuries due to needle stick, infection in case of blood collection from the systematic patients, prolonged standing while testing, continuous work in computer and use of microscope for reporting. They also feel some common factors which affect their body functioning such as body pain, joint pain, tiredness, lack of involvement, lack of energy, digestive problem, vomiting sensation, fatigue, irritation in eye sight, anxiety due to depression, loss of hair fall, skin allergy, hepatitis etc.

Moreover the employees working in medical laboratory used to face vital role of stress as well as health hazards in several occasion in their daily life based on physical and mental work. Therefore the research study mainly focused on laboratory technicians to determine the occupational stress and to evaluate the health hazards in their workplace.

Statement of Problem

Medical laboratory technicians are self-sufficient, precise and thorough. They are trouble-shooters who not only report accurate results, but also know when results are incorrect and need to be rechecked. Though they spend less time with patients than doctors and nurses, medical laboratory professionals are just as dedicated to patients' health. As vital members of the health care team, they play a critical role in collecting the information needed to give the best care to an ill or injured patient. Laboratory procedures require an array of complex precision instruments and a variety of automated and electronic equipment. They must be accurate, reliable, have an interest in science and be able to recognize their responsibility for human lives.

Laboratory technicians set up and sanitize laboratories, prepare specimens, match blood compatibility for transfusions, analyze fluid chemical content, collect blood samples and examine immune system elements. Technicians are expected to handle sophisticated laboratory equipment, including cell counters, microscopes and automated analyzers. These devices are used to search for parasites, bacteria and other microorganisms. Medical laboratory technicians carry out less complicated procedures and tests than do medical laboratory technologists.

The present study will provide a valuable findings and conclusion to provide advanced attention towards the health and occupational hazards for the technicians. It may create a convenient message and also help the diagnostic Centre's, which offer uniform services to realize the effects of occupational stress and hazards over laboratory technicians. The findings of this study may allow the management to take remedial and necessary steps in the way of modifying the work environment by providing training and development programme, pleasant atmosphere and environment in workplace, usage of electrical and electronic instruments, adopting new innovative ideas of instruction and awareness of testing and reporting.

Theoretical Review

9th WHO (2006) The world health organization reported that stress creates an tremendous and phenomenon role with substance to the human activity or any unavoidable condition will affects the loss of their lives and create injuries in their health. ILO (2008) the international labor organization estimated that more than 6000 employees used to loss their livelihood everyday from work related diseases and accidents.

4th Frank H, Paul G (2010) in their study delivered that Data from the recent study on laboratory mental stress can serve as an illustration of the limitations of a laboratory emotion research approach. Heart rate (HR) is a good index of intensity of mental stress and anxiety. Analysis strategies and software for coming to terms with the complex data stream have also evolved in the past years and will continue to do so, as more researchers and engineers put their intelligence to work. Additionally, the multidisciplinary Society for Ambulatory Assessment has just been founded, an organization devoted to developing a platform of exchange for interested researchers, as well as a vehicle for building up a critical mass of knowledge and providing guidelines for standardization and conclude as Medical applications, in the future, will increasingly utilize the potential of ambulatory technologies for diagnosis and patient monitoring. The ability to monitor stress responses and emotional activation may also become of greater interest to the medical community in their own search for understand and treat them to managing diseases.

7th Saha D., Sinha L. (2010) in their study on job stress among staff of a super specialty hospital has found that the prime sources of stress were found to be underpayment (76%), excessive workload (70.3%), inadequate staff (48.6), and being involved in the emotional distress of patients (46.7%). It is best to Look for the root cause(s) of the stress and addresses them as quickly as possible and it concluded with proper workload management policy, adequate delegation of authority along with responsibility, recognition of efforts along with ongoing training, stress and time management will go a long way in managing stress in these personnel.

2nd Lua PL & Imilia I (2011) in their study on Work-related stress among healthcare providers of various sectors in peninsular Malaysia have explained that healthcare workers are still equally vulnerable to the negative impact of job pressure which could in turn compromise patient care and result in diminished quality of life for both parties. The study concluded that there is no significant

differences in the work-related stress trend among government officers seemed to be on the relatively higher side compared to private sectors.

