QUALITY OF WORK LIFE AND OCCUPATIONAL STRESS AMONG THE LIBRARY PROFESSIONALS IN KERALA

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CERTIFICATE

This is to certify that the thesis '**QUALITY OF WORK LIFE AND OCCUPATIONAL STRESS AMONG THE LIBRARY PROFESSIONALS IN KERALA'** is a record of bonafide study and research carried out by **Smt. Reena K. K**. under my supervision and guidance. No part of this thesis has been submitted by her for the award of a Degree, Diploma, Title or Recognition earlier.

Dr. K. P. Somanathan Nair,

Research Guide

DECLARATION

I REENA K K do here by declare that this thesis entitled, "**Quality of Work Life and Occupational Stress Among the Library Professionals in Kerala**" is a bonafide record of research work done by me and that no part of the thesis has been presented earlier for any Degree, Diploma, or similar Title of any other university.

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The end of the twentieth century witnessed a series of violent changes battering our society. In fact, a new civilization has been found to be emerging in our lives all over the world. The well-known social thinker Toffler (1980) describes this powerful tide of revolutions as the 'Third Wave' of change surging across the world. He made a startling sense of it when he wrote: "This new civilization brings with it new family styles; changed ways of working, loving and living; a new economy; new political conflicts; and beyond all this, an altered consciousness as well… The dawn of this new civilization is the single most explosive fact of our lifetimes". The third wave thus begins a truly new era. All the bio, socio, and techno spheres of the new century will have to be enmeshed with the weft and weave of these transformations.

The key to such an extra ordinary change is, of course, the computer coupled with new advancements in electronics and communication technology. These technologies multiply the means and powers of spreading the new developments in different fields at different nook and corners of the world. Readymade information easily tapped from Internet and other information technology sources trembles all spheres of human life and all systems of human activity like marketing, engineering, management and so on. Information has become the vital resource, valuable input and a super power for societal development. The future society will be functioning around the axis of information values rather than material values. Knowledge capital will predominate over material capital in structuring the national economy.

Consequently, the information and knowledge industries assume greater significance and can play a prominent role in the economic transformation of a nation. Today, the primary and secondary information sectors have come to account for a significant proportion of the GDP and GNP of many developed and developing countries.

Implications of this emerging scenario of 'Information Society' are likely to be profound in many ways and its ramifications manifold. They also raise a host of questions including those related to the labour and workforce strategies in every sector. In the volatile environment, work in the factories and offices grow less repetitive and becomes less fragmented. Each person is entitled to do a somewhat longer, rather than smaller task. Workers are forced to cope with more frequent changes in their tasks as well as a blending succession of personnel transfers, product changes, and reorganisations. Changes in the organisation of work dictate new roles and relationships, which will have a direct impact on jobs and staff. Consequently, responsiveness to the needs and problems of an organisation's employees as well as its clientele also implies change and requires scrutiny.

The speed of the busy life; cultural, economic and political changes in the society; ever changing roles and role ambiguity of the individuals etc. are causing to precipitate a strange disease to human beings – the stress. Stress has become common and very frequent when and wherever there is human involvement. It has also become one of the most serious occupational health

hazards of the time. Stress at work and the stressful transactions are characterised in all organisational settings. The factors that lead to stress at the workplace are categorised mainly into four by Summers, *et al*. (1994) (viz.), Personal characteristics, Organisational characteristics – structural, Organisational characteristics - procedural and Role characteristics.

A person who enjoys the work and derives satisfaction alone can perform in the best perfect manner. The fulfillment of personal needs and goals leads to satisfaction, well-being and happiness. To be in a state of satisfaction or well-being or happiness is the prime motto of individual life. But how far and how long the individual can be satisfied in his profession, which is full of work-related stress and strain? Finding an answer to this question is not an easy task.

The Quality of Work depends on the Quality of Work Life. It has been clear that one can accomplish his mission and provide the level of service the public demands only if we recruit and retain the best and the brightest and provide them with a work environment that supports them in getting their jobs done. The phrase "Quality of Work Life" (QWL) has come in use recently to evoke a broad range of working conditions and the related aspirations and expectations of the employees. The QWL can be described as the subjectively perceived satisfaction in one's different aspects of work life as reported by the individual. It is an index of what people find interesting and satisfying at their work. For this reason, one needs to be sensitive to the factors related to

performance, recognition, work content, responsibility, promotion and pay, organisational policies, working conditions etc. Quality of Work Life is a concern not only to improve life at work, but also life outside work. Hence it encompasses a vide variety of programmes and techniques that have been developed to endeavor to reconcile the twin goals of an individual and the organisation, i.e. Quality of Life and Organisational Growth. The Quality of Work Life has, therefore become key area of consideration now a days.

The adverse effects of stress situation will impinge upon the running of an organisation. Unnecessary tensions may be created, employer-employee relationships as well as staff-clientele relations may deteriorate, inaccuracies may develop in work, and so on. More serious effects of Job Stress could include employee absenteeism and burnouts, which in turn could increase the load of fellow workers. The stress management has therefore got enough significance in improving the Quality of Work Life. As such it is felt that much exploration has to be ventured in the area of Quality of Work Life in connection with Job Stress. However, this sort of problems cannot be orally touched; it requires in-depth study, investigation and research for reaching palpable solutions.

NEED AND SIGNIFICANCE OF THE STUDY

In today's fast moving world, organisations live and last with innovations and competitions. So they cannot allow their employees to fall

behind in their task accomplishment, quality of service and sense of commitment. This observation seems particularly appropriate for libraries and information centres where many people are involved in the collection, processing, retrieval and dissemination of information to the fullest satisfaction of their users. These institutions exist without profit motive to provide quality information services and products. However, it is seen that a profit sector is fastly emerging in the arena of information services primarily due to the advances in Information Technology and its offshoots. Subscription agencies are now taking charge of abstracting and indexing business, and publishers are moving into bookshop or document supply business. A user can directly deal with the author or a publisher with the help of Internet. Consequently, as Goswami and Gaur (1998) have rightly pointed out, the direct role of libraries and information centres in the delivery of services (e.g.: document supply, abstracting, indexing etc.) and in the traditional form of regulations (e.g.: copyright, censorship etc.) may become less important. The emergence of "information brokers" (who act as collector, sorter, synthesizer or reviewer of information) and "information designers" (who can present information in a form which can be absorbed at a glance) will raise stiff challenges to the library and information professionals. The library and information science profession will be under stress as more varied structures and competing service methods are likely to be introduced by the private sector along with some innovations in the funding systems.

Stress is the changes which our bodies experienced as we adjust to our continually changing environment. It has been an integral part of our daily life since early times. We cannot avoid stress in our life; rather the best policy is to manage it properly to increase ones efficiency. Occupational stress is also called as burnout. Burnout is defined as a syndrome consisting of emotional exhaustion, depersonalization and reduced personnel accomplishment. Popular sources and researchers have variously defined stress. On the one hand it is a feeling of well-being and on the other hand it is a perceived sense of imbalance. i.e. managed with effective coping strategy. Further, it is a stage on which the use of inappropriate copying strategies results in a loss of physical and mental resources; things are out of control. Another is the burnout in which one feels "done in" by the stressful situation. It is important to consider here the great role a person's perceptions of situations to play. Perceiving ones skills and resources and adequate to deal with situation is very different from perceiving oneself confronted with demands that appear seriously threatening (Sadoviche, 2005).

Stress has both physical and emotional effects on us and create positive and negative feelings. As a positive influence stress can help us to compel action result in a new awareness in an exciting new perspective. As a negative influence, it can result in feelings of distressed, rejection, anger, and depression, which in turn lead to frustration to work. And also several health problems, such as head ache, high blood pressure, heart disease etc. The

library environment has changed drastically over the past few decades. With the development and application of information technologies, the library environment has changed from the traditional library to computerised library, then automated library and more recently digital library. With such changes, the structure and nature of library and information science professionals has also changed in a dynamic way. The Library information Science professionals experience stress as they readjust their lives with the changing library environment, job rotation, job promotion etc, while adjusting to such changing library environment, stress will either help or interrupt us depending on how we react to it (Routray and Satpathy, 2007).

The new technologies compelled the professionals to acquire new knowledge along with traditional library functions and services. But the scope for undergoing in-service training programmes, higher studies, refresher courses etc. have very limited scope in the profession, which increased to the stress among professionals. The appointment of computer professionals into the libraries, have created fear among the library professionals about their job security.

Working beyond normal hours and night shift duties adversely affect the physical conditions of the professionals resulting into physical stress and illness. Stress is not necessarily negative for performance of individuals. Some level of stress is desirable to generate enthusiasm, creativity, and productivity. Stress can be beneficial or detrimental. A beneficial stress motivates the

employees. This type of stress is called Eu stress. The detrimental stress which makes one irritable loses the spirit of work, called Distress (Pors and Johannsen, 2003).

Stress can be felt from sources such as physical, mental and situational among other various sources. Physical stress can be brought on by overwork, lack of rest, poor diet, polluted atmosphere etc. Mental stress can be traced to a person's state of mind, which involves expectation, fears etc. Situational stress is derived from the interaction with the outer world, like interaction with modern technologies, role as a library manager etc. During the past few years, libraries, like many other institutions, have been experiencing changes at an accelerating rate. Accordingly the Library Professionals have been exposed to a considerable amount of stress in their day- to-day work.

Change in technology, change in library environment, change of supervisors, change in library physical facilities, change in user's demand, reduction of staff strength, lack of funds and the like create unnecessary tensions and stresses to the library professionals. Identifying stress and aware of its effect on once life is not sufficient enough for reducing its harmful effects. Just as there are many sources of stress, there are many possibilities for its management (Elliot, 1990).

One reality of the twenty first century is that the library professionals are faced with constant challenges in their working environments. This is not only

because of the role they have to play inside their libraries, but also due to the increasing demands and expectations of the users with the libraries.

Many members of the library profession fear that the computers and other developments in Information Technology have shaken the very existence of this profession. Some others feel that inspite of the multi-dimensional role of such professionals as Librarians or Information Specialists, the very identity of the profession is at stake. The downfall of the profession has been predicted in many journal articles also. Even then, most of the professionals believe that the fast changing scene will not diminish their responsibility of ensuring the specific interests of their users. But they know that they must be required to deviate from their old practices and accept several new methods of customised services.

Therefore, as explained above, Library and Information Professionals are bound to assume new roles and functions in the wake of the information society. Activities of the information profession now attain great speed and keep pace with the fast developing cyber culture. The Information Professionals in their various capacities act in tune with their positions and according to the requirements of the aspirants. The question is whether they are able to perform at the expected level of contribution to the community they are supposed to serve. The bare truth is that some are not making any strain in serving the user community. In other cases, though strenuous efforts are made to put their maximum to the needy they are unable to contribute to the optimum

level because of so many factors which stand as impediments on their way of performance of their job. Situations like this lead to the necessity of proper analysis of the problems prevalent to organisational and occupational psychology of the individuals of this profession. Since this aspect has not been subjected to serious study by the experts, there is an immense potential and significance to conduct research in this area.

In India, high unemployment rate makes any work attractive. For the sake of getting a reasonably good job, many educated youths make up their mind to enroll as Library Science graduates and enter into the profession of Librarianship. Individuals who join the profession with great enthusiasm and ideas, later experience many hurdles and constraints for their successful functioning and professional development.

Unlike other professionals, the Library Professionals lack the deserving identity in their own organisation as well as in the society as a prominent figure who collect and disseminate information to the users which add to the woes of the profession. The advancement in computer and Internet technologies also made the problem a little more complex. The Library and Information Science is relatively a new discipline in India and there is a lack of proper understanding of it by the public. The work involved in organising a library for service is also not very much appreciated. Unlike other profession, Librarianship does not have the exclusivity or demand in the market to work independently without the support of the state. Like social workers, librarians

are considered as producers of 'merit goods' in the society. It is compared that the profession of a chartered accountant has a price tag in the market whereas the "chartered librarian" neither has any credibility nor any similar 'value label'.

Librarians often find it difficult to locate his place in the inter or intra positional hierarchies. They are always kept out of mainstream organisational functions like planning, decision-making etc. The higher echelon in any organisational structure often pays less attention in the performance of these professionals. The success of the profession is also associated with the key factors such as visibility and celebrity status. The librarians also lack bargaining power in any institution. Librarian in isolation cannot act as a pressure group to the management. In general, the society perceives Librarian as merely a custodian of books; the knowledge and skill of the professionals are recognized only by a tiny section of the society. There is also a 'dealing clerk' culture in India. Often the clerks play vital role in framing proposals for creating a library and even in determining the grades of the librarian where professionals' voice is not heard. The status of the profession also relates to the position titles "Librarian". There is a perception that librarians who opt to enter the corporate world in positions requiring the same competencies, but with different job titles such as Information Specialist, Information Officer, Knowledge Manager, Information Scientist etc., enjoy higher status and higher salaries than those in the traditional roles.

Most of the libraries in Kerala have qualified librarians, but in some of the libraries they have no control over the supporting staff. The supporting staff is controlled by the Head of the institution, or by other office staff, who are unfamiliar with the functioning of the library. This situation often causes malfunctioning of the library. In many libraries the library and information professionals are equated with clerical staff. They are also not given independent charge of the libraries, but have to work under other designated officers-in-charge of libraries, who have no idea of what Librarianship is and what its responsibilities involved. This is unconducive for the librarians in regard to their professional development and performance. The low pay scales and status of librarians kept the profile of the professionals low. Again it can be nothing frustrating and demoralising for a professional to retire in the same position where he/she had entered into the professional service. Another handicap of the system is that the Librarians have no involvement in allocating fund for their disposal while budgeting. It is of course the advancement of technologies i.e. the use of computers, Internet and other communication systems that poses another threat to the profession if not adaptive to the developments. The change in technology raises the fundamental issues of the change in nature and perception of the Library workforce, which in turn leads to occupational stress to employees. It is also observed that the librarianship and information work continuously suffer from tension related problems between its professionals and paraprofessionals. Another concern for the seniors in the profession is the resolution in role conflict. Most of the jobs in

the library set up are performed through team efforts. Continuous interaction with colleagues is necessary for the development of a professional, which is lacking in most of the libraries. The participative decision-making and communication methods are important indices of inter personal relations. Holding the librarians responsible for the missing of books, which in turn discourages them from rendering uninhibited library service, is another draw back the profession met with.

This sort of problems confronted by the profession in this country are very much highlighted and well documented in the library and information science literature. Select reports and write-up such as Isaac (2001), Raza and Gupta (2000), Rajyalakshmi (1999), Vara Lakshmi (1999), Saha (1998), Sharma (1998), Goswami and Gaur (1998), Joy Committee Report (1994), are some of them to mention the gravity of the issues. It may be seen that the above-mentioned issues fall into the following two major categories.

1) Status related issues – which includes the identity, social status and prestige of the professionals.

2) Work related issues – which include physical working conditions, recognition with the work conducted, job security, promotion, wages, skill and knowledge, feeling of inadequacy, change of any type, role conflict, interpersonal relations, work related stress etc.

The first type of problems are available not only here, but they are all the more global in nature and it is by no means an easy task to get over them. So we need to concentrate on the second and strive for a better working environment, including physiological environment, so that the professionals could develop their potential qualities for the benefit of the community. In the Indian context, we also need to recognize the professional's economic, social and self-actualization needs so that he could experience a better quality of life and mental satisfaction from his/her work. However, there has been little research in this direction especially in Kerala where there is a high incidence of libraries and library professionals. It is in this context that the Investigator decided to conduct an empirical study of the Quality of Work Life and Occupational Stress aspects of the Library Professionals in Kerala. The outcome of the study may be very useful for the proper manpower development of our Libraries. It will also be useful for the government and other agencies concerned to make the Library and Information Services in the state, more effective and valuable.

STATEMENT OF THE PROBLEM

The present study is entitled as "QUALITY OF WORK LIFE AND OCCUPATIONAL STRESS AMONG THE LIBRARY PROFESSIONALS IN KERALA".

DEFENITION OF KEY TERMS

The important terms used in the statement of the problem are defined in the following subsections.

Quality of Work Life

The term Quality of Work Life is a vast, broader and diverging concept to be covered into a single or a few terms. It cannot be defined or connoted in a few terms or sentences as it is the convergence of various factors like nature of the job, nature of the individual employee and employer, work environment, social condition, job facilities, objectives and goals of the organisation, qualification, experience and visions of the human elements involved etc.

For the present study, the term Quality of Work Life refers to values and attitudes contained in working life of any employee. The "working life concept" consists of many factors such as, Pay, Promotion, Opportunity for Continued Growth and Security, Benefits, Contingent Rewards, Safe and Healthy Working Conditions, Operating Procedures, Coworkers and Supervision, Nature of Work, Social Integration in the Work Organisation, Constitutionalism in Work Organisation, Work and Total Life Space, and Social Relevance of Working Life; each of which plays its role in evaluating working life.

Occupational Stress

Occupational Stress is a mental or physical tension or both emerged from related occupation and its environment comprising of persons and objects from within and outside the work place which results into absenteeism; turnover, accidents, low productivity and service efficiency, lack of motivation and initiative, job dissatisfaction, alienation and disruption of the smooth functioning of the organisation. For the present study, it is defined as 'a person's response to some threatening or disturbing stimuli emerged from the occupation'.

Library Professionals

Library Professional in the context of the present study refers to the professionally qualified person possessing minimum educational qualification a bachelor degree or equivalent diploma in Library and Information Science and employed in a Library or Information Centre.

VARIABLES OF THE STUDY

The variables identified and selected for the conduct of the present study are categorised into two (viz.)

(1) Dependent Variables   and   (2) Independent Variables.

Dependent Variables

'Quality of Work Life' and 'Occupational Stress' are taken as the dependent variables.

Independent Variables

The following variables have been selected as the independent variables.

1) Gender

2) Age

3) Marital status

4) Number of children

5) Educational background

6) Job title category

7) Professional experience

8) Primary functional area

9) Salary range

10) Involvement in IT applications

11) Number of supervisors

12) Work schedule

13) Type of library

14) Size of library

15) Type of management

OBJECTIVES OF THE STUDY

The major objectives formulated for the conduct of the present study are:

1.   To find out the extent and levels of 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

2.   To compare the 'Quality of Work Life' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of select independent variables.

3.   To compare the level of 'Occupational Stress' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of select independent variables.

4.   To estimate the relationship between the 'Quality of Work Life' of Library Professionals in Kerala and each of the select independent variables.

5.   To estimate the relationship between the 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables.

6.   To study the extent of association between 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

HYPOTHESES

The major hypotheses formulated for the study are given below:

1. The percentage of Library Professionals in Kerala having high level of 'Quality of Work Life' will be significant.

2. The percentage of Library Professionals in Kerala having high level of 'Occupational Stress' will be significant.

3. There will be significant difference in the mean 'Quality of Work Life' scores of the sub samples (taken in pairs) when Library Professionals categorised on the basis of each of the select independent variables are compared.

4. There will be significant difference in the mean 'Occupational Stress' scores of the sub samples (taken in pairs) when Library Professionals categorised on the basis of each of the select independent variables are compared.

5. The relationship between 'Quality of Work Life' of Library Professionals in Kerala and each of the select independent variables will be significant.

6. The relationship between 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables will be significant.

7. The relationship between 'Quality of Work Life' and 'Occupational Stress' of Library Professionals in Kerala will be significant.

1.7 PROCEDURE

1.7.1 Sample

The study was carried out on a representative sample of 300 qualified Library Professionals in Kerala. Proportionate stratified sampling technique was employed for the selection of the sample. Due representation was given to the factors like age, sex, job category, qualification and experience, type of the library etc. of Library Professionals.

1.7.2 Tools for the Study

The necessary data were collected using the following tools.

1) Quality of Work Life Scale for Library Professionals.

2) Occupational Stress Inventory for Library Professionals.

3) General Data Sheet.

1.7.2.1 Quality of Work Life Scale for Library Professionals (QWLSLP)

The scale was developed by the investigator as part of the study to measure the Quality of Work Life of Library Professionals in Kerala.

1.7.2.2 Occupational Stress Inventory for Library Professionals (OSILP)

The investigator constructed this inventory in order to assess the Occupational Stress among the Library Professionals in Kerala.

<u>1.7.2.3 General Data Sheet</u>

The data relating to the independent variables were collected through a systematically framed structured questionnaire.

The above tools are presented as appendix III, V and VI respectively.

1.7.3 Analysis of Data

The following statistical techniques were employed to analyse the data.

1)   Test of significance for percentage.

2)   Two-tailed test of significance for difference between means of large independent samples.

3)   Two-tailed test of significance of difference between means of small independent samples.

4)   One-Way Analysis of Variance (one-way ANOVA) for comparing the means of more than two groups.

5)   Scheffe' test for Multiple Comparison.

6)   Chi-square test of independence.

1.8 SCOPE AND LIMITATIONS OF THE STUDY

The main purpose of the study is to investigate the extent and level of Quality of Work Life and Occupational Stress among the Library Professionals in Kerala, and to estimate the relationship between these variables and select

independent variables. The study also aims to examine the relationship between Quality of Work Life and Occupational Stress among the sample. The tools were constructed in such a way to explore the measures of the variables selected. It is expected that generalisable results may be yielded from the study. However owing to practical considerations, certain limitations were anticipated for the study.

1. Selection of independent variables for the study is confined to few personal attributes and organisational characteristics only. Other psychological variables such as Motivation to manage, Achievement Motivation, Self Concept, Aspirations etc. and other organisational variables such as 'Amount of Technology', 'Organisational Climate' etc. were not included.

2. While measuring the dependent variables, only the overall Quality of Work Life and Occupational Stress were considered. The different components of the variables were not considered separately.

3. Even though population for the study was intended to be representative of professionally qualified librarians working in all types of libraries in Kerala, certain types of libraries (viz.) School Libraries, Prison Libraries, Newspaper Libraries, and Libraries of self financing professional colleges are not included in the study for practical reasons.

4. The generalisability of the study was limited to the extent of the nature of the tools and the sample selected. All possible precautions were taken to attain the optimum degree of accuracy in respect of these factors.

5. The interpretation of the results is only tentative. The present results may be superseded by other interpretations if more rigorous statistical techniques for analysis are used.

1.9 ORGANISATION OF THE REPORT

The report has been presented in five chapters.

Chapter 1 presents the underlying rationale for selecting the present problem, its significance in the present context, statement of the problem, definition of key terms, statement of variables, objectives and hypotheses, and the outline of the procedure.

Chapter 2 gives the detailed description of the concepts used in the study in its first part. The second section provides the survey of related studies to support the hypotheses.

Chapter 3 describes the design of the investigation under the major headlines: variables, objectives, hypotheses and procedure.

Chapter 4 covers the detailed analysis of the study conducted and the major findings evolved, with discussions of results and conclusions.

Chapter 5 (last chapter) contains the summary of the major findings, tenability of hypotheses, implications and suggestions for further research.

The list of references is given at the end.

The tools used for the study are given as appendices.

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REVIEW OF RELATED LITERATURE

Theoretical Perspectives of the Variables
Review of Related Studies
Conclusion

REVIEW OF RELATED LITERATURE

The study is concerned with the 'Quality of Work Life' and 'Occupational Stress' of Library Professionals. Literature related to the basic theoretical and empirical aspects of these variables is reviewed in this chapter. Review of related literature has been done particularly with a view to locate the possible correlates of the variables studied. The two key concepts namely 'Quality of Work Life' and 'Occupational Stress' are first explained and then the literature reviewed is presented in the following sections.

2.1 THEORETICAL PERSPECTIVES OF THE VARIABLES

An overview of the literature in the field of Psychological, Socio-Psychological and Educational research concerned with the variables selected for the study is presented in this section with a view to draw out the conceptual, theoretical and empirical development of the variables and their assessment.

2.1.1 Quality of Work Life (QWL)

2.1.1.1 The Concept Explained

To have a good understanding of the concept "Quality of Work Life" (QWL), one must look into the evolutionary stages of the concept. Even if the expression of "Quality of Work Life" is relatively new, the reality it encompasses is not of recent origin.

For more than two decades a sizable volume of literature has been developed on Quality of Work Life. In India, scholars as well as practitioners of Human Resources Management and Industrial Relation have studied its various aspects and developed a few case studies. However, no comprehensive attempt has been made so far in India, to objectively measure the Quality of Work Life in those specific contexts.

Walton (1974) attributes the evolution of Quality of Work Life to various phases in history. Legislations enacted in early twentieth century to protect employees from job-injury and to eliminate hazardous working conditions, followed by the unionisation movement in the 1930's and 1940's were the initial steps in this direction. Emphasis was given to job security, due process at the work place and economic gains for the worker. The 1950's and the 1960's saw the development of different theories by psychologists proposing a positive relationship between morale and productivity that improved human relations. Attempts at reform to acquire equal employment opportunity and job enrichment schemes also were introduced. Finally in the 1970's the idea of Quality of Work Life was conceived which according to Walton, is broader than these earlier developments and is something that must include 'the values that were at the heart of these earlier reform movements and human needs and aspirations'.

Sekharan (1985) observes that, historically the concept of Quality of Work Life had originally included only the issues of wages, working hours, and

working conditions. However, the concept has now been expanded to include such factors as the extent of workers' involvement in the job, their levels of satisfaction with various aspects in the work environment, their perceived job competence, accomplishment on the job etc.

According to Keith (1989), Quality of Work Life refers to "the favourableness or unfavourableness of a job environment for people". The basic purpose in this regard is to develop jobs aiming at Human Resource Development as well as production enhancement.

Gani (1993) in his study stated that the core of the Quality of Work Life concept is the value of treating the worker as a human being and emphasizing changes in the socio-technical system of thorough improvement, in physical and psychological working environment, design and redesign of work practices, hierarchical structure and the production process brought with the active involvement of workers in decision making.

In the words of Kumar and Tripati (1993), Quality of Work Life is a philosophy of management that believes co-operative relationship between employees and managers and also believes that every employee has the ability and right to offer his intelligence and useful inputs into decisions at various levels in the organisations. Quality of Work Life is a process to involve employee at every level of the organisations in the decision about their work and workplace. It refers to the intended outcomes of practicing above philosophy and process with improvements in working condition, working

environment, working climate or work culture. The process brings ultimate benefit to individual employee as well as to the organisations through individual development and increasing quality and productivity respectively.

As explained by Kumar and Tripathy (1993), there are several approaches for achieving Quality of Work Life in organisations, namely job design, workers' participation, welfare and quality circles.

Quality Circles are one of the ways of involving employees at the bottom level of the organisation in decisions affecting work and work related problems. A Quality Circle is essentially a small group of employees who meet voluntarily on regular basis to identify, analyse and find solutions to quality problems and other issues in their work-environment. The employees in a Quality Circle can range from four to twelve. The Quality Circles occupy a vital and far more specific role for aiming and achieving Quality of Work Life of workers in organisations.

However, Singh (1983) states that, Quality of Work Life is not based on any theory. It is concerned with overall climate of work place. Reduced supervision, increased self-regulation and self-management are pillars of Quality of Work Life.

American Society of Training and Development (1979) presented Quality of Work Life as a process of work organisations, which enables its members at all levels to participate actively and efficiently in shaping the

organisations environment, methods and outcomes. It is a value based process, which is aimed towards meeting the twin goals of enhanced effectiveness of organisations, and improved quality of life at work for employees.

Cohen and Rosenthal (1980) describes Quality of Work Life as an intentionally designed effort to bring out increased labour management, and co-operation to jointly solve the problem of improving organisational performance and employee satisfaction.

In the opinion of Jain (1991), Quality Of Work Life represents a blending of motivational factors of work, socio-technical system etc. which are of very real concerns for human values in today's society with an awareness that all individuals devote the greater part of their mature lives to the work, spending time, energy and physical and mental resources to this endeavor. Moreover, it recognizes that, work is the chief determinant of an individual's freedom, growth and self respect as well as his or her standard of living. Quality of Work Life denotes the experienced "goodness" of working in the organisational settings.

One of the principal problems with the term is that Quality of Work Life is not a single or a specific notion. It consists of a whole parcel of terms and notions, all of which really belong under the working life umbrella viz; 1) Industrial effectiveness 2) Human resource development 3) Organisational effectiveness 4) Work restructure 5) Job enrichment 6) Socio-technical systems 7) Working humanization 8) Group work concept 9) Labour management co-

operation 10) Working together; worker's involvement, worker's participation 11) Co-operative work structure.

Each of these in varying degrees of inadequacies identifies a part of the large whole that Quality of Work Life seeks to identify. Quality of Work Life is a common concern, not only to improve life at work, but also life outside work. After all, the two cannot be linked.

Quality of Work Life concept enumerated by Boisvert and Theriault (1974) is as structured below:
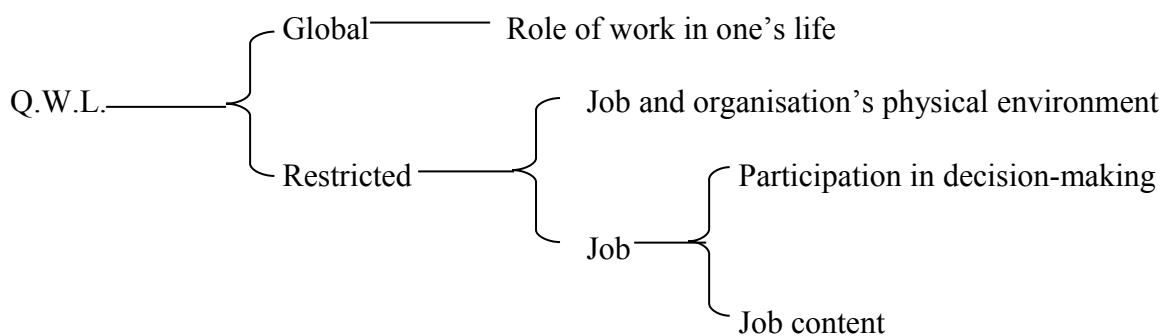
Quality of Work Life Concept

One can notice from the figure widely divergent views of Quality of Work Life varying from the global view of the role of work in ones life to as narrow concern as job content.

To improve the Quality of Work Life, the work satisfaction of employees is to be considered as a motivational strategy. The improvement in the Quality of Work Life is sought to be achieved through re-organisational and re-structuring of job content. Quality of Work Life scheme involves changes in

values, norms, systems, styles processes and structures in the organisational process. The main thrust is in optimising the job satisfaction available to employees. In the total system of Quality of Work Life, the process of bringing desired change itself is very important. It has been proved that participative process where the employees concerned are involved in bringing the change brings more effective results.

In the views of Johnston (1993), Quality of Work Life is more than simply a concept, means or an end. It embodies the following inter-related sets of ideas:

a) Ideas dealing with a body of knowledge, concepts, experiences related to the nature, meaning, and structure of work;

b) Ideas dealing with the nature and process of introducing and managing organisation change; and

c) Ideas dealing with outcomes of results of the change process.

The concept of Quality of Work Life views work as a process of interaction and joint problem solving by working people-managers, supervisors, and workers.

2.1.1.2 Criteria for Quality of Work Life

According to Balu (2001), Quality of Work Life encompasses various aspects relating to (1) Working Environment and (2) Employee Motivation.

Employee Motivation consists of (i) Proper Communication at Shop-level, (ii) Employee Facilities, (iii) Employee Performance Recognition, (iv) Employee Participation with team spirit, (v) Development and Job redesign and Job enrichment, (vi) Dynamic HRD factors, and (vii) Status of family. These aspects are summed up as below.

(1) Quality of Working Environment

Quality of work environment is an essential element for quality of work life. The management can normally ensure such an environment in the following way: Continuous, committed and concerted housekeeping, safety provisions and promotion, welfare amenities upkeep and environment, and occupational health and medical services. Safety culture is an essential element in the quality of work life. The environmental factors like sanitation, drinking water, rest shelters, ventilation, lighting facilities etc. do affect the quality of work life. These factors require continuous improvements.

(2) Motivational Factors

Employee motivation is the main activity for Human Resource Development thrust on quality of work life. The factors relating to employee motivation are: -

<u>Proper Communication at shop level</u>

The main object of Human Resource Development philosophy is respect for the dignity of the worker as a human being and motivates his enormous potential for contribution and growth. Human resource development efforts have therefore to gain the confidence of the worker that he is seen as a member who is important to the organisation. Proper communication plays a pivotal role to achieve results in this priority area. Besides the traditional methods of information sharing through house journals, notice boards, shop campaigns, etc., novelty can be experienced for orienting shop communication in tune with the process of work.

(ii) <u>Employee facilities</u>

Grievance redressal is a must for an organisation. Grievance handling has advanced from a formalistic system to a predictive culture. Moving close with the workers and shop grievance enquiries reveal the problems of the workers not only at the workplace but also beyond its periphery. Canteen facilities have become a must today. Canteen facilities form an important factor in determining the estimation of worker on the company's care for him. Generally the co-operative stores are set up to enable the workers to acquire experience in the process of management autonomy. All these efforts are made with the desire to keep the worker constructively engaged in the work place. Provision of catering services to the shop floor and mobile van services to

scattered places are efforts to extend satisfaction levels of employees. Home counselling is also undertaken to positively correlate the living habits with work attitudes.

(iii) Employee Performance Recognition

Recognition of employee's performance increases the morale of them and stimulates an urge to excel at the work place, spreading cheer to the families and enhancing the social status of the employee. Sometimes photographs of good performers are displayed and also at felicitation functions publicity in house journals, letters of appreciation- all these increase the morale of the individual and team efforts to boost the quality of work.

(iv) Employee Participation with Team-spirit

To maximise enrichment of quality of work life, the management has to generate team spirit and a sense of involvement among the workers. For instance the activities like celebration of the anniversary of the commissioning the department, by involving all the staff give a sense of togetherness among them. Formation of participative group like quality circles enable the committed work teams, voluntarily take up improvements in their area of work.

(v) Development and Job Enrichment

Job satisfaction increases work efficiency and hence they are indispensable elements of work-life. Initially the Human resource development

aims to develop the knowledge and skills of the worker to keep pace. Human resource development attention on shop training activities and multi-skill development have positively shaped the attitudes and competencies of the workforce and improved the possibilities to optimise their utilisation. Formulation, propagation and adherence to standard operating practices on specific work positions, imparting shop based training through unit training centres, multi-trade training and induction orientation for fresh recruits, identification of the skill needs of the existing employees in the revised job combinations and enrichment of their knowledge/competencies through on-the-job training are the various activities in this regard.

(vi) QWL and HRD Efforts

Evolving dynamic HRD strategies also boost the Quality of Work Life of the employees. Human resource development philosophy strongly believes that the workers involved in the process of work are the best qualified to bring about improvements in their area of work. Every worker has creative abilities, which can be tapped through managerial encouragement and support. From this angle the suggestion scheme has emerged as a dynamic Human Resource Development mechanism. While the attraction of awards for the suggestions is an offshoot of the scheme, the satisfaction potential inherent in the implementation of the worker's own ideas of improvement provides the drive and impetus to the improvement efforts in the shop-floor.

(vii) <u>QWL and Increasing the Status of the family</u>

The family of the employees may not have a proper understanding of the work place in which the employee spends a major portion of the day and earns living. Hence the family members may not know his pressures of work, day-to-day stresses and strains, the nature of his responsibility and the implications of his job accountability. He goes from home everyday not merely to earn their livelihood but to play a meaningful role as a strong link in the human chain of the company. Thus, he lives in between two worlds, that is, his sphere of activities at the work-place and a different world at home. Human Resource Development takes care of the responsibility of unifying these two worlds. The interactions of managers with the family members and the warmth of hospitality create a climate of homeliness in the shopfloor. This practice has brought the families closer to the company and enabled them to develop right attitudes to the working life of the employees.

Walton (1974a) has identified eight dimensions, which make up the quality of working life framework. They are as follows:

(i) <u>Adequate Income and Fair Compensation</u>

Motivation experts believe that money is still an important motive, which makes people work on the job. However, people also want to see fairness and adequacy in their pay rewards. Equal pay for equal work and pay that is linked to responsibility, skill, performance and individual

accomplishment are viewed with great importance. Pay must also be competitive with the external labor market and should be responsive to prevailing practices and changing economic conditions.

(ii) <u>Safe and Healthy Working Conditions</u>.

An organisation must create working conditions that are physically and psychologically safe for its workers. The emergence of ergonomics in the 1950s has significantly improved equipment design and plant layout to enhance the physical as well as psychological comfort and safety of the workers.

(iii) <u>Immediate Opportunity to Use and Develop Human Capacities.</u>

Development of its workers involves training, skill developments, recognition, and promotion. Work assignments should be made challenging enough to expand skills, abilities, and knowledge. They should create a positive effect on self-esteem, autonomy, involvement and motivation.

(iv) <u>Opportunity for Continued Growth and Security</u>

There must be employment, which provides for continual growth and job & income security. Opportunities for training and advancement should be considered.

(v) <u>Social Integration in the Work Organisation</u>

The work environment should provide opportunities for preserving an employee's personal identity and self-esteem through freedom from prejudice, a sense of community interpersonal openness and the absence of stratification in the organisation.

(vi) <u>Constitutionalism in the Work Organisation</u>

There should be the right to personal privacy, free speech and equitable treatment, in the workplace.

(vii) <u>Work and the Total Life Space</u>

A person's work should not overbalance his life. Ideally, work schedules, career demands and travel requirements should not take up too much of his leisure and family life.

(viii) <u>Social Relevance of Work Life</u>

The standing of an organisation in society can influence an employee's value of his work and career. The workers perceive the organisation to be socially responsible in its products, waste disposal, marketing techniques, employment practices and so forth.

<u>2.1.1.3 Popular QWL Programmes</u>

There are innovations and implementations of various schemes to have good working conditions and congenial work environment to the workers and the organisations for high productivity, service efficiency, effectiveness etc. to attain an improved Quality of Work Life.

Bhatia and Singh (2000) have established some popular QWL Programmes which are given in Table 2.1.

Table – 2.1

Popular QWL Programmes

Programme	Description
Flexi time	A system of flexible working hours. Flexi time serves as a work-scheduling scheme allowing individual employees, within established limits, to control and redistribute their working hours around organisational demands.
Job Enrichment	A Programme for redesigning employees jobs to allow greater autonomy and responsibility in the performance of work tasks.
Management By Objectives (MBO)	Participation of an employee with his superior in setting employee goals that are consistent with the objectives of the organisation as a whole. MBO is viewed as a way to integrate personal and organisational needs.
Staggered Hours	A work-hour arrangement of overlapping schedules of predetermined hours established for the total work force. In a staggered work-hour scheme, groups of employees begin and end work at different intervals.
Socio-technical systems	A physical and technological redesign of the workplace for employees with human considerations of the workforce.
Job Rotation	A Programme in which employees continue their present jobs, but duties are added with the intent of making the job more rewarding.
Autonomous Work Group	A form of participation in which the group of workers is given some control of decision-making on production methods, distribution of tasks, recruitment of team members, selection of team leaders, work schedules and so on.
Employee Participation	A programme aimed at a greater sharing of responsibility for decision-making

Bohlander (2000) has identified the following common problems of implementing QWL programmes.

a) Managerial Attitudes and

b) Union Influence.

(a) <u>Managerial Attitudes</u>

The philosophy of Quality of Work Life is based on the belief in worker participation. This implies that management must be prepared and willing to allow its employees some say or influence on decisions about conditions or processes which affect their work tasks and environment. Traditional managers may perceive this phenomenon as a challenge to their rights to control and to make decisions, which influence worker's work and environment. They may not be willing to delegate decision-making to the rank and file level. Managers generally believe that employees are inherently lazy, lack responsibility, and require close supervision, are likely to resist any attempt towards QWL pogrammes. Such managers will set objectives for subordinates and will limit employee participation.

A change in managerial attitudes at all levels is important in order that any QWL programme be successful.

(b) <u>Union Influence</u>

Labour unions can impose significantly on the success and failure of QWL programmes. Union leaders often believe that Quality of Work Life projects are management's tools to improve productivity or to speed up work performance in order to extract more work from workers without corresponding compensation.