3rd Morbidity and Mortality weekly report (2012) report has given some guidelines for safe work practices in human and Animal Medical Diagnostic Laboratories. The research estimated mainly safe methods for managing infectious materials in the laboratory to reduce or eliminate exposure of laboratory workers, other persons, and the environment. The study concluded that microbiology section must have a decontamination facility or have a medical waste contract in place, and it must provide with necessary provision and the Laboratories that contain multiple classes of BSCs, the hazards that are permitted to be manipulated within the specific unit need to be clearly indicated (by label) to staff (*1*). If waste will be decontaminated on-site before disposal, the laboratory must have an autoclave large enough to handle its needs.

1st Ali Ghaddar, Kayan H (2013) in their study suggested that laboratory technicians have high exposures to work-related psychosocial hazards and the findings highlighted the role of certain elements of the psychosocial environment in predicting ill health in a high-risk work environment. The results were consistent with findings of previous studies in another work environment that highlighted a positive significant association between shift work and increased urinary levels of adrenaline, nor adrenaline and dopamine.

5th Rajan D. (2014) in his descriptive research study based on 120 respondents from public health care centers and diagnostic centre employees faces stress in their daily life.

Medical laboratory technicians in hospitals and health care centre face extreme level of stress when compared to diagnostic centre laboratory technicians in Thirunelveli district and also displayed their stress level and health hazards in general health factors. He has reported that future research to be concentrated on paramedical lab technicians such as x-ray, radiology, cardiology and ultra sound technicians in both healthcare and diagnostic centers. Finally the study proved most of the medical laboratory technicians faces heavy pain in their neck, shoulder, joints and eye problems. Almost ear pain due to air conditioned atmosphere, and also feel sleeping disorder and minute injuries in their daily occasions while handling glass equipments.

Aim of the Study

- To examine the impact of stress in their workplace among medical laboratory technicians in Chennai city.
- To evaluate the factors influencing occupational and health hazards in their daily working condition.
- To give suggestions to improve their quality of work and prevent them from occupational stress and health hazards in daily life.

MATERIALS AND METHODS

This study has undergone the descriptive type research with the sample size of 60 laboratory technicians by identifying the occupational stress and health hazards of medical laboratory technicians in Chennai city, Tamilnadu. These researches include 17 factors analysis to test the occupational stress and health hazards of the employees in laboratory. The primary data were collected from the questionnaire method with three parts as mentioned above. The questionnaire is classified in three parts namely personal profile, occupational stress and health hazards in their daily life. Collections of the data were arranged in factor forms and followed the methods in two ways namely primary and secondary information. Secondary data has been collected from various book, journals and websites. Although this study has applied mean and standard deviation, ANOVA test, F-Test for resulting the data.

Instrumentation

The instrumentation of the study has undergone the research study with the primary data into two parts namely personal profile of the respondent and second part has been accomplished into 17 factors which causes occupational stress and health hazards in their workplace under 5 points Likert scale which consist of 1. Highly agree, 2. Agree, 3. Neutral, 4. Disagree, 5. Highly disagree.

Statistical Tools for Analysis

The collected data have been converted into analysis under SPSS was used to analyse the data. Factor analysis, descriptive statistics were used for the testing and to evaluate the occupational stress and health hazards among medical laboratory technicians.

The above Table 1 clearly shows that the primary data collected from the laboratory technicians in diagnostic centre who were working in Chennai city mainly indicates that the ratio between male and female is 47% (28 male) and 53% female (32 female). Secondly the data has spread into four major age groups namely below 20 years, 20 to 25 years, 25 to 30 years and above 30 years. So the maximum age of the respondent comes under the age group of 25 to 30 years of 33%. Next to the personal status of the respondent nearly 65% (39 respondents) of technicians were married and 35% (21 respondents) of technicians were unmarried. Moving to their educational qualification most of the respondents were completed DMLT (Diploma in medical laboratory technology) out of which 60% technicians has completed one year course and 40% were completed 2 years course.