2.1.1.4 QWL Scenario

Murthy (1993) shows the present Quality of Work Life scenario in the following illustration:
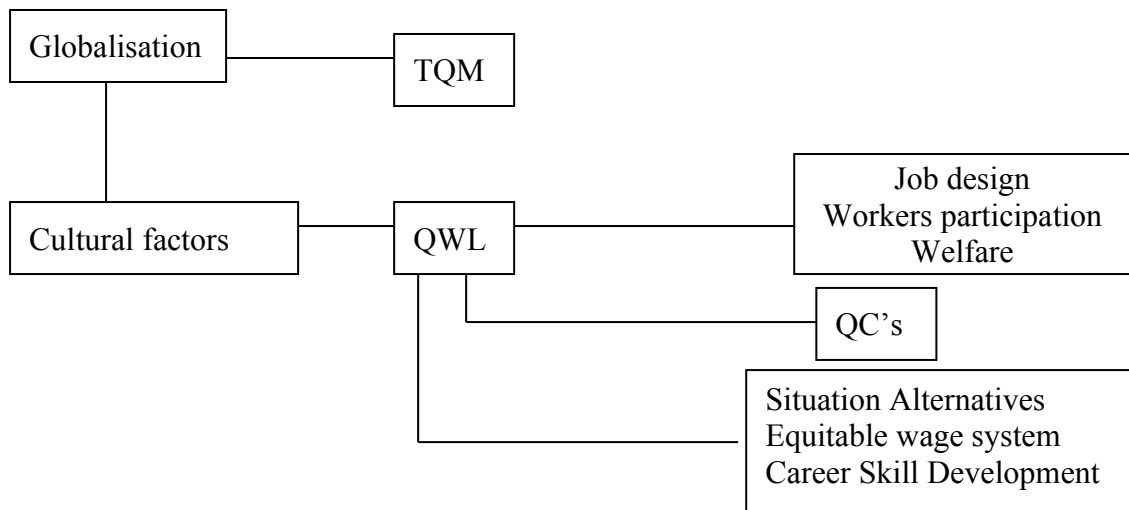
Fig. - 1
Quality of Work Life Scenario

It is clear from the figure that Quality Circle (QC) is the only significant and effective approach to achieve Quality of Work Life in India today. Quality of Work Life system appears to be the logical concomitant to Total Quality Management (TQM) in enabling organisations to cope up with the fast globalisation of Indian economy. The Total Quality Management and Quality of Work Life, both require transparency of the managerial policies and their working in an organisation.

2.1.2 Occupational Stress (OS)

2.1.2.1 The Concept explained

In Psychophysiology, stress refers to some stimulus resulting in a defectable strain that cannot be accommodated by the organism and which ultimately results in impaired health or behaviour.

The present day researchers and practitioners visualise the phenomenon of stress in a new perspective. Each individual needs a moderate amount of stress to be alert and capable of functioning effectively in an organisation. Stress is inherent in the concept of creativity (Pestonjee, 1992) and entrepreneurship (Pareek, 1995).

Stress is a part of modern life; with increasing complexity of life, stress is likely to increase. Various events in life cause stress, starting with the birth of a child and ending in the death of a dear one. Several attempts have been made to measure life events as sources of stress identifying and giving weightage to different events in a person's life like, transfer, changing house, admission of children etc. An excellent review of the life events scales developed in India, and the research conducted on life stress in India, have been provided by Sharma (1988) who has commended the stress scales developed by Dube and Singh (viz.), Dube's Life Events Scale (1983) and Sing *et. al.*'s Life Events Scale (1983).

Jagadish and Srivastava (1989) state that Stress has become one of the major concerns of present times. People are under stress of some sort or other, most of the time. Stress at work, stemming from increasing job complexity and its divergent demands have become pervading feature of modern organisations. A little amount of stress may be helpful from organisational and personal point of view. It is reported that stress creates as well as promotes employees inclination towards the job, thus enhances the performance and develops positive attitude among employees. However it has been more frequently observed that excessive and persistent stress is aversive for employees.

Stress is commonly understood to be a work related health hazard. The National Association of Working Women (US), which has undertaken considerable research into Occupational Health, reached to the finding that – people with greatest responsibility, who make a lot of important decisions, have most stress – people bring stress with them from home into work and, if they are under stress, it is because of family or personal problems – certain people are more susceptible to stress; this is not due to the job but due to inherent characteristics of the individual. There is a misconception that only the highly paid staff is subject to the stress and its after-effects, but it affects the lower paid staff too. As automation increase, the level of stress increased, indeed in many cases the reverse too happen.

Dyer (1990) explains that Stress is our body's biochemical response to an outside stimulus. Different stimuli will cause us to react differently. We may blush, jump or hide the reaction under a confident mask but the

biochemical response of our body is the same – an increase in the heartbeat and the breathing rate, increased secretion of stomach acid and the release of certain hormones. An increased flow of adrenalin and acid in cholesterol and blood sugar cause a surge of energy to the muscles whilst the stomach becomes inactive. Emotionally we may experience frustration, anger, excitement or anxiety. Some Stress is good. Without thrills or excitement life would be dull. Indeed, after a short period of stress one's body is returned to equilibrium. Prolonged and continuous stress causes threat to health, which will lead to many physical and mental diseases.

Stress has been conceptualized in the following ways: (i) as an external force which is perceived as threatening; (ii) as response to a situation demanding an individual to adapt to change, physically or psychologically; (iii) as an internal outcome of the external demand and internal resources and; (iv) as a personal response to a certain variation in the environment.

According to Selye (1956), any external event or internal drive, which threatens to upset the organismic equilibrium, is stress. He has defined stress as the non-specific response of the body to any demand made upon it.

Lazarus (1960) maintains that stress occurs when there are demands on the person, which tax or exceed his adjustment resources.

McGrath (1976) explains that there is a potential for stress when an environmental situation is perceived as presenting a demand which threatens to exceed the person's capacities and resources for meeting it, under condition

where he has expected a substantial differential in the rewards and cost from meeting the demand versus not meeting it.

As a competitive definition stress is a dynamic condition in which an individual is confronted with an opportunity, constraint etc.

Pestonjee and Pareek (1997) in their study wrote that the concept of stress was first introduced in the life sciences in 1936 by Hans selye. During the last two decades the term "stress" has come to be widely used in relation to work organisations. Manson (1975), reviewing literature on stress, concluded that there was confusion and a lack of consensus regarding its definition. The term "stress" has been used variously to refer to (a) stimulus (external force acting on the organism), (b) response (changes in the physiological functions), (c) interaction (interaction between an external force and resistance opposed to it, as in biology), and (d) more comprehensive combinations of the above factors.

Selye's (1956) General Adaptation Syndrome (GAS) has been widely held as a comprehensive model to explain the stress phenomenon. This three-stage model states that when an organism is confronted with a threat, the general physiological response occurs in three stages.

Alarm reaction

The first stage includes an initial "shock phase" in which defensive mechanisms become active. Alarm reaction is characterised by autonomous

excitability, adrenalin discharge, increased heart rate, muscle tone, and blood content; and gastro-intestinal ulceration. Depending on the nature and intensity of the threat and the condition of the organism, the periods of resistance vary and the severity of symptoms may differ from "mild invigoration" to "decrease of adaptation".

Resistance

Maximum adaptation occurs during this stage. The bodily signs characteristic of the alarm reaction disappear. Resistance increases to levels above normal. If the stressor persists, or the defensive reaction proves ineffective, the organism deteriorates to the next stage.

Exhaustion

Adaptation energy is exhausted. Signs of the alarm reaction reappear and the resistance level begins to decline irreversibly.

The general physiological response occurs in three stages is diagrammatically illustrated below.

Duration of Exposure to Stress
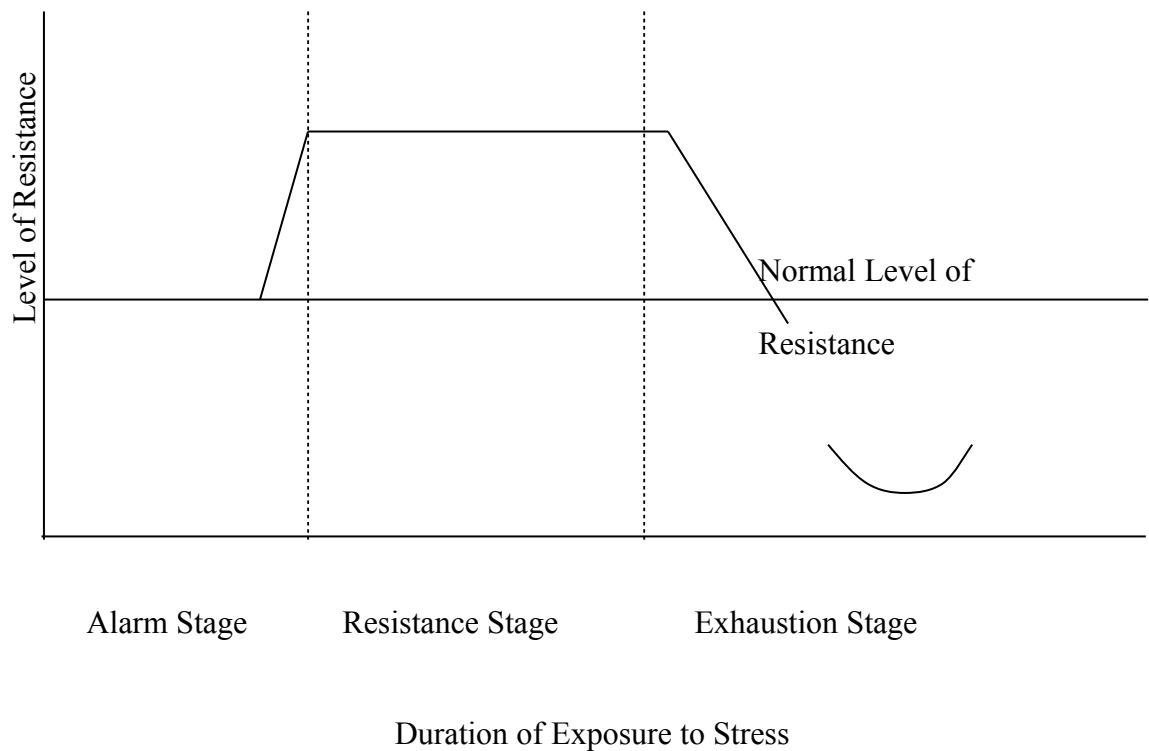
Fig. - 2

General Adaptation Syndrome

The working population constitutes a major section of the community. Industrialisation and automation of industrial processes in our country have resulted in rapid changes in the psychosocial environment at workplace and in the reactions of the workers to this environment. Exposure to these factors depends on various external factors (eg. fast changing technology, competitive environment, pressures to improve performance) and internal factors (eg.organisational climate, various management processes, the physical and psychological conditions at work and so on).

Occupational Stress is a mental or physical tension or both, created and related to occupation and its environment comprising of persons and objects from within and outside the work place which results into absenteeism, turnover accidents, low productivity and service efficiency, lack of motivation and initiative, job dissatisfaction, alienation and disruption of the smooth functioning of the organisation. It is a person's response to some threatening or disturbing stimuli emerged from the occupation.

Stress is built in the concept of role which is conceived as the position a person occupies in a system, as defined by the expectations from role senders (significant role occupants and the persons himself/herself).

Kahn *et.al*. (1964) proposed three main role stresses: role conflict, role ambiguity and role overload. Pareek (1993) proposed ten organisational role stresses, (viz.) self-role distance (SRD), inter-role distance (IRD), role stagnation (RS), role isolation (RI), role ambiguity (RA), role expectation conflict (REC), role overload (RO), role erosion (RE), resource inadequacy (RIn). A lot of research has been done on role stresses, their nature and correlates. These have been summarized by Pestonjee (1992).

2.1.2.2 Causes of Occupational Stress

The factors that lead to stress at the workplace are categorised mainly into four by Summers *et.al*. (1994) (viz.), Personal characteristics,

Organisational characteristics, Structural and Organisational characteristics, Procedural and Role characteristics.

The major causes of Occupational Stress enumerated by Apex (1985) are: (1) Environmental factors, (2) Job design faults, (3) Employer Employee relationships, (4) Social isolation, (5) Failure to solve grievances, (6) Fear of adverse health effects, and (7) Threat of job losses.

(1) Environmental factors

Poor working environment may cause or add to job stress.

(2) Job design faults

Poor Job design, resulting in incorrect pace of work or underutilisation of skills, can cause stress.

(3) Employer employee relationships

Fundamental organisations evoke feeling of apprehensions at all levels. Uncertainty surrounding the need for one's own job in the new system or its possible restructuring with consequent changes in pay, promotion, and training etc., inevitably lead to anxiety.

(4) Social isolation

This type of stress refers to the psychological distance between the occupant's role and other roles in the same role set. It is also defined as role distance, which is different from inter-role distance (IRD), in the sense that while IRD refers to the distance among various roles occupied by the same individual, role isolation (RI) is characterised by the feelings that others do not reach out easily, indicative of the absence of strong linkages of one's role with other roles.

(5) Failure to solve grievances

There shall be a proper mechanism for the redressal of the complaints and grievances raised by employees in any organisation set up. Failure to solve the grievances occurs when the management does not respond or when there is lack of proper understanding of the underlying causes and thus treat only the symptoms. Other problem may arise because the solutions may be seen to be costly to implement.

(6) Fear of adverse health effects

Unless management handles the fear of potential health risks sensitively and knowledgeably, it can increase the stress out of proportion.

(7) Threat of job losses

Automation is sometimes introduced to cut the staff budget, which may imply that the existing staff is to be axed. Even if this is not the case in an individual library, the plan to automate may create anxiety.

The major dimensions of Occupational Stress identified by some of the prominent researchers are laid down for detailed understanding.

Pareek (1983) listed eight major dimensions, contributing to the Organisational Role Stress. They are (1) Self-role distance; (2) Inter-role distance; (3) Role-stagnation; (4) Role ambiguity; (5) Role overload; (6) Role erosion; (7) Role inadequacy; and (8) Total role stress (overall role stress).

The occupational stress dimensions, located by Srivastava and Singh (1981) are (1) Role Overload; (2) Role ambiguity; (3) Role conflict; (4) Group and political pressures; (5) Responsibility for persons; (6) Under-participation; (7) Powerlessness; (8) Poor peer relations; (9) Intrinsic impoverishment; (10) Low status; (11) Strenuous working condition; and (12) Unprofitability.

2.1.2.3 Coping of Stress

The word coping has been used to denote the way of dealing with stress, or the effort to master conditions of harm, threat, or challenge when a routine or automatic response is not readily available.

Studies of various coping strategies or styles used in role stress reveal that approach styles have a strong relationship with internality, optimism, role

efficacy, job satisfaction and effective role behaviour in organisations. Two contrasting strategies for some role stresses are explained below: -

Many individuals, who find a conflict between their self-concept and the role they occupy in an organisation, may play that role in a routine way to earn their living. They take no interest in their role, and this is indicative of self-role distance, i.e., they have rejected the role. On the other hand, some other individuals may seriously occupy their roles and, in due course of time, completely forget their self-concept and play that role effectively but reject their self. Both these approaches are avoidance approaches and are dysfunctional. If an individual rejects the role, he is likely to be ineffective in the organisation. However, if he rejects the self, he is likely to lose his effectiveness as an individual, which in turn will adversely affect his mental health.

The amount of role stress is not as important for an individual's mental and physical health as the way he copes with stress. Coping styles or strategies may either be oriented towards avoiding stress or towards dealing with stress. The former are dysfunctional while the latter are functional. For the managerial effectiveness, among the approach styles or strategies, the most functional is the one in which the individual shares with other significant persons and jointly with friends in ways of managing it. These are active approaches of dealing with stressful situations and are more approved by social

scientists as these are supposed to be more effective and healthy when compared to dysfunctional style.

The eminent psychologist Phutchick has proposed eight basic coping styles to reduce stress: suppression (avoided the stressor), help seeking, replacement (engage indirect stress-reducing activities), blame (others and system), substitution (engage in indirect stress reducing activities), mapping (collect more information), reversal (act opposite to the way one feels) and minimization (minimize the importance of stressful situation). Individuals may review functionality and dysfunctionality of these styles for different situations.

Golembiewski (1982) has suggested that Organisational Development (OD) is helpful in reducing and managing stress. According to him, OD ameliorates and prevents burnout of intervenors.

Sen (1981) has stated that Job satisfaction and effective role behaviour are positively related with approach styles.

Goodman (1980) reviewed literature on stress among teachers in urban schools and examines the stress concept. Among the sources of stress identified are pupil misbehaviour, environmental factors such as poor working conditions, poor organisational management, and non-participation in decision-making, personality characteristics, life experiences, interpersonal relationships, and structural variables such as school location, school racial composition and student's socio-economic status.

2.1.2.4 Tentative Model of Coping Styles

Generally, investigators have followed two different approaches to the study of coping. Some researchers emphasized general coping traits, styles or dispositions, while others have preferred to study the active ongoing strategies in a particular stress situation. Coping styles imply a broader, more encompassing disposition. Trait and style are fundamentally similar ideas. Trait and style refer to a characteristic way to handling situations, they are stable tendencies, on the basis of which inferences are drawn about how an individual will cope in some or all types of stressful situations. A person's coping style or disposition is typically assessed by personality tests, not by actual observation of what the person says or does in a stressful situation. Of the various methods of copying styles of stressful situations, one Tentative Model of Coping Styles of Stress is illustrated diagrammatically as follows:
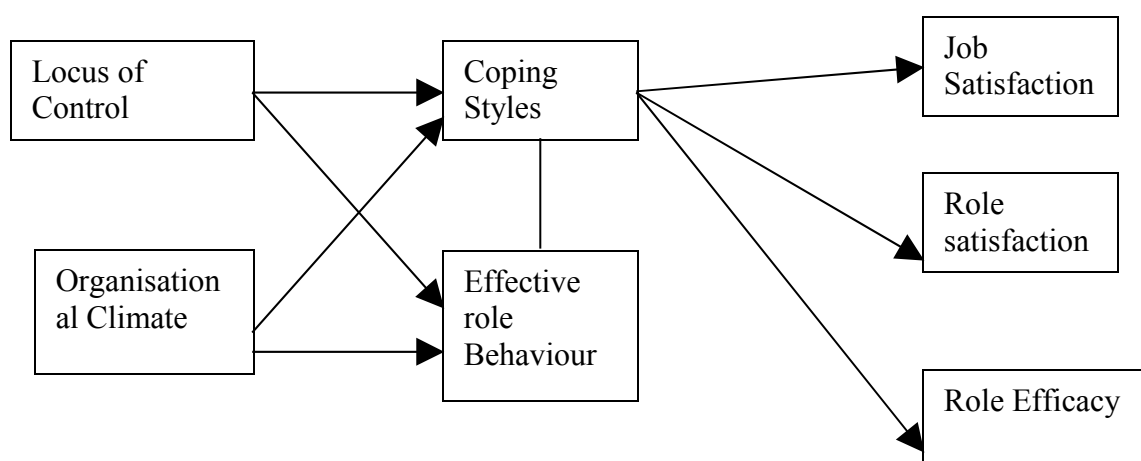
Fig. - 3
Tentative Model of Coping Styles of Stress

It shows that organisational climate and one personality variable, i.e. locus of control, are significant determinants of coping styles, which can be considered as intervening variables influencing job satisfaction, role satisfaction and role efficacy. Locus of control and organisational climate, however have an impact on effective role behaviour as well, which also influences coping styles. Moreover locus of control and organisational climate are the important factors producing role stress.

2.2 RELATED STUDIES

The Investigator has gone through a number of studies related to the Quality of Work Life and Occupational Stress in respect of professionals engaged in different occupations under different organisational settings. All the studies reviewed are presented under the following sections:

1. Studies related to Quality of Work Life.
2. Studies related to Occupational Stress.
3. Studies showing relationship between Quality of Work Life and Occupational Stress.

2.2.1 Studies Related to Quality of Work Life

In this part an extensive review is made on the Quality of Work Life of each category of occupants associated with their professions.

Ganguli and Joseph (1976) studied Quality of Working Life among young workers in Air India with special reference to life and job satisfaction issues. Findings indicate that, of the various physical and psychological working conditions, pride in organisation, job earned community respect, reasonable working hours, etc. are some variables positively correlated with job satisfaction than friendship with colleagues, good work location, physical strain, variety of skills and risks of injury. Data also indicate that strong family ties and rural background are more positively correlated with life and job satisfaction. Expectation and aspiration of young workers also found affecting the quality of working life.

The unauthorised absenteeism rates in two large textile factories at Isfahan in Iran were compared by **Kavoussi** *et.al.* (1978). The working conditions in the study factory were unsatisfactory, unlike the control factory. Findings show significantly higher absenteeism rates in the study factory. In view of the widespread consequences of such absenteeism, it is recommended that closer attention be paid for improving the quality of working life.

National Seminar on improving the quality of working life (1982) was convened to enquire into the direction of Quality of Work Life activities in India and prepare an action plan for implementing the Quality of Work Life concepts. The recommendation from the National seminar published in the Journal of Productivity (1982) states that at the enterprise level, improvement of quality of work life should be through the co-operative endeavor between

management and unions.   The conference pointed out that the Government could help in improving Quality of Work Life through legislation, executive policy and action through its entrepreneurial role in the public sector.   It recommended the need for engaging and involving shop-floor level staff in the management and policy decisions for improvement in Quality of Work Life.

Based on his various studies and wide experiences, **Mehta** (1982) indicated that work does not occupy a central place in the life space of the Indian worker. According to him, in the present context, where hard economic factors like monetary compensations, fringe benefits and work amenities are dominant, nature and design of jobs may not be a significant factor in the current ethos. It did not show a clear linkage between job satisfaction and a general sense of life satisfaction. One important finding of this research is that the younger entrance to work organisation and younger employees showed greater work-related dissatisfaction tended to decrease with increasing age of employees.

In an endeavor to analyse the conceptual aspect of improving quality of life in working environment and the experiments done in Rashtriya Chemicals and Fertilizers Ltd, **Sanyal and Singh** (1982) ascertained that the term improving the quality of working life is basically concerned with improving the work satisfaction of employees as an effective corporate motivational strategy. It is sought to be achieved through re-orientation and restructuring of job content.

With an interest in Job Satisfaction, within the work setting, **Lynch and Verdin** (1983) studied the Job Satisfaction differences among library units and among occupational groups within libraries. The relationships of sex, age and tenure to the Job Satisfaction of library employees also were explored. The results suggests that the chief satisfying factors were achievement and recognition, and the chief dissatisfying factors were Institutional Policy and Administration, Supervision and interpersonal relationships. The reference librarians working in academic libraries were more satisfied than catalog librarian. No significant differences were found between Age and Job Satisfaction or between Tenure and Job Satisfaction. Satisfaction tended to increase with Experience, Mobility, with Seniority of the post and with Managerial level.

An explorative study has been made by **Nitish** (1984) to develop various criteria for a good work life and life generally and sets forth some organisational methods by which these can be achieved at the level of organisational unit, the country and the world. He has identified some dimensions of Quality of Work Life in respect of organisational form, hierarchy and staffing pattern, work group size, internal network and communication concern for quality, concern for people, ideals and values etc. According to him lesser the managers and supervisors level is in an organisation, the better would be the Quality of Work Life.

Uma Sekaran (1985) has examined the Quality of Work Life in the Indian (Nationalized) banking industry as perceived by organisational members at different organisational levels and in different job positions. She found that Quality of Work Life in the banking profession is not high. The recruitment of overqualified personnel for rather routine job, inequitable reward system which demotivate the better performing employees, frustration experienced due to lack of alternative job avenues, scarce chance of promotion, alienation from work etc. are pointed out as the reasons for poor Quality of Work Life in banks. The study suggests that greater decentralization, more autonomy, power and control will facilitate the individual banks to recruit the right people, design the jobs as best, and reward employees based on performance and thus enhance the Quality of Work Life in banks.

Nzotta (1987) undertook the study about the librarians working in University college of Education, College of technology/polykehmi, public and speech libraries in Nigeria to find out their job satisfaction level. This comparative study categorises librarians into three groups viz. public services librarians, technical services librarians and Management (administrative services) librarians. This was also an attempt to expand the scope of the study of job satisfaction in the library and Information field by making it more interested. A 342 mail questionnaire were used to collect data for the study. 214 numbers of usable responses were analysed. The first part of the questionnaire sought the background information about the respondents – their demographic and job characteristics. The second part was designed to measure

about 21 dimensions of job satisfaction – activity, independence, variety, social status, supervision-human relations, supervision technical, moral values security, social service, authority, ability utilisation, library or institutional policies, compensational advancement, working condition and general satisfaction. The dimensions were measured on a Likert-type five point scales of agreement. The study revealed that the Management Librarians and the public service librarians desire greater satisfaction from their social status than the Technical Service Librarians. The two groups have greater opportunities than the Technical Librarians.

Lahri (1988) conducted an empirical study on the personnel's attitudes and experiences with library system in Manipur, based on Herzberg's theory. It examined the library professionals of Manipur from two angles. First through their interaction with today's library system based on Herberg's hygiene factors and second through their feedback in the form of suggestions for a better network of tomorrow, based on Herxberg's motivational factors. The study of hygiene factors, however leads us to the proposition that there is formidable ground for dissatisfaction. It was pointed out that a combination of economic factors, pressure, and recognition along with personal feeling of success, accomplishment and self satisfaction were dominant concerns of the employees.

Etuk (1989) successfully investigated job satisfaction of the junior library staff in the University of Calabar Library in Nigeria. The study was

aimed to examine the factors that influence the work attitude of the Junior Staff in the University of Calabar Library. Data was gathered by a questionnaire from a 30 selected samples from the staff of University Library. The major factors taken into account for investigating the Job Satisfaction of the Library staff were Pay, Job Security, Extent of fairness of the management, Working Condition, Participation in decision making. Making use of individual talent, recognition and Praise one get from their boss etc. The analysis of the data reveals that most of the staff were not satisfied with their Pay, Working conditions, Lack of facilities to improve their talents etc. It suggests improved interactions between the Subordinates and Supervisors involvement of junior staff in planning, decision making etc.

Pelsma (1989) administered quality of teachers work life survey on 227 teachers to examine the life satisfaction. The result indicated to factors contributing to Teachers Satisfaction.

Quality Circles have been suggested as a technique by **Elizur** (1990) for enhancing employees' quality of work life and satisfaction with their work. This study attempts to analyse the relationships between employees' perception in quality circles, their sense of Quality of Work Life, perceived job enforcement capacity and job satisfaction. 143 employees of a large industrial Corporation in Israel, half of them regularly participating in quality circles and half not participating were surveyed. A positive relationship was found

between participation in quality circles and various aspects of quality of work life.

Fitch (1990) used the Job Descriptive Index in her survey of Alabama paraprofessional job satisfaction. She made an effort to look at how institutional differences such as size of university and extent of library automation affected job satisfaction. She found that pay and promotion were the least satisfying areas.

Navalani (1990) has conducted a survey to measure the level of satisfaction of the professional and semi professional manpower working in the university libraries in India with various characteristics of job study. The researcher administered questionnaires to 353 professionals and semiprofessionals chosen from 23 selected universities in India for the collection of data for the study. Of the population 216 were males and 137 females. 154 seniors and 199 juniors. The questionnaire covered mainly 10 dimensions of the job such as professional work, planning and policies working conditions, supervision and management, communication, salary, promotion, user services and status. The study reveals that majority of the professionals are satisfied with most of the attributes of their work, but there is a difference in the perception of men and women and seniors and juniors.

Jain (1991) has made an attempt to identify the potential dimensions of Quality of Work Life in the sample unit for all hierarchical levels in a large private industry and to study the quality of Work Life at various hierarchical

levels for understanding different effect of Quality of Work Life dimensions. Studying the hierarchical effects in viewing the Quality of Working Life and the effect of Quality of Working Life on Group Behaviour were the twin goals taken for the study. The investigation was concentrated on the administration, shipping, sales, carpentry, security, plant, painting and stores departments of the industry. The population studied had a strength of 644 employees spread over the eight departments in the industry. A questionnaire (QWL Scale) developed by the investigator was used to collect data on 'QWL'. The scale includes eight basic major factors (1) Adequate Income and Fair Compensation, (2) Safe and Healthy Working Conditions, (3) Immediate Opportunities to use human capacities, (4) opportunity for Continued Growth and Security, (5) Social Integration in the work organisation, (6) Constitutionalism in work organisation, (7) Work and Total Life Space, and (8) Social Relevance of Working Life. The data were collected through questionnaire from five stratas of the employees, namely Executives, Supervisors, Skilled Workers, Semiskilled workers and Unskilled workers across the eight departments. The questionnaire was administered individually and instructions, which were very simple, were conveyed to the individuals verbally with assurance of keeping the anonymity of the name and the information furnished. The responses were obtained on seven point dimensions i.e. Strongly Disagree, Disagree, Slightly Disagree, Neither Agree Nor Disagree, Slightly Agree, Agree, and Strongly Agree. On the hierarchical effects of QWL, it was found that there were differences at various hierarchical

levels of the organisation in perceiving their working life. Higher levels were found to have better perception regarding their working life than workers level on all the sub factors of QWL and overall QWL. On the effect of QWL on group behaviour, it was observed that some QWL factors were positively contributing towards group cohesiveness. For instance, in the shipping department, maximum number of significant correlations was observed between QWL factors and Group Cohesiveness, which has been ascribed to the functional peculiarities of this group. Painting, store and security departments on the other hand failed to show such significant relationship. Based on these findings the investigator states that the Quality of Work Life factors get moderated by functional peculiarities of any work group and have differential effects on Group Cohesiveness.

Siggins (1991) has made a study of Job Satisfaction and performance in a changing environment in the Research and Academic libraries subjecting the survey conducted by the Association of Research Libraries. In the study 80 persons responded are analysed. In his attempt, Siggins portray the changing scenario in the library profession which demands for the retension of only effective staff who have the skills to respond to the changing circumstances. The elements of job satisfaction and their relationships to the performance output are also analysed. Accordingly there is a strong connection between work related attitudes and performance attitudes towards one's job. Of this the most significant is job satisfaction. There are individual and organisational factors that may purport job performance and satisfaction. It has found that

librarians group is professionals motivated to serve others. They enjoy their roles as providers of information and participants in larger purpose of education and research. He concluded that any improvement in the performance of librarians likely to be due to job enrichment and not simply to the fact that a change has occurred at any level.

Suri *et.al.* (1991) undertook a survey to study about the quality of work life practices in the Indian Industry. The organisations covered were manufacturing and service sectors. The result of the study indicated that there are several trends, which have implications for Quality of Work life practices and their outcomes. Both public and private sector organisations least preferred the job and workplace redesign programmes. Organisations prefer system wide practices to isolated experiments, which are limited to certain section or departments.

Thapisa (1989) conducted an investigation into Library Assistants' perceptions about the characteristics of their employment. As per the report of the results of the investigation, some of the job characteristics which effect the perception of work were found to include Pay, Satisfaction, Promotional Opportunities, Satisfaction with the work itself, Skill variety, Task identity, Supervision, Task significance and Autonomy. This report shows that Pay, Performance and Work experience appear to be very important considerations for Library Assistants.

In an enquiry into the incentives for professional staff working in college and university libraries, **Reddy** (1992) has studied the relative importance of incentives to the professional staff working in college and university libraries of Delhi. Fourteen incentive items were taken into consideration. The results show that among the incentive item 'recognition of work done' has been ranked first, by the professionals. The incentive factors namely 'good opportunity for promotion', 'treating the work of professional staff on par with the academic staff' and 'adequate earning' are the next three factors of incentives for the professional staff working in college and university libraries of Delhi. The factors 'giving prompt information about policy', 'procedure of staff changes' and 'lesser work load' are considered as least important incentive factors relatively by professional staff.

Quality of Work Life of secondary teachers and principals was investigated by **Rossmiller** (1992). It was found that principals positively influenced the respect accorded teachers, teacher participation in decisions affecting their work, professional collaboration and interaction, use of skills and knowledge and the teaching learning environment.

Ghosh (1993) has conducted a study to find out the factors that will help to improve the Quality of Work Life at micro level with the objectives of developing tools for evaluation of Quality of Work Life. The primary data have been collected from organisations randomly selected, engaged in manufacturing, mining, power generation and service sectors covering both

public and private enterprises. The categories studied covered the management perception regarding significance of Quality of Work Life, organisational supportive activities of management and its involvement in Quality of Work Life programmes. The finding is that the core determinant of QWL in an organisation is the management's perception of Quality of Work Life in affecting the organisation's effectiveness.

Horestein (1993) studied over 600 academic librarians in the United States to determine whether faculty status and rank were related to job satisfaction. She found that the greatest sources of satisfaction of the librarians in her study were relationship with patrons, relationship with coworkers, assigned duties, and variety of work. Dissatisfaction was caused by opportunities for promotion, recognition of accomplishments, and salary.

Singh-Sengupta (1993) in her study observed that one of the most critical and one of the least discussed elements in QWL is the issue of power relations. In their series of observations in a wide range of organisations the top management is suffering from deficit of power as the non-managerial cadres amass all powers because of the strength of trade unions and their numerical strength. The study disclosed that the two groups, managers and workers seemed to be currently interdependent. Appropriate intervention programme may change the relationship to co-operatively interdependent.

Kershaw (1994) conducted a study to assess teacher's perceived levels of satisfaction with the Quality of their school life according to school level,

gender and years of teaching experience. Data were collected from 701 teachers in 21 Tennessee public schools. Findings indicated that perception vary according to school site. School level factors were found to be significantly different in terms of importance. Communication, support, workload, working conditions and resources were consistently ranked important to teachers, while work enrichment, leadership and recognition were ranked least important.

The survey conducted by **Palmini** (1994) explores the effects that computerisation of libraries has had on the work and job satisfaction of over 200 support staff employed in academic libraries in Wisconsin. The questionnaire includes the questions on period and area of employment, type of automated systems used, percentage of time spent at computer terminals, adequacy of training, change in overall effectiveness since computerisation, and change in job satisfaction. Responses to open-ended questions reveal that many support staff are concerned not only with the specifics of their jobs, but also with larger questions facing academic libraries.

A survey was conducted by **Phillips** *et.al*. (1994) on one hundred and nine master level librarians of varying ages, about their career attitudes. Hierarchical polynomial regression was then employed to examine the relationships between and three effective outcomes: (1) Career Satisfaction (2) Career Entrapment, and (3) Career Identity. Results indicated the age-satisfaction relationship was linear, demonstrating that libraries become

increasingly pleased with their profession overtime. A similar linear relationship between age and entrapment indicated that as librarian's nature, they become bound to their line of work because of accumulated investments and decreased career options. A five-point-rating scale was used to measure career responses. The relationship between age and identity assumed a curvilinear, or inverted U-shaped form. Career identity was higher at mid-career and lower at both early and late career stages. Implications of these findings are advanced.

Prasad (1994) conducted a study of the professional library employees with 460 sample population from seven central university libraries in India. The purpose of the study was to investigate job anxiety and job satisfaction as a technique for library personnel management. A considerable differences in the extent of employee's satisfaction with the overall and specific four areas of job satisfaction – job content area, management area, personal adjustment area and social relation area have been observed. The level of anxiety of employees of higher post is comparatively less than lower posts. The correlation analysis between job anxiety and job analysis reveals that the degree of job anxiety are related to job satisfaction in various areas in different ways. The findings confirm the theory that interpersonal relations are the major determinants of anxiety.

The advantages and limitations of job sharing, with particular reference to librarians were examined by **Stennet** (1994). The work stresses the

importance of communication and equitable division of work and includes two case studies. The study concludes that job sharing, makes good sense in a female-dominated profession but that library managers need to be more aware of the job-sharing option and should create specific job-sharing contracts. Prospective job-sharers need encouragement and can learn from the experiences of others in similar working environments.

By correlating the Quality of Work life at Hindustan Machine Tools (HMT) with special reference to its Jammu & Kashmir Unit, **Gani and Ahmad** (1995) examined the empirical level of various components of QWL from their theoretical expositions. The study was carried out by personal interviews of the workers there. The results of the study are (i) the existing QWL in the organisation under study is of an average standard (ii) compared to working environment, rational and job factors, the financial factors present a dismal picture (iii) the absence of participative management culture, has given rise to harder beaurocratic controls, which has eroded creativity initiative and innovative capabilities of excellent performers.

Daniels (1995) attempts to ascertain and sort out the problems faced by non-professional library staff on computerisation of their respective libraries. Three colleges in UK have been selected for the study, where the libraries are computerised to impart quality service to their clients. In this study the general impact of the implementations of the system was examined. The result of the study was that the computerisation did not disturb the nonprofessionals or

feared instead it promoted their work quality. But it prompted the reduction of staff strength in the nonprofessional wing.

Hovekamp (1995) endevoured to study unionisation and Job Satisfaction of library employees in Academic Research institutions in USA. The participants in this study were full-time or part time employees with MLS or equivalent qualifications. Of the 32 libraries selected for the study, 19 were unionised and 13 were non unionised. 200 professionals were randomly selected representing both the unionised and non unionised libraries for collecting the data for the study. By comparing the survey results of union and non union participants, it finds that the presence of union has a negative relationship with job satisfaction. Here the component Salary was found as more consistent predictor of job satisfaction.

Kaya (1995) conducted a study based on Librarians job satisfaction in the developing countries. According to the author, Job satisfaction is one of the criteria of establishing a healthy organisational structure in an organisation. Libraries are inseparable cornerstones of the society. To render an effective service at the libraries depends on the human source. Job satisfaction of the librarians, who have an important place in the question of how the material and moral elements affect the job satisfaction of the librarians gains importance. It examines librarianship and especially, job satisfaction of librarians in the developing countries.

Lam (1995) surveyed 350 teacher trainees from Singapore to examine relationships among Quality of Work Life, Career Commitment, Job Satisfaction and Withdrawal Cognition. Results showed that perceptions of the social status of teaching strongly related to commitment to and satisfaction with teaching.

Voelck (1995) has explored the job satisfaction of the support staff of libraries in Michigan in USA. A survey has been conducted by distributing questionnaires to the support staff in 15 state supported academic libraries in Michigan. The result of the exploration indicates that support staff is satisfied with Supervision, the nature of their work, co-workers and benefits. They are also dissatisfied with opportunities for promotion, pay and contingent rewards. The means of several dimensions of job satisfaction varied significantly by the staff variables of experience, education, position title, union representation, full or part-time work and working directly with users.

Koenig *et.al.*(1996) investigated the relationship between the job turnover and job satisfaction of ARL University Library directors relative to faculty status. The findings were that there is, in fact seen to be a positive relationship between job satisfaction and faculty status. The provision of staff release time to pursue scholarly endeavors was correlated positively with the directors reported job satisfaction, whereas "hollow faculty status" defined as nominal faculty status but without the provision of release time, was correlated

negatively. Job turnover by itself was quite unrelated to the issue of faculty status.

Kumar and Shanubhogue (1996) have attempted in their study to analyse and compare Quality of Work Life in university systems. The study was aimed to investigate the reactions of the teachers about the existing and expected Quality of Work Life in the universities under study; to see the impact of designation and the perception about the QWL; and to make a comparative learning of existing and expected Quality of Work Life of a rural and an urban university. Two structured questionnaires framed for the purpose of the study were administered to more than 200 teachers to observe the existing and expected Quality of Work Life of teachers. The hypothesis has been proved correct, as there is significant gap between the existing and expected Quality of Work Life of SP university teachers. But in the case of MS universities, lecturers were expecting improvement in Quality of Work Life.

Mishra (1996) conducted a study to compare the levels of occupational stress and job satisfaction among male and female teachers of higher educational institutions. The study was conducted on a sample of 80 degree college teachers comprising 40 males and 40 females. Results indicated that significant differences observed between male and female teachers on overall stress and overall job satisfaction scores. Stress was found to be correlated negatively and significantly with job satisfaction in both the groups.

Reenen (1996) surveyed the Job Satisfaction of the library professionals in US Libraries compared to the other workers of USA. The survey conducted by the news magazine Inc/Gallup on the attitudes of the American workers in total showed high levels of satisfaction among those surveyed. This made him eager to know about the position of the library workers in particular. He chose six questions from the (I/G) survey and used for testing the Job Satisfaction of the library workers were found at 80.4% which is lower to the satisfaction level of other US workers. A few conclusions of the survey are (1) Old workers were more satisfied than younger workers (2) Professional librarians are more satisfied than the non-professional staff and (3) Experienced employees were more satisfied than the less experienced. Those lacking supervisory responsibilities had the lowest satisfaction while department heads were the most satisfied.

Lanier *et.al.* (1997) has performed a study of professional librarians' job satisfaction, which found that creativity, flexibility, and recognition of librarians' skill and knowledge were sources of high satisfaction.

In another study of job satisfaction of librarians, **Leckie and Brett** (1997) found that "relationship with non-professional staff" was a source of great satisfaction among Canadian librarians. The result shows that job satisfaction of professional librarians is high.

Quality of Life among a metropolis population was studied by **Latha and Karthikeyan** (1998). The sample consists of 200 urban peoples. Factor

analysis of the data revealed the emergence of eight factors related to significant spheres of individual's life. Men were found to reveal better Quality of Life than women.

Preston (1998) conducted a descriptive survey including a questionnaire to observe both personal and observed experience of racial discrimination within the profession. The study focused on relationships with Supervisors, Patrons, Coworkers and Management. The purpose of this study was to examine the perceptions of African American librarians on discriminatory practices and behaviors that occur within the profession. SAS (Statistical Analysis System) Software program was used to analyse the survey information. The result shows that no significant correlation was found to exist between overall job satisfaction and Affirmative Action policies. Although 81 percent reported that their jobs gave them a sense of accomplishment, only 49 percent felt that their job skills were being fully utilised.