Personal profile analysis

Table 1: Personal Profile of Medical Laboratory Technicians

S. No	Personal Data	Measurement	Frequency	Percentage
1	Gender	Male Female	28 32	47% 53%
2	Age Group	Below 20 Years 20 To 25 Years 25 To 30 Years Above 30 Years	12 18 20 10	20% 30% 33% 17%
3	Personal Status	Married Unmarried	39 21	65% 35%
4	Educational qualification	DMLT 1 year DMLT 2 year	35 14	60% 40%
5	Work Experience	below 2 years 2 to 4 years 4 to 6 years above 6 years	09 15 19 17	15% 25% 32% 28%
6	Salary	below 5000 5000 to 8000 8000 to 10000 above 10000	09 13 29 19	15% 22% 48% 32%
7	Timing	below 8 hours 8 to 10 hours 10 to 12 hours above 12 hours	05 21 23 11	08% 35% 38% 18%
8	Holidays	government leave weekend leave personal leave clinical leave	18 20 14 08	30% 34% 23% 13%

Source: primary data

Correlations

		Gender	Monthly income
Gender	Pearson Correlation	1	.576(**)
	Sig. (2-tailed)		.000
	N	60	60
Monthly income	Pearson Correlation	.576(**)	1
	Sig. (2-tailed)	.000	
	N	60	60

** Correlation is significant at the 0.01 level (2-tailed).

Descriptive Statistics

Table 2: Occupational Stress among MLT

Occupational stress	N	Minimum	Maximum	Mean	Std. Deviation
irritation due to chemicals	60	1	4	2.03	.938
injuries by needle & sharp items	60	1	5	2.48	1.097
stress due to error spotting and reporting	60	1	5	2.45	1.048
Time constraints of work	60	1	4	2.05	.999
Overload of work	60	1	5	2.42	1.124
Lack of awareness about new equipments	60	1	5	2.60	1.028
Handling violence patient	60	1	5	2.45	1.171
Tiredness of work	60	1	3	1.70	.743
Handling broken glass objects	60	1	3	1.93	.756
working in contaminated places	60	1	3	1.87	.747
Valid N (list wise)	60				

Table 3: Health Hazards among MLT

Health Hazards	N	Minimum	Maximum	Mean	Std. Deviation
pain in joints & shoulder	60	1	4	1.97	1.025
irritation in eye sight	60	1	5	2.53	1.049
Tiredness of work	60	1	3	1.70	.743
Fatigue and exhaustion mind	60	1	4	1.93	.756
Loss of weight & energy	60	1	5	2.50	1.172
Digestive problem and ulcer	60	1	4	2.70	1.094
Loss of appetite	60	1	4	2.18	.965
Anxiety due to depression	60	1	4	2.33	.914

Factor Analysis

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.934
Bartlett's Test of Sphericity	Approx. Chi-Square	2298.730
	Df	136
	Sig.	.000

Table 5: Communalities

Factors	Initial	Extraction
irritation due to chemicals	1.000	.912
injuries by needle & sharp items	1.000	.944
stress due to error spotting and reporting	1.000	.934
Time constrains of work	1.000	.910
Overload of work	1.000	.938
Lack of awareness about new equipments	1.000	.913
Handling violence patient	1.000	.948
pain in joints & shoulder	1.000	.880
irritation in eye sight	1.000	.916
Tiredness of work	1.000	.870
Fatigue and exhaustion mind	1.000	.862
Loss of weight & energy	1.000	.929
Digestive problem and ulcer	1.000	.875
Loss of appetite	1.000	.914
Handling broken glass objects	1.000	.869
Anxiety due to depression	1.000	.898
working in contaminated places	1.000	.874

Extraction Method: Principal Component Analysis.

Table 6: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.385	90.500	90.500	15.385	90.500	90.500
2	.440	2.585	93.086			
3	.247	1.454	94.540			
4	.215	1.266	95.806			
5	.188	1.106	96.912			
6	.113	.663	97.575			
7	.096	.567	98.141			
8	.068	.398	98.539			
9	.053	.311	98.850			
10	.044	.258	99.108			
11	.035	.203	99.312			
12	.033	.192	99.503			
13	.027	.156	99.660			
14	.024	.144	99.804			
15	.016	.095	99.899			
16	.010	.061	99.960			
17	.007	.040	100.000			

Extraction Method: Principal Component Analysis.