Edem and Lawal (1999) conducted a survey on Job Satisfaction and the survey data were used to determine the influence of job satisfaction on the publication output of librarians in Nigerian Universities. A stratified random sampling method was used to select 202 librarians working in 22 out of the 35 university libraries in Nigeria. A multiple regression statistical analysis was employed to examine the influence of job satisfaction on publication output of librarians. The results of the empirical analysis indicate that, of the six dimensions of job satisfaction used in the study, only three librarians' levels of

satisfaction with their achievement, responsibility and recognition had a significant influence on their publication output. Other dimensions including salary, university library policies and administration, and supervision, had no significant influence on their publication output. The study also reveals that the intrinsic job satisfaction dimensions were the greatest influence on the quantity of publications among the sample population. However, the extrinsic job satisfaction dimensions which do not influence publication output should not be neglected, rather they could be improved to enhance job satisfaction and raise publication productivity.

Hoque and Rahman (1999) conducted a study to assess and compare the Quality of Working Life of industrial workers of organisations of public and private nature in Bangladesh (Dhake) and to measure whether there is any significant relationship among Quality of Work Life, job behaviour and demographic variables of the workers. The results revealed that the private sector workers perceived significant and higher Quality of Work Life than their counter parts in the public sector. Quality of Work Life has significant correlation with performance and negative correlation with absenteeism and accident.

A study was designed by **Hossain and Islam** (1999) with a view to investigate the overall Quality of Working Life, job satisfaction and performance of the Govt. hospital nurses in Bangaladesh. Significant correlation was found between Quality of Work Life and job satisfaction.

Quality of Work Life had the highest contribution to performance. Morning shift nurses perceived higher Quality of Work Life and job satisfaction than the night shift nurses.

Using the Academic Affairs Library of the University of North Carolina at Chapel Hill as a case study, **Murray** (1999) investigates whether professional and paraprofessional staff in large academic libraries experience significantly different levels and sources of job satisfaction. Over 140 library employees were administered with a modified version of Paul Spector's Job Satisfaction Survey. The results of the study indicate that employees at the Academic Affairs Library of the University of Carolina at Chapel Hill are satisfied with their jobs. While both types of staff were basically satisfied with their jobs, there were significant differences in levels of satisfaction in several areas. Professionals were significantly more satisfied than paraprofessionals in the areas of enjoyment of the work itself, coworkers, appreciation and recognition, promotion, pay, and overall satisfaction. Reasons of these differences were suggested by the investigator as well as possible means to bridge the gap between the two groups.

A survey of library personnel working in different academic libraries in Orissa has been conducted by **Parida** (1999). The study determines the type of status these library professionals prefer, the criteria for evaluating their performance for promotion and salary, whether they prefer to be evaluated like teachers, and the input of faculty members in library matters. The study shows

that eighty percent of the professionals interviewed preferred academic status rather than be equated with teachers. All university librarians, however, prefer to be assessed for promotion through an expert selection committee, as in the case for teachers.

How the Canadian Workers rated their job and their employers with respect to the prevailing Quality of Work Life in their workplace were evaluated by **Lowe** (2000). It was stated that a sizeable group (between 18 & 26 per cent) considered themselves to be in a dead-end job, underemployed, or not encouraged to use initiative. While rating their workplace on a scale of 'very poor' to 'excellent', roughly half or fewer gave 'good' or 'excellent' ratings in their areas of involvement in decisions affecting their work, job security, time of training, effective performance, feed back, recognition for doing a good job and advancement opportunities. Though Canadians have engrained commitment to work, a good number of them tend to express discontentment when they are asked about specific features of their jobs or to evaluate their employers. These findings could be taken as a constructive feed back and can be used to both employees' and employers' advantage.

In an attempt to establish an inevitable linkage between the Quality of Work Life and the industrial relations processes, **Mankidy** (2000) observes that the more positive the Industrial relations processes, the greater the possibility of improved Quality of Work Life. Positive Industrial Relations should ensure better wages, flexible hours of work, conducive work

environment, employment benefits, career prospects, job satisfaction, meaningful employee involvement in decision making etc. leading to better Quality of Work Life. The study concluded that the improved Quality of Work Life will naturally help to improve the family life of the employees and would also improve the performance of the organisation.

The study conducted by **McCormick** (2000) is a notable one. The study was conducted to examine the relationship between three job attitudes – job satisfaction, organisational commitment and career commitment – and a developmental concept, "career adaptability" among employed members of the library and information science profession from Virginia and Maryland. The study employed a demographic survey developed for the purpose. Career adaptability was observed to have statistically significant relationship with satisfaction with pay, satisfaction with the job in general and organisational commitment.

Sierpe (2000) has conducted a study on Job Satisfaction among Librarians in English-Language Universities in Quebec. Spector's Job Satisfaction Survey (JSS) was used to measure the job satisfaction of librarians in the three English-Language universities in the Province of Quebec, Canada (Bishop's Concordia, and McGill). A total of 81 responses (74.3%) were analysed. The results show that although librarians working in these institutions are generally satisfied, they are dissatisfied with communication and operating procedures. The relationship between job satisfaction and

demographic characteristics, such as gender, age, academic rank, and tenure status, were also explored and compared with previous research findings.

Taylor (2000) surveyed the ARL Library Webmasters about the aspects of their roles and job tasks. Information was obtained about their job responsibilities, job satisfactions and dissatisfactions and their opinions about the role of librarians in Website Development. The results of the survey provide insight into a number of expectations and areas of satisfaction and dissatisfaction of library webmasters. Most respondents seemed to have additional responsibilities besides the website. Many stated that they enjoyed using new skills and technological applications to improve and expand their services.

Thornton (2000) has on meticulous evaluation and observation made a Job Satisfaction Survey among the African Descent librarians. The study examines the job satisfaction of librarians of African Descent employed at academic libraries holding membership in the Association of Research Libraries. Data was collected from 79 academic libraries. 136 professionals responded to the Questionnaire. The survey identifies areas of both satisfaction and dissatisfaction for this group of Librarians. It also identifies, there has been no significant increase in the number of librarians of African Descent in ARL Academic libraries for the past ten years. It concludes that if libraries are to recruit and retain a diverse workforce, consideration must be given to what

makes these employees remain on the job and in the profession. It also suggests scope for further research on this area.

Mentz (2001) conducted a study to determine the Quality of Work life of teachers on farm schools in South Africa. The sample consists of 60 teachers in 15 farm schools. Findings indicate that teachers in rural schools are generally satisfied with circumstances and enjoy teaching; they are satisfied with classroom size, physical facilities and teacher student relations.

A study to develop a scale for measuring Quality of Working Life of Doctors was presented by **Yousaf and Anwar** (2001). Through questionnaire, interviews etc., they collected the data required for the construction of the scale. With the help of the scale they arrived at the conclusion that those who were found using their skills and abilities most at work were found enjoying the best possible work life. The extent of feeling of successful work life was found related with quality of work performance and work activities. To have a sense of accomplishment there shall be good supervision too.

Togia *et.al*. (2004) in their study have investigated the job satisfaction among Greek Academic Librarians. In this study they used the Employees Satisfaction Inventory (ESI) for the detection of Job Satisfaction. The instrument assessed six dimensions of Job satisfaction. "Working conditions", "Pay", "Promotion", "Job itself", "Supervision" and "Organisation as a whole". They found that Greek academic librarians were most satisfied with "Job

itself", "Supervision", and "working conditions" and less satisfied with "Pay" and "promotion". Prior working experience contributed negatively to the prediction of satisfaction with "working conditions", "supervision" and "organisation as a whole", whereas participation in decision-making positively influenced "job itself" and "organisation as a whole".

The literature reviews of psychological and sociological studies of job satisfaction in general and specifically for library workers were undertaken by **Topper** (2008). The investigation was primarily intended to measure the job satisfaction among library workers. It revealed that the library workers are very satisfied in their job. It also underlined the fact that job satisfaction should be the key factor for recruitment of the next generation library workers.

2.2.2 Studies Related to Occupational Stress

This part of the review focuses on the Occupational Stress of professionals arising out of their profession and the major and common stressors causing it.

Truch (1980) identified many factors that contribute to teacher stress and burnout including discipline problems, physical and emotional abuse of teachers, low pay, little support from superiors, public criticism of educational quality and an almost traditional attitude to low esteem for teachers as professionals.

A statewide teacher stress survey was conducted with 365 full time special education teachers in Connecticut by **Fimian and Santoro** (1982). Of the 365 respondents 58 were identified as low stress, 250 as moderate stress, and 57 as high stress teachers. Among findings were that the strongest and most frequent sources of stress included inadequate salary, frustration over lack of time for the administration. Many of the teachers surveyed enjoy and are satisfied with the administration. Many of the teachers surveyed enjoy and are satisfied with their job regardless of the moderate to high stress levels that may be incurred.

Meagher (1983) studied the variables associated with stress and burnout of regular and special education teachers and the analysis of data revealed that there was no major difference between regular and special education teachers in terms of teacher stress. When the two groups were compared on each of the eight scales included in the questionnaire, considered collectively, the most frequently reported stressors were lack of support from administrators, working with other teachers and discipline/behaviour problems.

A comparison of levels of stress of special education elementary teachers and secondary teachers was done by **Pipkin** (1983). The result of the study showed that there was a significant difference in the levels of job related stress between secondary and elementary special education resource teachers. The elementary teachers experienced a significantly higher degree of stress than did the secondary teachers. No significant difference was revealed

between the elementary and secondary teacher's level of stress regarding non-job related life events.

The effect of employees' ego strength and job involvement on their experience of role stress arising from role conflict were investigated by **Srivastava and Sinha** (1983). The Ego-strength scale (Hassan, 1974), the Job Involvement Scale (Lodahl and Kejner, 1965) and the Occupational Stress Index (Srivastava and Singh, 1981) were administered to a sample of 120 respondents comprising of 30 managers, 30 engineers, 30 superintendents and 60 section in-charges. The authors concluded that high ego strength enables employees to cope effectively with excessive demands and conflicting expectations. On the other hand, job involvement leads to job satisfaction and enhances the level of intrinsic motivation.

By using a path analytic model, **Hubert** (1984) determined the relationship of school organisational stressors to teacher stress in public high schools. Surveying 786 teachers from a group of 50 Connecticut high schools, it was found that variation in stress from school to school was strongly related to selected organisational health variables but that stress does not vary much among schools. Need-satisfaction, proved valuable in explaining how organisational variables related to stress.

Scamell and Stead (1984) investigated the relationship between subordinate assertiveness, leader behaviour and subordinate role stress for a sample of professional librarians. This exploratory study is a theoretical base,

and a model to describe the consequences that might occur when a subordinate was either high-or low-assertive behaviour. Although the findings did reveal a significant correlation between initiating structure and consideration for the low-assertive subordinates, assertiveness did not otherwise moderate the relationship between either consideration or structure and subordinate role ambiguity, role conflict, and need for clarity. Based on the total sample of 66 respondents, it was found that, there was a high inverse relationship between consideration and role ambiguity and between consideration and role conflict. No significant relationship was found between consideration and need for clarity and between structure and role ambiguity and between structure and role conflict.

Smith and Neilsen (1984) focused their study on the burnout problems of corporate librarians in the United States of America. The study was limited to those librarians working in the profit making corporate sector. The data for the study was gathered by sending the copy of the survey instrument to a sample of 150 corporate libraries to fill it and return by reference librarians only. The Maslach Burnout Inventory (MBI) was as such applied for the survey. Eighty percentage of the respondents to the questionnaire were female gender and a third of the respondents were between the ages 30-40. 57% of the respondents had Masters Degree, 25% had Bachelor's degree, 7% had a non library degree, 5% had a Ph.D. and 7% had non college degree. The corporate librarians showed some signs of burnout. Feeling lack of personal accomplishment was found to be the greatest cause of high burnout for the

sample. Inadequate positive feedback and a lack of control over the operations of the library were also found closely related to the problem of burnout of the corporate librarians.

Connolly and Sanders (1986) examined the amount of perceived stress and dimensions on 121 elementary and secondary school teachers. Correlations were found between the 'Emotional Exhaustion' dimension of stress and gender (males experienced more burnout) and years of teaching (teachers with more years at their present job experienced more burnout). Correlations were also found between the 'Depersonalisation' dimension of stress and education level (secondary teachers experienced more burnout). Correlations were found between the third dimension of stress, 'Personal Accomplisment' and gender, years of teaching, and years at the present job. The years at the present job made a significant contribution to the prediction of the three dimensions of burnout.

Tupes (1986) conducted a study to measure, analyse and compare the degree of stress perceived by public elementary and secondary school teachers in the Prince William country school system. The findings of the study revealed that eventhough a moderately high level of stress across selected levels of key demographic variables, such as sex, age, marital status, race, degree and percentage of total family income.

Jagdish and Srivastava (1989) conducted a study to examine the relationship between perceived occupational stress stemming from various job

dimensions and mental health or psychological well being of the first level supervisors. The perceived occupational stress was assessed with the help of Occupational Stress Index developed and standardized by Srivastava and Singh (1981). The items relate to twelve dimensions of job life namely Role overload, Role ambiguity, Role conflict, Group and political pressures, Responsibility for persons, under participation, Powerlessness, Poor peer relations, Intrinsic impoverishment, Low status, Strenuous working conditions and Unprofitability. The sample studied comprised of 400 first level technical supervisors, randomly selected from various units of Mechanical and Electrical departments of Diesel Locomotive Works, Varanasi (U. P.). The results revealed that occupational stress arising particularly from intrinsic impoverishment, role conflict, role ambiguity and poor peer relations are closely associated with employee's mental health. It is observed from the results that the stress stemming from role overload, under participation, strenuous working conditions and unprofitability do not significantly relate to perception of reality – a dimension of mental health.

Kumar (1989) conducted a study in an oil company to investigate the relationship between role stress, role satisfaction and role efficacy. He took a sample of 292 lower and middle level executives from different functional areas of the company. The ORS Scale (Pareek, 1983), the MAO-R (Pareek, 1986) and the Role Efficacy Scale (Pareek, 1986) were used to measure the relationship. The findings of the study revealed that (a) Role stagnation, personal inadequacy and self-role distance were found to be significantly

higher among lower level executives. (b) Unmarried executives experienced significantly higher total role stress as compared to married executives.

Manthei (1989) surveyed the school counselors about the job-related stress. Results indicated that females reported significantly more than males when performing non professional duties. Males reported more stress regarding financial concern than did females. Older subjects reported less stress than younger subjects. Stressors included role ambiguity, role overload and the role conflict.

In a study by **Vance and Humphreys** (1989) on Occupational Stress among 30 American, Indian, Hispanic and white teachers at a reservation school, concludes that regardless of race or sex, major sources of stress were inadequate salary, lack of professional recognition, and time management problems.

Dhadda (1990) studied the relationship of role stress, job involvement and personality types in aviation and railway officials. The sample consisted of fifty railway and fifty aviation officials. For the purpose of the study, the ORS scale (Pareek, 1983), the Job Involvement Scale (Lodahl and Kejner, 1965) and the Type-A/Type-B Scale (Bortner, 1969) were administered to the respondents. The study arrived at the conclusion that (a) Role overload caused maximum stress among railway officials and role ambiguity caused the least, whereas role erosion caused maximum and role overload caused minimum

stress among aviation officials (b) Job involvement was found to be positively related to role stress.

The study by **Kirby** (1990) explored the perceived stress levels of 115 Kentucky elementary school principals. Findings show that the most stressful events involved forcing the resignation or dismissal of a teacher and dealing with unsatisfactory performance of professional staff. The two most stressful events correlated significantly with the variables such as gender, age and number of years as principal.

Beena and Poduval (1991) studied gender differences in relation to the work stress with age as an independent variable. The sample consisted of 80 first-level executives of a large industrial organisation. A 25-item work stress-related scale was developed by using items from the Higging's scale. The findings of the study indicated that stress experience of the executives increased with advancing age. Sex was also found to be a major factor affecting the stress condition.

Borg and Riding (1991) conducted an investigation of Occupational Stress on 545 teachers in Malta. It was revealed that one-third of the respondents rated teaching as stressful or very stressful. The study was also identified pupil misbehaviour, poor working conditions, poor staff relations and time pressures as leading contributors to stress.

Relationships among secondary school teachers' Occupational Stress, Personality Type and Social Supports were examined by **Mo** (1991). Results of the study reported greater stress among single and newer teachers, graduate status teachers undergoing less social support. The results also indicated that teachers with Type A personality suffered less from burnout and the harmful effects of stress.

Burns and Gmelch (1992) examined the stress factors for academic department chairs of institutions of higher education. The sample consists of 523 department heads at 100 institutions. Department Chair Stress Inventory (DCSI) was used to collect data. Analysis of data revealed that chairs who have high role ambiguity experience high stress regarding their career. Chairs who have high role conflict characterised as significantly more stress, than those chairs with low perceived role conflict. Stress of the chairs was found highly correlated with role conflict and role ambiguity.

Hipps and Halpin (1992) studied the difference in teachers' and principals' general job stress and stress related to performance based accreditation. The sample consists of 65 principals and 242 teachers from Alabama school system. Results show that teachers experienced more stress than principals. Also found out the largest source of stress being the job overload, relationships with students, salary and compensation.

In a study based on the International Conference on AIDS, **Hulme** *et.al*. (1992) have sent a self administered questionnaire to 123 staff

working in HIV/AIDS in and out patient units and 72 doctors and nurses working on Oncology. It included the General Health Questionnaire, Maslach Burnout Inventory and self reported stressors, supports and coping methods. 78% of the staff working in HIV/AIDS have returned the questionnaires while 57% of the doctors and nurses working in Oncology (41 nos.) returned the questionnaires.   There was no significant difference in the Genral Health Questionnaire scores although both had higher than the general population. Results from the Maslach Burnout Inventory showed greater frequency and higher intensity of Personal Accomplishment in the Oncology staff.   Staff working in Oncology were more likely to seek religious support. It found that both groups shown high levels of stress.

Mittal (1992) studied role stresses in relation to coping styles, locus of control and personality type using a sample of 147 doctors belonging to both private and government hospital settings. A set of five psychometric tools – the ORS Scale (Pareek, 1983), Can You Type Your Behaviour (Gmelch, 1982), the Social Reaction Inventory (Rotter, 1966), the Role PICS (Pareek, 1983) and the Symptom Management Checklist (Latack, 1986) - were administered to the respondents. The analysis of data revealed that (a) Private doctors experienced more overload and self-role distance in comparison to government doctors (b) Male private doctors experienced more self-role distance and role ambiguity in comparison to male government doctors.

In a cross-cultural study on Occupational Stress of 373 Jewish and Arab teachers in Jerusalem, **Gaziel** (1993) found higher stress among Jewish teachers, whereas Arab teachers were most stressed by working conditions and professional image. Two groups were found different in coping strategies.

Johnstone (1993) conducted a study on 58 primary and 32 secondary Scottish teachers to examine the workload and stress, and found the following results. The teachers experienced between three and five occasions of stress in those week in which they had extra work and registering high scores on the measure of Occupational Stress.

Teachers' workload and associated stress was studied by **Johnstone** (1993) on 570 Scottish classroom teachers. The results indicated that 93% of teachers reported at least one occasion of stress during the week. The longer the hours worked, the more stress occasions reported.

Minner and Lepich (1993) examined the Occupational Stress of rural and urban special education teachers. A 60-item questionnaire was administered on 265 beginning special education teachers in Illinois. Significantly higher levels of job related stress were found for rural compared to urban teachers.

Olsen (1993) studied work satisfaction and stress in the first and third year of appointment on 52 and 47 teachers respectively. Findings indicated a decrease in job satisfaction and increase in job related Stress. Factors driving stress and satisfaction varied over time.

Russell and Wiley (1993) studied the Occupational Stress levels among rural teachers in the area of Mental retardation, learning disabilities and emotional conflict. The survey of 154 rural special educators found no significant difference in stress levels among groups as measured by the teacher stress inventory.

Brown and Ralph (1994) conducted a research study with teachers in the University of Manchester to identify stressors and stress management strategies. Sample comprised of 100 Teachers. Findings indicated that certain work related factors were common stressors. These stressors are teacher/pupil relationship, relation with colleagues and parents, innovation and change, school management and administration and time factors.

Soyibo (1994) conducted a study on 230 high school teachers in Jamaica using 40-item self-report instrument to identify the significant stress factors. From the results it can be seen that institutional, environmental and personal factors were identified as significant stress factors.