Table 7: ANOVA Using 'F' Test

Occupational stress and health hazards	Sum of Squares	Df	Mean Square	F	Sig.	
irritation due to chemicals	Between Groups	16.017	1	16.017	25.865	.000
	Within Groups	35.917	58	.619		
	Total	51.933	59			
injuries by needle & sharp items	Between Groups	33.004	1	33.004	50.402	.000
	Within Groups	37.979	58	.655		
	Total	70.983	59			
stress due to error spotting and reporting	Between Groups	31.538	1	31.538	54.910	.000
	Within Groups	33.313	58	.574		
	Total	64.850	59			
Time constrains of work	Between Groups	16.538	1	16.538	22.669	.000
	Within Groups	42.313	58	.730		
	Total	58.850	59			
Overload of work	Between Groups	30.104	1	30.104	39.255	.000
	Within Groups	44.479	58	.767		
	Total	74.583	59			
Lack of awareness about new equipments	Between Groups	30.817	1	30.817	56.592	.000
	Within Groups	31.583	58	.545		
	Total	62.400	59			
Handling violence patient	Between Groups	31.538	1	31.538	37.094	.000
	Within Groups	49.313	58	.850		
	Total	80.850	59			
pain in joints & shoulder	Between Groups	14.017	1	14.017	16.966	.000
	Within Groups	47.917	58	.826		
	Total	61.933	59			
irritation in eye sight	Between Groups	31.538	1	31.538	54.773	.000
	Within Groups	33.396	58	.576		
	Total	64.933	59			
Tiredness of work	Between Groups	7.350	1	7.350	16.883	.000
	Within Groups	25.250	58	.435		
	Total	32.600	59			
Fatigue and exhaustion mind	Between Groups	13.067	1	13.067	36.671	.000
	Within Groups	20.667	58	.356		
	Total	33.733	59			
Loss of weight & energy	Between Groups	33.750	1	33.750	41.429	.000
	Within Groups	47.250	58	.815		
	Total	81.000	59			
Digestive problem and ulcer	Between Groups	39.204	1	39.204	72.425	.000
	Within Groups	31.396	58	.541		
	Total	70.600	59			
Loss of appetite	Between Groups	21.004	1	21.004	35.853	.000
	Within Groups	33.979	58	.586		
	Total	54.983	59			
Handling broken glass objects	Between Groups	13.067	1	13.067	36.671	.000
	Within Groups	20.667	58	.356		
	Total	33.733	59			
Anxiety due to depression	Between Groups	26.667	1	26.667	68.235	.000
	Within Groups	22.667	58	.391		
	Total	49.333	59			
working in contaminated places	Between Groups	11.267	1	11.267	30.160	.000
	Within Groups	21.667	58	.374		
	Total	32.933	59			

On the other part of their experience level, maximum amount of technicians were 4 to 6 years experience in the field of testing in laboratory, only 15% of the respondent were only below 2 years of work experience. Considering their occupational income of the technicians most of them were receiving only minimum amount of salary below 10,000 and their salary starts from 5,000 to 10,000.

Another important problem which forces them to get stress in their daily working duration is that only 8% of the technicians have work for 8 hours but the rest of them were working for 10 to 12 hours per day. Finally holiday is one of the major events of medical laboratory technicians to commit their personal work in family. Only 30 % of the technicians are only getting government holidays and only 13% of the technicians have clinical leave in a month or a week.

Moreover final table shows that the medical laboratory technicians were not enjoyed in the daily life due to various commitments in their workplace.

RESULTS AND DISCUSSION

The table 2 clearly stated the occupational stress among MLT in their work place and the result shows the mean value is greater than 1 and less than 3. Based on the standard deviation (SD) all the factorized variables are less than 2 in which factors were randomly selected and discussed. On the basis of factor which indicates stress while handling the broken glass objects shows the mean value as 1.93 and the standard deviation as .743. On the other part irritation due to chemicals is one of the factors which accumulates stress as the mean value of 2.03 and (SD) shows the value of .938 when compared to stress due error spotting and reporting mean value as greater than 2. Table 3 shows the mean value and SD of health hazards among MLT which listed out the factorized variables such as pain in shoulder and joints, irritation in eye sight, fatigue and loss of appetite etc. Based on the analysis all the values are less than 3 and it is randomly verified. When compared to pain in joints and shoulder out of loss of weight and energy indicates the mean value of 2.50 and standard deviation as 1.72.

The table 4 depicts KMO and Bartlet's Test which helps to measure the sampling adequacy and also to study the validity along with suitability of the responses collected for the analysis. The factorized variables result shows the sampling adequacy (MSA) is .934 which is more than the accepted index 0.6. The approximated chi-square value of 2298.730 with the degree of frequency as 136 and significant level of the factorized value is less than p value.