Affleck (1996) surveyed the Bibliographic Instruction Librarians in New England. She has mainly chosen three dimensions of burnout such as emotional exhaustion, loss of feeling for clients or depersonalization, and diminished feelings of personal accomplishment. She has used the Maslach Burnout Inventory as the psychometric instrument to measure the above three dimensions of burnout. There were 142 BI Librarians in the sample for study.

She has found high levels of burnout among 52.8 percent of the total sample of BI Librarians in a single dimension of the syndrome and in all three of its dimensions among 8.5 percent.

Arnold (1996) investigated the influence of institutional characteristics on teacher stress on nearly 43,000 teachers at 300 secondary education institutions in USA. Results revealed that institutional variables did not appear to be predictors of faculty stress. Among professional status variables, academic rank was identified as a significant predictor of general stress with higher rank predicting higher stress.

Lim and Teo (1996) examined gender differences in occupational stress and coping strategies among Information Technology (IT) professionals in Singapore. It was found that the female IT personnel reported significantly higher scores on sources of stress originating from 'factors intrinsic to the job', 'managerial role', 'career and achievement', 'organisational structure and climate' and 'relationships with others'. Contrary to initial prediction, no significant gender difference was found for stress originating from 'home-work interface'. With respect to copying strategies female IT personnel tend to suppress their emotions and deal with problems in a logical and unemotional manner.

Schamer and Jackson (1996) conducted an investigation on Teacher stress and burnout. The sample consists of 515 secondary level teachers of Ontario city. The study suggests that more than any other public service

professionals, teachers are affected by continued stress leading to burnout. This in turn results in a negative attitude towards student and a loss of idealism, energy and purpose.

In a survey conducted by **Thorsen** (1996) on 494 teachers in four disciplines at four Ontario Universities it was found that quality rather than nature of academic work was stressful. Hours spent on the job with a time constraint were found significant sources of stress.

Chen and Miller (1997) reviewed the International literature on Teacher Stress. They summarized research on both organisational and individual characteristics positively correlated to Teacher Stress. Organisational characteristics are time constraints, workload, job demands, role conflict, role ambiguity, income resources, class size, participation in decision-making student discipline and interaction. Individual characteristics are age, marital status and gender. Teachers found increased stress by time factors, workload, role conflict and role ambiguity etc.

Biographical differences in Occupational Stress of teachers were investigated by **McCormick** (1997) in Australia. Significant difference in Occupational Stress between elementary and secondary school teachers was found.

Mishra (1997) conducted a study to compare the level of Occupational Stress among public and private sector public relations officers. The

Occupational Stress Index of Srivastava and Singh (1981) was administered to the sample population. Critical ratio test was used to find out the difference between perceived occupational stress among public and private sector public relations officers. The analysis of the data revealed that public relations officers of public sector experienced significantly higher occupational stress on the dimensions of role ambiguity, role conflict, unreasonable group and political pressures, powerlessness, poor peer relations at work, intrinsic impoverishment, low status and strenuous working conditions as compared to public relations officers of private sector.

Guglielmi and Tatrow (1998) reviewed the health effects of Teacher Stress and reported serious health problems as suffered by teachers having occupational stress.

Odelia (1998) surveyed burnout among librarians in Israel's academic libraries with respect to scope, rate and reasons. He found that there is a low degree of burnout among librarians working in university libraries in Israel. Based on MBI questionnaire, level of burnout was found to fluctuate between low to medium. Close to 75% of the librarians sampled were between the ages of 41 and 60. The few younger ones had feelings of frustration and lack of self-fulfillment. Fast technological changes were not considered as a main cause for burnout. The study discovered high degree of burnout and dissatisfaction with respect to working conditions and Motivation. The low

status bothers many librarians. The gap between self and public perception results in low self-estimate among university librarians in Israel.

Poole and Denny (2001) investigated the aspects of techno stress of Librarians owing to the introduction of new technologies in the library field. Techno stress is considered to be modern disease of adaptation caused by inability to cope up with new technologies in an effective manner. An exclusive survey has been conducted at the Community College Library at Florida in USA to study the impact of technology on the library professionals. It examined how employees in Florida Community College Library and Learning Resource Centres are dealing with technological change in their work environment. The result of the investigation indicated that the staff is reacting positively to the technological change. They showed only a negligible stress related consequence in the change.

Haridasan and Sultan (2002), in their survey examines the extend of Occupational Stress felt by the library staff of the Gorakhpur University. The main objectives of the study were to identify the role of different dimensions of stress experienced by the library staff working in different levels in the organisation, to study the personal factors causing the burnout among library staff etc. Data were collected by sending questionnaire to library staff of the university. 62 staff were investigated for ascertaining their stress experience. A few of the findings are, the librarians are under stress as they are affected by role overload, role conflict, unreasonable group and political pressure and

under participation, the librarian also experience high burn out on the emotional exhaustion dimension.   Junior professional assistants also experienced high degree of burnout on the emotional exhaustion etc.

Awasthy (2002) has conducted a study on the stress and burnout among library professionals in the universities and colleges of Punjab, Haryana and Chandigarh.   The results of the study indicate that (i) the stress of library professionals found moderate or average in the areas under study (ii) the library professionals are maintaining moderate level of burnout (iii) there is no significant sex difference exists in respect of stress and burnout (iv) urban library professionals suffers from more occupational stress than their rural counterparts (v) significant differences on stress and burnout is found existing between the library professionals based on their age groups (vi) senior library professionals show less satisfaction as regards to their status in comparison with their junior counterparts.

Sornam and Sudha (2003) attempts to study the level of Occupational Role Stress (ORS) among women library professionals working in Bharathidasan University in Tamil Nadu. Among 45 professionals the study has made use of Occupational Role Stress Scale developed by Pareek (1992). Objectives of the study were to identify the influence of age, experience, marital status on ORS and to find out the extend of association between selected socio demographic variables and ORS. The scoring pattern was done in a five point mode ranging from 0-4 and the Median, Chi-Square test, Karl

Pearson's Co-efficient of Correlation and Students t-test were used as statistical Tools. The study identified that age, experience and marital status have significant association with ORS.

The study undertook by **Togia** (2005) mainly includes to measure the levels of burnout among Greek Academic librarians and to assess its relation with certain background characteristics. The Maslach Burnout Inventory (MBI) was administered to 136 academic librarians across Greece. The study suggested that respondents experienced low levels of emotional exhaustion and depersonalization and moderate levels of personal accomplishment. Of the background characteristics, age, number of years as a librarian and participation in decision-making were found to be independent of the burnout experienced. Direct contact with library users seemed to enhance feelings of personal accomplishment. In addition, employees with short-term contracts reported higher levels of emotional exhaustion in comparison to their colleagues holding lifetime positions. It provides valuable results concerning burnout among library professional in Greece.

Routray and Satpathy (2007) attempt to analyse the occupational stress experienced by the library and information science professionals in a digital library environment. According to them the stress can create negative/positive feelings on professionals. A positive influence of stress will result in new awareness and exciting new perspective. Whereas a negative influence may result in distrust, rejection, anger, depression which in turn leads

to frustration etc. Stresses in a digital environment can be technological stress, job insecurity stress, or physical stress. The reasons for stress may be due to technological changes, changing library environment, changing user's demand, reducing staff strength etc. It concluded that best way to manage the stresses wisely is to reduce its effect considerably than to avoid them.

Khosravi (2000) surveyed the opinions of librarians working in central university libraries in Iran about the problem of library stress. Fred Luthan's categorisations stressors is applied. A questionnaire with 36 questions using Likert Scale is used. 150 filled questionnaires were received. Results are analysed using percentage and means. Luthan's five factors, causing the most amount of stress in libraries are identified as a lack of library director's support, lack of job security, lack of library director's cooperation, lack of correct measures for encouragement, and lack of scientific methods of performance evaluation.

2.2.3 Studies Showing Relationship between Quality of Work Life and Occupational Stress

This part of the review includes studies which observed relationship between Quality of Work Life and Occupational Stress. It shows that the two aspects exist side by side in a work organisation. At every work place these two aspects influence the professionals and the organisation.

Laughlin (1985) studied the occupational stress and its relationship to social supports and life turbulence of teachers in New South Wales. The study revealed that nearly one third of the teachers considered their job to be extremely stressful. Self reported teacher stress was found to be negatively related to Job satisfaction and intension to continue teaching.

In a cross-cultural study conducted by **Menlo and Poppleton** (1990) on quality of teaching life among secondary school teachers, it was reported that quality of teaching life is related to Job Satisfaction, work centrality and Occupational Stress.

Whitlatch (1991) has made a study about the Job Satisfaction among reference librarians where the libraries are automated. He chose five academic libraries for the study. It affirmed that the automation raises stress in the job when attempting to improve services through automation. The arising stress is to be more focused. The general notion concerning stress is that too much or too little stress is not good. But a moderate level of stress motivate the professionals is good. The study reveals that one of the dangers of automation is that the professionals will become technicians and the job will become very routine. The job satisfaction will be less in routine job. It found that the people working in the reference library departments report the work to be significantly less routine and that the reference personnel were more satisfied.

Billingsley and Cross (1992) conducted a study on 463 special educators and 493 general educators in Virginia. Analysis indicated that work-

related variables, such as leadership support, role conflict, role ambiguity, and stress, are better predictors of commitment and job satisfaction than are demographic variables. Findings were similar for general and special educators.

McCormick and Solman (1992) studied teachers' attributions of responsibility for Occupational stress and satisfaction in Australia. The study suggests different levels of stress exist at elementary and secondary levels and pointed out that stress and job satisfaction is related.

A healthcare corporation of St. Johns' at Newfoundland was formed with tiny eight units of other eight health care facilities. The radical transformation resulting from the Health care reform on restructuring, recognizing and downsizing has impacted on the nursing profession and affected the quality of nurses' work life. This has been subjected to the study of **Davis and Thorburn** (1995) for evolving strategies for enhancement of the profession's Quality of Work Life. The Health Care corporation experienced the stress associated with change when it simultaneously merged eight health care sites and introduced a programme-based management structure. It resulted in the development and implementation of a professional support network called nursing peer support programme which found its fruit in solving the crisis.

Attempts have been made by **Ahmad and Mehta** (1997) to bring forward empirical evidence on the relationship between Organisational Role

Stress (ORS) and Perceived Quality of Work Life (PQWL). The results indicate that all the ten dimensions of ORS, namely inter-role distance, role stagnation, role expectation conflict, role erosion, role overload, role isolation, role inadequacy were negatively correlated with the four dimensions of PQWL, namely, influence, work amenities, job satisfaction and supervisory behaviour.

Patanayak (1997) has conducted a study about Role Stress and Quality of Work Life specifically at Steel Authority of India (Rourekela Steel Plant) and National Aluminium Co. (NALCO) taking into account of 3 dimensions, namely type of organisation (new and old) area of work (production and service) and the position in the Organisation's hierarchy (executive and non-executive) with regard to Organisational Role Stress and sub scales. It explained that all the three dimensions jointly contribute to the differential experience of role expectation conflict as ORS variables. The major dependent variable of the study is Quality of Work life as an index of organisational effectiveness.

In an effort to improve efficiency and productivity for employers of Academic Library, **Black and Forro** (1999) investigated the relevance of breaking humor at work place. The serious nature of academic research, teaching and dissemination of knowledge does not produce an atmosphere of jocularity; academic libraries, as a part of the larger academic community, naturally reflect this serious atmosphere. According to the investigators, libraries can and should reap the benefits of supporting humor in workplace –

better interpersonal communications, improved teamwork and enhanced personal job satisfaction – while acknowledging the serious vital nature of the services they provide. According to them, a library staff lounge humor resource section could be a heaven to the irreverent. They concluded that humor may be a key to controlling stress promoting good health and encouraging positive work relationships. It suggests that the people who enjoy their work are more productive and creative. Because they are more satisfied with their job, they tend to promote better morale in the workplace.

Quality of Work Life Task Force of George Mason University (2000) has conducted a survey of George Mason University employees to assess the quality of their work lives. This survey included 73 structured questions, and was sent to a random sample of 600 employees across all job categories: adjunct, restricted, administrative, and tenure line faculty, classified staff, and wage employees. The survey achieved a high rate of response (66%), indicating that the opportunity to speak out regarding the quality of work life at George Manson University is important to many employees. The results of the survey revealed that (1) Overall job satisfaction at George Manson is reasonably high, with nearly two thirds (63%) saying they are either "satisfied" or "very satisfied", (2) Employees at all levels value the autonomy of their jobs, (3) Work load is a significant source of stress for the entire sample, especially for all faculty groups and classified employees, (4) A majority of classified staff and tenure-line, restricted, and administrative faculty identify "institutional procedures and red tape" as sources of stress, (5) Lack of

promotion opportunities or the review/promotion process are sources of stress to many employees, (6) A lack of "special recognition for achievements and milestones" was a source of great dissatisfaction among classified and faculty employees (except adjunct faculty).

Raza and Gupta (2000) have conducted a study to measure the extent of job satisfaction and effect of job anxiety on job satisfaction and their inter relationship among library professionals according to their hierarchy of the post. The data was collected from a sample of 65 library professionals employed in Delhi University System. This was an empirical study to establish some relationship between job anxiety and job satisfaction in the library environment, which could be useful for maximising the output and efficiency of library operations. Questionnaire method has been used for the data collection. The 'J.S.Q.: Job Satisfaction Questionnaire' developed by D. M. Pestonjee (1973) and 'J.A.S.: Job Anxiety Scale' developed by A.K.Srivastava (1974) were the main tools used to gather required information. The results indicate that library employees of different posts demonstrate individual differences in job anxiety. The percentage of satisfied employees pertaining to social relation area is the highest (92.30%), most of the persons are able to maintain good social relation. The extent of job satisfaction in personal adjustment area is 63%, which is the lowest percentage as compared to other areas of job satisfaction. There is an inverse relationship between the level of anxiety and hierarchy of posts in library.

Goudwaard and Andries (2006) studied the relationship between the employment status and working conditions. They used data from the third European Survey on working conditions to look at changes in employment relations between 1996 and 2000. It analyses the relationship between employment status and working conditions. The concept of employment status is two-dimensional. The research distinguishes between two types of employment contracts: permanent or openended. It distinguishes between full-time and part-time employees. These two dimensions are linked together, with a higher proportion of part-time European Foundation for the improvement of living and working conditions. The multivariate analysis has been done taking into account several characteristics such as sector, occupation, sex, age. The findings include the notion that employment status is not the only variable that may lead to poor working conditions. Stress appears to be most prevalent (41%) among non-qualified blue-collar and white-collar female workers. Strong intensification in work and less discussion within the work group are major factors that accentuate stress. 62% of employees whose relations with co-workers have been decreased and they are found to be more stressed. The survey reveals that the working conditions differ according to each socio-professional category. Its impact particularly depends on the quality of interaction between employer and employee in the company's work organisation structures.

2.2.4 Conclusion

The studies reviewed relate to different types of occupations (viz.) banking, teaching, nursing, medicine, industry, private and public limited companies; in addition to those relating to library profession. The studies located and reviewed include both Indian and foreign studies.

In the studies reviewed on Quality of Work Life, a number of dimensions were considered for evaluating the job satisfaction of the Professionals. Most of the characteristics found analysed and studied were amenities at work, participation in decision making, planning and policies, working conditions, supervision and management, communication, career advancement, job safety and security, compensation, recognition and praise, interpersonal relations, job stress, job enrichment, motivation, age, marital status, promotion, salary, application of modern technologies such as computer and other electronic gadgets for information processing and retrieval etc. In a few studies it was found that the professionals were satisfied with the supervision, nature of work and benefits, but dissatisfied with opportunities for promotion, pay and contingent rewards. Many dimensions of job satisfaction significantly varied with the staff variables of experience, education, position title, union representation etc. As regards the application of computer and other electronic technologies, a very few enjoyed in using new skills to improve and expand their services. It was also revealed that improved Quality of Work Life naturally helped to improve the family life of the employee and also improved the performance and productivity of the organisation.

The related literature and studies reviewed on Occupational Stress identified a number of factors that bring stressful situations in the profession. The common and popular dimensions of stress considered and studied at the work place were role overload, role ambiguity, role conflict, group and political pressure, responsibility for persons, under participation, powerlessness, poor peer relations, intrinsic impoverishment, low status, strenuous working conditions, unprofitability, staff-role distance, inter-role distance etc. It also examined the independent variables like ego strength, job involvement, age, marital status, gender, social support, extra work, job demands, professionals engaged in rural and urban sectors, for ascertaining factors which add to the occupational stress of the professionals.

Role overload is another dimension found causing maximum stress. From the reviewed studies, it has been made clear that lack of personal accomplishment and lack of control over the operations of the library were closely associated with the burnout of the library professionals. Technostress is considered to be a modern disease of adaptation caused by inability to cope up with new technologies in an effective manner. The investigation in this area of library profession indicates that the staff is positively reacting to the technological changes. The influence of age, experience, marital status on occupational role stress were also examined and identified that they had significant association with Occupational Role Stress. Some findings revealed that librarians were under stress as they were affected by role overload, role conflicts, unreasonable group and political pressure and underparticipation.

The librarians also experience high degree of burnout on emotional exhaustion dimension.

The personal and organisational characteristics like persons behaviour, reaction, mental or physical conditions, age, marital status, family background, environmental factors, faulty job design, employer-employee relationships, social isolation, failure to solve grievances, fear of adverse health effects, threat of job losses etc. were identified as the main causes of stress. These stress normally result into absenteeism, turnover accidents, low productivity, inefficient services, lack of motivation, job dissatisfaction and alienation.

Some of the studies reviewed also correlates Quality of Work Life dimensions with Occupational Stress dimensions. They revealed empirical evidences on the relationship between Organisational Roll Stress and Perceived Quality of Work Life.

Thus the review of literature helped the investigator to identify the possible correlates of the dependent variables.

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DESIGN OF THE STUDY

Variables

Objectives, Hypotheses

Procedure
Sample for the Study
Data Collection Procedure, Scoring and Consolidation of Data
Statistical Techniques

DESIGN OF THE STUDY

The major objectives of the present study are to investigate the extent and levels of Quality of Work Life and Occupational Stress among Library Professionals in Kerala and to examine the magnitude of correlation between the two variables. Attempt was also made to compare the QWL of relevant subsamples.

In this chapter, the methodology adopted for the investigation is detailed under the following major sub-sections.

3.1   VARIABLES

3.2   OBJECTIVES

3.3   HYPOTHESES

3.4   PROCEDURE

3.1 VARIABLES OF THE STUDY

The study warrants two sets of variables namely dependent variables and independent variables. The variables under these two sets are given below:

3.1.1 Dependent Variables

The title of the problem suggests that there are two dependent variables:

(i) Quality of Work Life

(ii) Occupational Stress.

3.1.2 Independent Variables

The selection of any variable as an independent variable was based on the assumption that there were measurable differences among levels with regard to the perception of the dependent variables, Quality of Work Life and Occupational Stress and could be used as a probable predictor of Quality of Work Life change and Occupational Stress variation on the respondent.

Selection of the variables was also made on the major consideration that the factors selected should be amenable for objective measurement and also facilitate group measurement.

Considering the above criteria, independent variables selected for the study were categorised as:

1. Demographic and personal variables.
2. Organisational characteristics.

3.1.2.1   <u>Demographic and Personal Variables:</u>

This includes:

1) Gender

2) Age

3) Marital status

4) Number of children

5) Educational background

6) Job title category

7) Professional experience

8) Primary functional area

9) Salary

10) Involvement in IT applications

3.1.2.2   Organisational Characteristics:

This includes:

1) Type of Library management

2) Number of supervisors

3) Type of Library

4) Size of Library

5) Work schedule

3.2 OBJECTIVES

The objectives formulated for the conduct of the present study are stated below:

1. To find out the extent and levels of 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

2. To compare the 'Quality of Work Life' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of (i) Gender (ii) Age (iii) Marital status (iv) Number of children

(v) Educational background (vi) Job title category (vii) Professional experience (viii) Primary functional area (ix) Salary range (x) Involvement in IT applications (xi) Number of supervisors (xii) Work schedule (xiii) Type of library (xiv) Size of library (xv) Type of management.

3. To compare the level of 'Occupational Stress' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of (i) Gender (ii) Age (iii) Marital status (iv) Number of children (v) Educational background (vi) Job title category (vii) Professional experience (viii) Primary functional area (ix) Salary range (x) Involvement in IT applications (xi) Number of supervisors (xii) Work schedule (xiii) Type of library (xiv) Size of library (xv) Type of management.