Table 5 mainly shows the factorized values of initial ranging as 1.000 and extraction ranging from .862 to .948 values indicates the goodness of fit value. The values of the common communality for each question that the majority of them have a value higher than 0.50 which represents satisfactory quality of the measurements. Table 6 shows the total variance explained with their initial Eigen values and extraction sums of squared loading. Finally two dominant independent variables explaining the total variance of 15.385 and cumulative percentage of 90.500. From the above Table 7, it is inferred that in one-way ANOVA, the total variation is partitioned into two components, between groups represents variation of the group means around the overall mean and within groups represents variation of the individual scores around their respective group means; significance indicates the significance level of the F-test. Based on the occupational stress and health hazards among MLT shows the degree of freedom as 1 and 59. On the other hand f test shows the values from 16.966 to 72.425.

Findings and Suggestions

Based on the analysis, the research suggests that management in diagnostic centers or health care centers should provide proper training and development programme for the technicians.

Instruction about new scientific equipments and instrument for both scientific and manual testing must be given to the technicians and they must be aware of latest updates.

In order to reduce stress the management should provide tactics about the self safety precautions to be taken while using dangerous equipments and they should also encourage and recognize the employees by motivating in the forms of holidays, gifts, vouchers, appreciation, incentives, free check up etc.

This study also suggest that not only the management but also the laboratory technicians should take care of their wellbeing by taking 10 minutes rest in between work, have healthy balance food at right time and also practice breathing exercise, stretching exercise.

CONCLUSION

Scientific laboratory technicians are involved in a variety of laboratory-based investigations within biological, chemical, physical and life science areas. Technicians provide all the required technical support to enable the laboratory to function effectively, while adhering to correct procedures and health and safety guidelines. Stress may be referred to as an hostile state of mind of emotional and physiological excitement that people experience in situations that they perceived as hazardous or threatening to their well being.

The final result of this study indicates that most of the laboratory technicians were affected from occupational stress and health hazards such as stress due to error reporting, injuries by needle and sharp items, mostly working in contaminated surface for a long period of standing while testing. Mainly they are affected by body pain shoulder pain and loss of appetite as well as ear pain due to air-conditioned atmosphere in their workplace. These results mainly conclude that the health care management should pay their attention towards training

and development programme. Also to implement awareness to safeguard the lives of both the laboratory technicians and patients while reporting the accuracy of results in work area.

REFERENCES

1. Ghaddar A., Kayan H., "Work-related Stress and Urinary Catecholamine's among Laboratory Technician" *journal of occupational health,* 55, 2013, 398–404.
2. Lua PL, Imilia I, "work-related stress among healthcare providers of various sectors in peninsular Malaysia", *MJP Online Early,* 2011, pp MJP-01-09-11.
3. Morbidity and Mortality weekly report, "Guidelines for safe work practices in human and Animal Medical Diagnostic Laboratories" 61, 2012, 1-103.
4. Paul G, "Emotions beyond the laboratory: Theoretical fundaments, study design, and analytic strategies for advanced ambulatory assessment", *Biological Psychology,* 84, 2010, 552-569.
5. Rajan D, "Occupational hazards among medical laboratory technicians", SCMS Journal of Indian Management, 11(1), 2014, 134–148.
6. Rucker LM, Sunell S., "Ergonomic risk factors associated with clinical dentistry", *J Calif Dent Assoc*, 30, 2002, 139-48.
7. Saha D., Sinha L., "Job stress among staff of a super speciality Hospital", *Journal of the Academy of Hospital Administration*, 22(1) & (2), 2010, 23-28.
8. Saldaria M., Susana GH., Javier GR., "The Impact of occupational hazard Information on employee health and safety: An analysis by professional sectors in Spain". *International Electronic Journal of Health Education*, 15, 2012, 83-98.
9. World Health Organization, WHO definition of Health. (WHO Publication No.2, 2009, pp. 100. New York, WHO Press.

Source of Support: Nil, **Conflict of Interest:** None.

Author details:

Dr.R. Angayarkanni

Assistant Professor, Dept of Commerce,

Faculty of Science and Humanities,

SRM University, Kattankulathur, Tamilnadu, India.

***Corresponding author's E-mail: angayarkanni.r@ktr.srmuniv.ac.in

Ms. K.Thamarai selvi

Research Scholar, Dept of Commerce,

Faculty of Science and Humanities,

SRM University, Kattankulathur, Tamilnadu, India.

Selvithamarai118@gmail.com