4. To estimate the relationship between the 'Quality of Work Life' of Library Professionals in Kerala and each of the select independent variables selected (viz.) Gender, Age, Marital status, Number of children, Educational background, Job title category, Professional experience, Primary functional area, Salary range, Involvement in IT applications, Number of supervisors, Work schedule, Type of library, Size of library, Type of management.

5. To estimate the relationship between the 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables selected (viz.) Gender, Age, Marital status, Number of children, Educational background, Job title category, Professional experience, Primary functional area, Salary range, Involvement in IT applications, Number of supervisors, Work schedule, Type of library, Size of library, Type of management.

6. To study the extent of association between 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

3.3 HYPOTHESES

The following hypotheses were formulated to give a specific direction to the investigation. They were tested with the data collected.

1. The percentage of Library Professionals in Kerala having high level of 'Quality of Work Life' will be significant.

2. The percentage of Library Professionals in Kerala having high level of 'Occupational Stress' will be significant.

3. There will be significant difference in the mean 'Quality of Work Life' scores of the subsamples (taken in pairs) when Library

Professionals categorised on the basis of each of the select independent variables are compared.

4. There will be significant difference in the mean 'Occupational Stress' scores of the subsamples (taken in pairs) when Library Professionals categorised on the basis of each of the select independent variables are compared.

5. The relationship between 'Quality of Work Life' of Library Professionals in Kerala and each of the select independent variables (viz.) Gender, Age, Marital status, Number of children, Educational background, Job title category, Professional experience, Primary functional area, Salary range, Involvement in IT applications, Number of supervisors, Work schedule, Type of library, Size of library, and Type of management will be significant.

6. The relationship between 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables (viz.) Gender, Age, Marital status, Number of children, Educational background, Job title category, Professional experience, Primary functional area, Salary range, Involvement in IT applications, Number of supervisors, Work schedule, Type of library, Size of library, and Type of management will be significant.

7. The relationship between 'Quality of Work Life' and 'Occupational Stress' of Library Professionals in Kerala will be significant.

3.4 PROCEDURE

The procedure adopted for the investigation has been described under the following subsections:

3.4.1   TOOLS USED FOR DATA COLLECTION AND
        MEASUREMENT

3.4.2   SAMPLE SELECTED FOR THE STUDY

3.4.3   DATA COLLECTION PROCEDURE, SCORING, AND
        CONSOLIDATION OF DATA

3.4.4   STATISTICAL TECHNIQUES USED FOR ANALYSIS OF
        DATA

Each of the above is explained below:

3.4.1 Tools Used for Data Collection and Measurement

The necessary data on dependent and independent variables were collected using the following tools.

1) Quality of Work Life Scale for Library Professionals

2) Occupational Stress Inventory for Library Professionals

3) General Data Sheet

The tools were specifically designed, constructed and standardized by the investigator for the purpose. The various steps and procedures undertaken by the investigator in the construction of each tool are described below:

3.4.1.1 Quality of Work Life Scale for Library Professionals (QWLSLP)

The scale was developed by the investigator for the purpose of the study to measure the Quality of Work Life of Library Professionals in Kerala.

According to American Society of Training & Development (1979), Quality of Work Life is a process of work organisations, which enables its members at all levels to participate actively and efficiently in shaping the organisations environment, methods and outcomes. It is a value-based process, which is aimed towards meeting the twin goals of enhanced effectiveness of organisations and improved quality of life at work for employees.

Cohen and Rosenthal (1980) has defined Quality of Work Life as an internationally designed effort to bring out increased labor management and co-operation to jointly solve the problem of improving organisational performance and employee satisfaction.

The variable, 'Quality of Work Life' is conceived in the present study as 'values and attitudes contained in working life of any employee'. A higher score on 'QWL' Scale indicates 'Better Quality of Work Life'. The 'Work Life Concept' consists of many factors, each of which plays its role in evaluating Work Life.

It is evident from the related literature that, Quality of Work Life is considered as one of the significant variables in stress research.

Review of literature revealed that the Quality of Work Life of various professionals was often measured with different standards or scales. None of them was found suitable for Library Profession. Hence development of a new scale was found inevitable to precisely measure the Quality of Work Life of the Library and Information Professionals. For the construction of a scale for measuring the Quality of Work Life, systematic procedures and techniques were already suggested by the experts in Psychometric. Following these procedures and techniques, construction of the scale has been completed. They are briefly explained below:

(I) <u>Planning of the Scale</u>

Quality of Work Life of the individual worker reinforces the organisational efficacy and productivity. Therefore each dimension of the Quality of Work Life has positive versus negative or favorable versus unfavorable component as its impact on the individual and the organisation.

As an initial step for designing an instrument for measuring the Quality of Work Life of Library Professionals, the QWL Scale of Jain (1991) has been taken as a model. The format of the present scale was designed based on the nature of statements and constructs measured under the above scale. As a

result of the detailed examination and scrutiny of the available literature on the

Quality of Work Life of various professions, and after thorough discussion with

experts, the following thirteen dimensions (Table 3.1) were selected to harness

the Quality of Work Life positions of the Library Professionals.

Table – 3.1

Dimensions of Quality of Work Life

Sl.No.	Major Facets	Related Aspects
1	Pay	Adequate income and fairness or equity of salary
2	Promotion	Opportunities and fairness of promotion
3	Opportunity for Continued Growth and Security	Development, Prospective and application, Advancement – Opportunity, Security
4	Benefits	Insurance, vacation and the fringe benefits
5	Contingent Rewards	Sense of respect, recognition, and appreciation
6	Safe and Healthy Working Conditions	Reasonable hours, physical working conditions
7	Operating Procedures	Policies, procedures, rules, and perceived red tape
8	Co-workers and Supervision	Perceived competence and pleasantness of one's colleagues and supervisors
9	Nature of Work	Enjoyment of the actual tasks themselves, immediate opportunity to use and develop skills and knowledge, involvement and challenges in the work itself
10	Social Integration in the Work Organisation	Freedom from prejudice, community, mobility, interpersonal openness
11	Constitutionalism in Work Organisation	Privacy, Free speech, Equity
12	Work and Total Life Space	Balanced role of work in life
13	Social Relevance of Working Life	---------

The above facets of Quality of Work Life have been adopted from Walton's (1974) work and Specter's (1985) Job Satisfaction Survey (JSS).

It was decided to compile a large pool of statements representing all the above facets of Quality of Work Life for the draft scale having almost equal number of positive and negative items.

(ii) Preparation of the Draft Scale

Besides books and journals in Library and Information Science, learned articles on Quality of Work Life, Human Resource Development/Management available in India and abroad and informal discussions with experts and experienced professionals in the field of Library and Information Science and Management studies were utilized as sources for framing statements. The criteria suggested by Edwards (1969) in the construction of attitude scales have been followed for the preparation of scale items. Statements likely to be endorsed by almost everyone or by almost no one were avoided. Factual, ambiguous, confusing and excessively long statements were eliminated. Special attention has been given to keep the language of the statement clear, simple and direct. Each statement was made to contain only one complete thought. The statements prepared in such a way consisted of almost equal number of positive and negative items. These statements were again subjected to critical evaluation by the Research Guide of the investigator and few experts in Psychological Research, Educational measurement and test construction. On the basis of their valuable suggestions with regard to relevancy,meaningfulness and clarity of the statements, a few items were discarded and some were slightly modified. After modification, 107 items were retained in the draft

scale with 50 positive items and 57 negative items. Care was taken to include items pertaining to all the different dimensions of Quality of Work Life indicated earlier. The Draft scale is presented as Appendix I.

The scale was planned as a five point scale wherein the respondent had to read each item carefully, choose one of the five alternatives namely "Strongly Agree (SA)", "Agree (A)", "Neither Agree nor Disagree (NAD)", "Disagree (D)", "Strongly Disagree (SD)" to express his/her degree of acceptance or rejection of the idea contained in the statement.

(iii) Scoring Procedure

The scoring scheme of the scale was also developed in consultation with experts. Accordingly, the score for each item is assigned as 5 for SA, 4 for A, 3 for NAD, 2 for D and 1 for SD in the case of positive items. The scoring is reversed for negative items.

(iv) Try-out and preparation of the final scale

The draft scale was then tried out on a sample of Library Professionals for selecting suitable items for the final scale. A detailed description of the try-out is given below:

a) Sample for the try-out

The draft scale was administered to a sample of 85 Library Professionals drawn from different libraries in the state. This group of Librarians was a representative sample of the target population proposed for the study.

b) Administration of the draft scale

The tool was administered under the circumstances very similar to those in which the final scale was employed. The investigator visited the different Libraries during May 2005 and administered the tool together with the draft "Occupational Stress Inventory" to the prescribed number of Librarians selected at random from each Library.

At the time of administration, the investigator gave detailed description of the instructions as to what the test was intended for.

The response sheet of 85 Library Professionals were collected and verified. Incomplete and defective sheets (either in QWL scale or in OS inventory) were rejected and 80 sheets were obtained for analysis. Library-wise break-up of the sample for the try-out is given in Appendix II.

c) Scoring

In order to select suitable items for the final scale, 'item analysis' was done after scoring all the 80 sheets according to the scoring procedure given in the earlier section. The weight age given to each item was summated to yield total score of each individual.

d) <u>Item analysis</u>

For item analysis, the procedure suggested by Nunnally (1978) was followed. Items were selected for the final scale on the basis of item-total correlation. Compared to items with relatively less correlations with total scores, those that have higher correlations with total scores have more variance relating to the common factor among the items and they add more to the test reliability. Therefore correlations of each item with total scores were computed by using the formula for Product Moment Correlation Coefficient (r). r - value of 107 items calculated by the software SPSS are given in Table 3.2.

Table – 3.2
Correlation coefficient (r) of statements with total scores (QWL)

Item No.	r-value	Item No.	r-value	Item No.	r-value

001 *	.472	037	.286	073 *	.661
002	.183	038	.251	074 *	.447
003	.132	039 *	.568	075 *	.532
004	.119	040 *	.608	076	.376
005	.198	041	.083	077 *	.557
006	.325	042 *	.630	078	.033
007 *	.476	043 *	.561	079	.287
008 *	.574	044	.303	080 *	.463
009 *	.508	045 *	.493	081 *	.526
010	.344	046	.185	082 *	.396
011	.240	047	.348	083	.254
012 *	.526	048	.387	084 *	.371
013	.248	049 *	.433	085	-.151
014 *	.537	050	.143	086 *	.537
015 *	.612	051	.364	087	.372
016 *	.607	052 *	.485	088	.335
017 *	.445	053	.345	089	.072
018 *	.558	054 *	.620	090 *	.498
019 *	.521	055 *	.426	091 *	.494
020	.380	056	.379	092	.235
021	.284	057 *	.401	093	.266
022 *	.531	058	.257	094 *	.469
023	.247	059	.070	095	.082
024 *	.414	060	.322	096 *	.449
025 *	.726	061 *	.476	097	.348
026	.251	062	.340	098 *	.474
027 *	.553	063	.281	099 *	.614
028	.369	064	.189	100 *	.655
029 *	.441	065	.274	101 *	.577
030	.394	066	-.254	102	.245
031 *	.381	067	.363	103	.320
032	.394	068	.325	104 *	.527
033	.378	069	.223	105 *	.679
034	.250	070 *	.414	106 *	.396
035	.211	071	-.133	107	.256
036	.217	072 *	.489		

* denotes items selected for the final scale.

e) <u>Final selection of statements</u>

Tolerance level for the correlation coefficient (r) was fixed at 1% significance and items whose correlations with total scores did not reach this level of significance (r ≤ .256) were rejected. Thus after rejection 80 items were found to be of the supposed tolerance level. However this number was considerably more than the proposed number of items in the final scale, because it was already decided to include only 50 items in the scale. Hence a second level elimination was necessary. To select almost equal number of positive and negative statements with high r–values, the remaining 80 items were sorted, positive and negative and separate rank orderings were made. There were 36 positive items and 44 negative items arranged separately in the descending order of their r – values. At this instance the investigator decided to select those items whose r – value is above 0.4. Thus the top 21 positive items and top 25 negative items were selected from each sequence. The total items selected were thus 46. In order to represent all the select dimensions in the final scale, it became necessary to select some more items belonging to certain dimensions. Thus 4 more items with higher r – values were also included to get representation to the dimensions 'Pay', 'Promotion' and 'Social Relevance'. The items thus added at this stage are serial numbers 82, 84, 31 and 106 giving a total of 50 items in the final scale with 22 positive items and 28 negative items. The positive and negative items were distributed at random. The scale in the final form is given in Appendix III. The final scale thus prepared was tested for validity and reliability.

3.4.1.2 <u>Occupational Stress Inventory for Library Professionals (OSILP)</u>

Stress is our bodies' biochemical response to an outside stimulus. Different stimuli will cause us to react differently; we may blush, jump or hide the reaction under a confident mask, but the biochemical response of our bodies is the same - an increase in the heartbeat and breathing rates, increased secretion of stomach acid and the release of certain hormones.

Stress is therefore defined as the non-specific response of the body to any demand made upon it. McGrath (1976) explains that there is a potential for stress when an environmental situation is perceived as presenting a demand which threatens to exceed the person's capacities and resources for meeting it, under conditions where he has expected a substantial differential in the reward and cost from meeting the demand versus not meeting it.

In the present study, Occupational Stress is treated as a "person's response to some threatening or disturbing stimuli emerged from the occupation" (Traverse and Cooper, 1996).

As part of the study, an Occupational Stress Inventory was developed by the investigator to measure the Occupational Stress experienced by the Library Professionals in Karalla. The steps followed in the construction of the tool were outlined briefly in the following sections.

(I) <u>Planning of the Inventory</u>

While reviewing the literature, a number of stress instruments developed for the purpose of measuring stress in various professions such as teaching, nursing etc. have come to the notice of the investigator. On verifying these tools it was seemed that they were inadequate to measure the Stress of Library Professionals due to the peculiarities of the nature of library profession. Hence it was decided to construct an instrument specially useful to the Library and Information profession.

The Occupational Stress Index of Srivastava and Singh (1981) and the Organisational Role Stress (ORS) Scale of Pareek (1983) were the two main tools which helped the investigator to understand the structure of such instruments.

Findings of research studies in the field of stress were examined by the investigator to know the major stressors in work settings. Along with this, detailed discussions were also held with experienced and senior members of different professions to identify seven potential sources of stress as given below.

(i)   Stressors intrinsic to the job

(ii)   Role in the Organisation

(iii)   Relationship at work

(iv)   Career Development

(v)   Organisational Structure and Climate

(vi)   Technological Change

(vii)   Home and Work interface

The investigator then made informal discussions and interviews with selected librarians. This was done with a view to get clarity about the different aspects of the seven major stressors enumerated above. After getting a clear insight in to the aspects of the major components, it was decided to construct a 60 item self-reporting inventory in Likert format suitable to give a satisfactory measure of the Occupational Stress of Library Professionals in the Indian context.

(ii) Preparation of the Draft Inventory

The major stressors and the related aspects used in the stress inventory are presented in Table 3.3.

Table – 3.3
Stressors and Related Aspects in OSILP

Sl. No.	Major stressors	Related aspects
1	Intrinsic to the job	Size of the Library, No. of users, Unsuitable building, Inadequate space and furniture, Inadequate resources, Strenuous working conditions, Level of participation in decision making, Work load, Working hours etc.
2	Role of Information Professionals	Role ambiguity, Role conflict, Responsibility for others and Role preparedness
3	Relationship at work	Quality of relationships with Colleagues, Head, Users/Clientele
4	Career development	Status incongruency, Recognition, Self esteem, Future prospects, Over/under promotion, Job security, Retirement etc.
5	Organisational structure	Participation in decision making, Performance appraisal, Personal freedom, Poor communication, Inadequate feedback about performance, Group and political pressures, Powerlessness, Reward and punishment, Lack of effective consultation, Change in responsibilities at work
6	Technological change	Environmental factors, Job design faults, Employee – employer relationships, Social isolation, Failure to solve grievances, Fear of adverse health effects, Threat of job loses etc.
7	Home work interface	Stressful life events, Conflict between organisational and personal beliefs, Financial difficulties, Dual career couples, Dilemma of equality and Interaction between home and work

Based on the above model of Occupational Stress, the investigator prepared items in English language. The items were then subjected to evaluation of experts in the field of Occupational Stress research. On the basis of their criticisms and suggestions, necessary modifications, additions and deletions were made to improve the quality of statements. The investigator thus prepared 31 positive and 118 negative statements. All the items were further scrutinized by a panel of experts from Library and Information Science profession. Modifications were again made accordingly and then the draft inventory was finalized with 25 positive and 111 negative statements. The draft inventory consisting of 136 items is presented in Appendix IV.

(iii) <u>Mode of Responding and Scoring</u>

Subjects have to decide how far each statement in the inventory is true for their case. Responses can be made in a five point scale as 1) Strongly Agree (SA), 2) Agree (A), 3) Neither Agree nor Disagree (NAD), 4) Disagree (D), and 5) Strongly Disagree (SD). For a negative statement the score given will be 5, 4, 3, 2, and 1 respectively for the responses 'Strongly Agree', 'Agree', 'Neither Agree nor Disagree', 'Disagree', and 'Strongly Disagree'. Scoring scheme will be reversed for a positive statement.

(iv) <u>Try-out and preparation of the final inventory</u>

The draft inventory was then tried out on a sample of Library Professionals for selecting suitable items for the final inventory. A detailed description of the try-out is given below:

a) <u>Sample for the try-out</u>

The draft inventory was administered to a sample of 85 Library Professionals drawn from different libraries in the state. This group of Librarians was a representative sample of the target population proposed for the study.

b) <u>Administration of the draft inventory</u>

The tool was administered under the circumstances similar to those in which the final inventory was employed. The investigator administered the tool together with the draft "Quality of Work Life Scale" to the prescribed number of Librarians selected at random from each Library.

At the time of administration the investigator gave detailed description of the instructions as to what the test was intended for.

The response sheet of 85 Library Professionals were collected and verified. Incomplete and defective sheets (either in QWL scale or in OS inventory) were rejected and 80 sheets were obtained for analysis.

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c) <u>Scoring</u>

In order to select suitable items for the final scale 'item analysis' was done after scoring all the 80 sheets according to the scoring procedure given in the earlier section. The weightage given to each item was summated to yield total score of each individual.

d) <u>Item analysis</u>

For item analysis, the procedure suggested by Nunnally (1978) was followed. Items were selected for the final inventory on the basis of item-total correlation. Compared to items with relatively less correlations with total scores, those that have higher correlations with total scores have more variance relating to the common factor among the items and they add more to the test reliability. Therefore correlations of each item with total scores were computed by using the formula for Product Moment Correlation Coefficient (r). r-value of 136 items calculated by the software SPSS are given in Table 3.4.

Table – 3.4
Correlation coefficient (r) of statements with total scores (OS)

Item No.	r-value	Item No.	r-value	Item No.	r-value	Item No.	r-value
001 *	.257	035	.412	069 *	.539	103	.202
002	.313	036 *	.410	070 *	.543	104	.193
003	.300	037 *	.268	071	.157	105	.152
004 *	.383	038 *	.408	072	.338	106	.185
005	-.127	039 *	.471	073	.334	107	.255
006 *	.325	040	.269	074	.240	108 *	.359
007 *	.325	041 *	.282	075	.077	109	.214
008	.192	042	.338	076 *	.494	110 *	.308
009	.406	043	.097	077 *	.528	111 *	.333
010	.341	044	.212	078	.360	112	.430
011	.279	045 *	.457	079	.387	113	.237
012 *	.594	046 *	.485	080 *	.261	114	.337
013	.196	047 *	.582	081	.173	115	.422
014	.084	048 *	.466	082	.409	116	.382
015 *	.300	049	.246	083	.445	117	.091
016	.437	050 *	.636	084 *	.388	118	.373
017	.028	051	.082	085 *	.656	119 *	.441
018	.385	052	.133	086	.119	120	.408
019	.427	053 *	.511	087	.345	121 *	.419
020 *	.489	054 *	.277	088 *	.567	122 *	.257
021 *	.497	055 *	.367	089	.404	123 *	.413
022	.455	056	.432	090 *	.578	124 *	.467
023 *	.539	057	.234	091 *	.384	125 *	.572
024	.318	058	.092	092	.442	126 *	.607
025	.330	059	.114	093 *	.440	127 *	.511
026	.269	060	.306	094 *	.302	128 *	.327
027 *	.514	061 *	.460	095 *	.352	129 *	.352
028 *	.264	062	.197	096	.189	130	.403
029	.260	063 *	.369	097	.399	131 *	.515
030 *	.368	064	.349	098 *	.511	132	.285
031 *	.331	065 *	.463	099 *	.373	133	.453
032	.182	066	.447	100	.437	134	.437
033 *	.480	067	.143	101	.215	135 *	.263
034	.072	068	.156	102	.252	136	.400

* denotes items selected for the final inventory.

e) <u>Final selection of statements</u>

Tolerance level for the correlation coefficient (r) was fixed at 1% significance and items whose correlations with total scores did not reach this level of significance ($r \leq .256$) were rejected. Thus after rejection, 102 items were found to be of approved tolerance level. Since all these items cannot be included in the final scale, the investigator took a decision about the size (number of items) of the final scale. It was decided to include only 60 items in the final scale. And hence a second level elimination was necessary. To select almost equal number of positive and negative statements with high r - values, the remaining 102 items were then sorted into positive and negative items and separate rank orderings were made. There were 16 positive items and 86 negative items arranged separately in the descending order of their r – values. Since the number of positive items was only 16 with correlations ranging from 0.4 to 0.257, all these items were selected. Among the 86 negative items arranged in the descending order of their correlation values, 30 items having maximum correlation values ($r \geq 0.453$) were then selected. On verification of the dimensionwise representation of items among the total 46 items thus selected, it was seen that certain dimensions did not get representation. Therefore to represent all dimensions in the final scale, another 16 negative items with highest correlation in the respective dimensions were also selected. But after this inclusion, the total number of items became 62. In order to reduce the total number of items from 62 to 60, two items having the least

correlation values among the top 30 negative items were excluded. The deletion of these two items did not result in the loss of representation of any dimension in the final scale. Thus the final scale consisted of 16 positive and 44 negative items distributed over all dimensions of OS. The final scale in which the items are presented at random is given in Appendix V.

The final scale thus prepared was tested for validity and reliability.

Establishing Validity and Reliability of the scales

A sound psychological measurement must meet the tests of validity and reliability. The tool should measure what it purports to measure (validity) and should yield consistent results when applied under the same conditions (reliability).

Validity of the scales QWLSLP and OSILP

Content validity and face validity of the scales were ensured through the plan and procedures adopted for the construction of the scales. A perusal of the scales reveals that their purpose was to measure the QWL and OS of library professionals. The tools therefore possess face validity. QWLSLP aims to measure all aspects of QWL among the library professionals. Similarly OSILP aims to measure all components of Occupational Stress. Therefore the tools can be considered to have content validity.

Reliability of the scales QWLSLP and OSILP

Reliability of the tools QWLSLP and OSILP were established by the Split-half (odd-even) method and the internal consistency method.

In Split-half method, the instrument is divided into two equal and comparable halves and the correlation of scores for these half tests is found out. From this reliability coefficient of the full test is computed by applying the Spearman-Brown Prophecy formula (Chase, 1974) which states as:

$$r_t = \frac{2 \times r}{1 + r}$$

Where r_t is the prophesied reliability for the full test and r, the Product Moment Correlation between the half tests.

Internal consistency method stresses the inter correlation of the items in the test and the correlation of the items with the test as a whole. The following formula (Anastasi, 1990) gives the coefficient of the internal consistency (coefficient alpha) of the tool.

$$r_{tt} = \left(\frac{n}{n-1}\right) x \frac{SD_t^2 - \Sigma\left(SD_i^2\right)}{SD_t^2} -$$

Where r_{tt} is the reliability coefficient of the whole test, n is the number of items in the test, SD_t is the standard deviation of total scores on the test and $\Sigma(SD_i^2)$ is the sum of the variances of item scores.

Reliability of QWLSLP

The investigator selected 60 response sheets of QWLSLP at random and calculated Coefficient of Correlation (r) between the total score of the odd items and the total score of the even items. The reliability coefficient computed was found to be 0.933. This is the reliability coefficient of half test. The prophesied reliability (r_t) for the full test was calculated in 0.965.

Again the variance for each statement was calculated. The standard deviation of the total scores was also computed. Coefficient alpha for the test was computed. Coefficient alpha for the test was computed from the above values. The coefficient alpha for the test was 0.95.

Thus the indices of reliability shows that QWLSLP is a highly reliable instrument to measure the 'QWL' .

Reliability of OSILP

60 response sheets of OSILP were selected at random and correlation (r) between the total score of the odd items and the total score of the even items was calculated. The reliability coefficient thus computed was found to be 0.884. This is the reliability coefficient of half test. The prophesied reliability (r_t) for the full test was calculated as 0.938.

The Coefficient Alpha computed for the test was 0.937.

Thus the value of reliability coefficient indicates that OSILP is a highly reliable instrument to measure OS.

<u>3.4.1.3 General Data Sheet</u>

A general data sheet was prepared to collect data regarding the independent variables. The data such as personal characteristics, institutional details of the respondents were collected using this questionnaire. This questionnaire consists of 22 items which are of structured short answer and multiple choice type questions. The General Data Sheet is presented in Appendix VI.

3.4.2 **Sample selected for the study**

The professional librarians in Kerala constitute the population for the present investigation. Persons having minimum qualification of graduation in Library and Information Science and employed in professional duties in the various libraries in Kerala are considered as professional librarians. The different libraries include University Libraries, College Libraries, Libraries of R&D institutions, Libraries of industrial establishments, Libraries of cultural organisations and Government departments. The size of the population is approximated to 2000. As it was not possible to contact each and every member of the population to collect data, the investigator had to take a representative sample from the population. Deciding the size of the sample was a major problem at this stage. The sample should be large enough to avoid

sampling error; it should be small enough to avoid necessary effort and expenses. Considering these factors, it was felt that sample about 400 would be an optimum size for the study; which covers about 20 percent of the population.

Since the population for the study is highly heterogeneous in nature, stratified random sampling technique was used to draw a representative sample. The investigator considered the following characteristics as the major strata from which the necessary sample was drawn.

1) Sex
2) Age
3) Job title category
4) Type of the library
5) Size of the library
6) Primary functional area
7) Geographical distribution of libraries

Considering all these aspects, the investigator formulated a scheme of a tentative sample for the study. This constituted the basal sample of 400 in size. The break up of the basal sample is given in Table 3.5.

Table – 3.5
Break up of the Basal Sample

Sex	Type of the Library			
	Academic	Special	Public	Total
Male	150	35	15	200
Female	150	35	15	200
Total	300	70	30	400

Selection of subjects was made at random from the defined subpopulations. Subgroups based on characteristics other than those considered in the selection of sample were taken from within the total sample for the purpose of data analysis.

3.4.3 Data Collection Procedure, Scoring, and Consolidation of Data

The present study requires the administration of three tools to collect sufficient data. The three tools were got printed, arranged and clipped together one each in a set in the order:

a) General Data Sheet

b) Quality of Work Life Scale for Library Professionals

c) Occupational Stress Inventory for Library Professionals

Sufficient number of copies of these booklets were kept ready at hand for administration to the sample. The administration of the tools was carried out during the month December 2006.

3.4.3.1 Collection of Data

Uniform procedure was followed for administering the tools and the rules and conditions prescribed in the test manuals were strictly observed. The investigator personally visited the libraries, met the Library Professionals, and solicited their co-operation. They were assured that their responses and personal details would be kept confidential and be used for research purpose only. The tool booklets were then presented to them and explained the instructions as to what the study was intended for. Since all necessary directions for answering the tools were given in the facing sheet of each tool, no difficulty was felt by the respondents in marking their responses. The respondents were particularly asked not to take too much time for answering. 100 minutes was sufficient for responding all the three tools.

The completed booklets were collected and verified. Only 315 professionals responded.

3.4.3.2 Scoring and consolidation of data

Out of the 315 response sheets collected, some had to be rejected due to one or other of the following reasons.

a) Failure to respond to all items in the scales.

b) Failure to answer all items in the General Data Sheet.

Finally, cases that were complete in all respects were taken for scoring and this added to 300 in number. Thus the final sample of 300 was obtained for data analysis. The Library-wise break up of the final sample is given in Appendix VII. A category-wise break up of the final sample is given in Table 3.6.

Table – 3.6

Category-wise break up of the final sample
(N=300)

	Gender		Type of Library				Job category	
	Male	Female	University	College	Special	Public	Supervisory	Non-supervisory
	176	124	106	129	55	10	118	182
Total	300		300				300	

The completed response sheets of 300 respondents were then scored and the scores were consolidated for further analysis. Scoring of data sheets of Quality of Work Life and Occupational Stress were done as per the scoring scheme of each tool described earlier. QWL score of each respondent was obtained by summing up the scores of 50 items in the scale. Similarly OS score of each respondent was found out by adding the scores of 60 items in the OS inventory. Descriptive data such as gender, age etc. from the General Data Sheet were converted into suitable numerical codes for facilitating computer analysis.

Each respondent was assigned a serial number called 'Case number' against which the scores and the data relating to the individual were entered in separate columns on a data sheet. The coded data and the scores were then transcribed to CD for computer processing.

3.4.4 Statistical Techniques Used for Analysis of Data

The objectives chosen and the hypotheses formulated warranted the use of the following statistical techniques in analysing the data.

3.4.4.1 Classification techniques

i) Classification on the basis of Gender

The total sample was categorised on the basis of sex. Out of the 300 respondents, 176 (58.66%) were male and 124 (41.33%) were female. This shows that the male – female distribution of the respondents was not equal in the sample.

ii) <u>Classification on the basis of Age</u>

The total sample and the subsamples based on sex were categorised on the basis of the respondent's age into four groups as 1) those in 21-30 years, 2) those in 31-40 years, 3) those in 41-50 years, 4) those in 51-60 years. The rationale behind such a classification is that the Library Professionals were likely to get promotions within a period of 10 years, thereby changing their duties and responsibilities. The actual sample size under each category is given below:

	Age				
	21-30	31-40	41-50	51-60	Total
Total sample	41 (13.7%)	112 (37.3%)	108 (36%)	39 (13%)	300
Men	19 (6.3%)	64 (21.3%)	68 (22.7%)	25 (8.3%)	176
Women	22 (7.3%)	48 (16%)	40 (13.3%)	14 (4.7%)	124

iii) <u>Classification on the basis of Marital status</u>

The total sample and the subsamples of men and women were classified into five groups on the basis of the respondent's marital status. The actual

number of professionals coming under each category of marital status (viz.),

Single, Married, Divorced, Separated, Widowed is given in the following table.

	Marital Status		
	Single	Married	Total
Total sample	48 (16%)	252 (84%)	300
Men	25 (8.3%)	151 (50.3%)	176
Women	23 (7.7%)	101 (33.7%)	124

From the table it is seen that the sample of respondents belongs to two

categories only (viz.) Single and Married. Frequencies in other groups are

zero.

iv) <u>Classification on the basis of Number of children</u>

The total sample and the subsamples of men and women were classified

into four groups on the basis of the number of children they have. The four

groups of respondents (viz.) those having no child, those having one child,

those having two children, and those having three children are shown as below:

	Number of children				
	0	1	2	3	Total
Total sample	78 (26%)	80 (26.7%)	123 (41%)	19 (6.3%)	300
Men	38 (12.7%)	45 (15%)	78 (26%)	15 (5%)	176

Women	40 (13.3%)	35 (11.7%)	45 (15%)	4 (1.3%)	124

v) Classification on the basis of Educational background

The total sample was classified on the basis of their highest professional qualifications into five groups. The groups are B.L.I.Sc., M.L.I.Sc., M.Phil. (Lib.Sc.), Ph.D. (Lib.Sc.) and other qualifications such as Diploma in Librarianship and Associateship in Documentation. The frequencies under each group are given below:

	Professional qualifications					
	B.L.I.Sc.	M.L.I.Sc.	M.Phil. (Lib.Sc.)	Ph.D (Lib.Sc.)	Others	Total
Total sample	116 (38.7%)	157 (52.3%)	7 (2.3%)	4 (1.3%)	16 (5.3%)	300
Men	65 (21.7%)	89 (29.7%)	7 (2.3%)	2 (0.7%)	13 (4.3%)	176
Women	51 (17%)	68 (22.7%)	0	2 (0.7%)	3 (1%)	124

vi) Classification on the basis of Job title category

The total sample was categorised on the basis of Job title category as Supervisory professionals and Non-supervisory professionals. The actual sample size under each category is given below:

	Job title category

	Supervisory	Non-supervisory	Total
Total sample	118 (39.3%)	182 (60.7%)	300
Men	78 (26%)	98 (32.7%)	176
Women	40 (13.3%)	84 (28%)	124

vii) <u>Classification on the basis of Professional experience</u>

The total sample and the subsamples of men and women were classified into four groups on the basis of the respondent's professional experience. The actual number of professionals coming under each category according to their experiences in the profession is given below:

	Professional experience (in years)				
	< 10	11-20	21-30	31-40	Total
Total sample	132 (44%)	106 (35.3%)	55 (18.3%)	7 (2.3%)	300
Men	73 (24.3%)	66 (22%)	30 (10%)	7 (2.3%)	176
Women	59 (19.7%)	40 (13.3%)	25 (8.3%)	0	124

viii) <u>Classification on the basis of Primary functional area</u>

The total sample and the subsamples of men and women were classified into eight groups based on the respondent's Primary functional area. The functional areas are classified as Acquisition, Technical, Journals, Stack, Reference, Counter, Others, and more than two sections. The number of professionals that may come under each category of Primary functional area is given below:

	Primary functional area								Total
	Acquisition	Technical	Journals	Stack	Reference	Counter	Others	More than two sections	
Total sample	8 (2.7%)	17 (5.7%)	11 (3.7%)	11 (3.7%)	12 (4%)	8 (2.7%)	21 (7%)	212 (70.7%)	300
Men	3 (1%)	10 (3.3%)	7 (2.3%)	3 (1%)	9 (3%)	4 (1.3%)	15 (5%)	125 (41.7%)	176
Women	5 (1.7%)	7 (2.3%)	4 (1.3%)	8 (2.7%)	3 (1%)	4 (1.3%)	6 (2%)	87 (29%)	124

ix) Classification on the basis of Salary range

The total sample and the subsamples of men and women were categorised into five groups on the basis of their monthly Salary. The five classes of respondents according to their Salary range are as shown below:

	Salary range (in Rs.)					
	< 7000/-	7000/- to 9000/-	9000/- to 11000/-	11000/- to 13000/-	>13000/-	Total
Total sample	144 (48 %)	104 (34.7%)	38 (12.7%)	10 (3.3%)	4 (1.3%)	300
Men	80 (26.7%)	63 (21%)	24 (8%)	6 (2%)	3 (1%)	176
Women	64 (21.3%)	41 (13.6%)	14 (4.7%)	4 (1.3%)	1 (.3%)	124

x) Classification on the basis of Involvement in IT applications

The total sample and the subsamples of men and women were classified into two groups on the basis of their involvement in IT applications. The two groups of respondents (viz.) those involved in IT applications and those not involved in IT applications are as shown below:

	Involvement in IT applications		
	Involved	Not involved	Total
Total sample	222 (74%)	78 (26%)	300
Men	131 (43.7%)	45 (15%)	176
Women	91 (30.3%)	33 (11%)	124

xi) Classification on the basis of Number of supervisors

Depending on the number of supervisors the respondent have, the total sample and the subsamples of men and women were classified into five groups. The five groups of respondents (viz.) those having no supervisors, one supervisor, two supervisors, three supervisors, and more than 3 supervisors are shown as follows:

	Number of supervisors					
	Nil	1	2	3	>3	Total
Total sample	55 (18.3%)	126 (42%)	71 (23.7%)	25 (8.3%)	23 (7.7%)	300
Men	38 (12.7%)	67 (22.3%)	43 (14.3%)	16 (9.3%)	12 (4%)	176
Women	17 (5.7%)	59 (19.7%)	28 (9.3%)	9 (3%)	11 (3.7%)	124

xii) Classification on the basis of Work schedule

The total sample and the subsamples of men and women were classified into four groups on the basis of their Work schedule. The four groups of respondents (viz.) those working in the morning hours, those working in the evening hours, those having no shift duties, and those having more than one of these, are shown as below:

	Work schedule				
	Morning hours	Evening hours	No shift	More than one	Total
Total sample	12 (4%)	12 (4%)	187 (62.3%)	89 (29.7%)	300
Men	6 (2%)	6 (2%)	107 (35.7%)	57 (19%)	176
Women	6 (2%)	6 (2%)	80 (26.7%)	32 (10.7%)	124

xiii) <u>Classification on the basis of Type of Library</u>

The total sample and the subsamples of men and women were classified into four groups on the basis of the Type of library where they were working. The four groups of respondents (viz.) those who were working in the university, college, public, and special libraries are detailed as below:

	Type of Library				
	University	College	Public	Special	Total
Total sample	106 (35.3%)	129 (43%)	10 (3.3%)	55 (18.3%)	300
Men	59 (19.7%)	84 (28%)	5 (1.7%)	28 (9.3%)	176
Women	47 (15.7%)	45 (15%)	5 (1.7%)	27 (9%)	124

xiv) <u>Classification on the basis of Size of Library</u>

The respondents were categorised into different groups on the basis of size of the library in which they were working at the time of the survey. The size of the library was determined on the basis of three criteria:

1) Number of books   2) Number of journals   and   3) Number of staff

The break up of the sample into different groups on the basis of size of library is given below:

(i) Classification on the basis of Number of books

	Number of books										Total
	less than 5000	5000 to 10000	10000 to 15000	15000 to 20000	20000 to 25000	25000 to 30000	30000 to 50000	50000 to 75000	75000 to 1lakh	more than 1lakh	
Total sample	55 (18.3%)	43 (14.3%)	33 (11 %)	26 (8.7%)	14 (4.7%)	8 (2.7%)	66 (22%)	11 (3.7%)	35 (11.7%)	9 (3%)	300
Men	27 (9%)	28 (9.3%)	14 (4.7%)	16 (5.3%)	9 (3%)	5 (1.7%)	43 (14.3%)	9 (3%)	18 (6%)	7 (2.3%)	176
Women	28 (9.3%)	15 (5%)	19 (6.3%)	10 (3.3%)	5 (1.7%)	3 (1%)	23 (7.7%)	2 (0.7%)	17 (5.7%)	2 (0.7%)	124

(ii) Classification on the basis of Number of journals

	Number of journals

	less than 50	50 to 100	100 to 150	150 to 200	more than 200	Total
Total sample	118 (39.3%)	61 (20.3%)	32 (10.7%)	28 (9.3%)	61 (20.3%)	300
Men	68 (22.6%)	39 (13%)	23 (7.7%)	14 (4.7%)	32 (10.7%)	176
Women	51 (17%)	22 (7.3%)	8 (2.7%)	14 (4.7%)	29 (9.7%)	124

(iii) Classification on the basis of Number of staff

	Number of staff							
	1	2	3 to 5	6 to 10	11 to 15	16 to 20	more than 20	Total
Total sample	52 (17.3%)	37 (12.3%)	44 (14.7%)	61 (20.3%)	29 (9.7%)	18 (6%)	59 (19.7%)	300
Men	23 (7.7%)	22 (7.3%)	28 (9.3%)	42 (14%)	17 (5.7%)	11 (3.7%)	33 (11%)	176
Women	29 (9.7%)	15 (5%)	16 (5.3%)	19 (6.3%)	12 (4%)	7 (2.3%)	26 (8.7%)	124

xv) <u>Classification on the basis of Type of management</u>

The total sample and the subsamples of men and women were classified into four groups on the basis of the type of management of their institution. The actual number of professionals coming under each category is as given below:

	Type of management				
	Private	Government	Semi-government	Autonomous	Total
Total sample	44 (14.7%)	97 (32.3%)	32 (10.7%)	127 (42.3%)	300
Men	26 (8.7%)	64 (21.3%)	18 (6%)	68 (22.7%)	176
Women	18 (6%)	33 (11%)	14 (4.7%)	59 (19.7%)	124

xvi) Classification on the basis of 'QWL'

The total sample was divided into three groups (viz.) High QWL Group (HQWLG), Average QWL Group (AQWLG) and Low QWL Group (LQWLG) on the basis of the 'Quality of Work Life' scores of the respondents. Assuming a normal distribution of QWL scores, the procedure of taking ½ σ distances from the mean score (M) for dividing the sample was used. Thus a subject whose QWL score fell between M ± ½ σ was placed in the Average QWL group, a respondent whose score was as - ½ σ or below was put in the Low QWL group, and a subject whose score was M + ½ σ or above was classified in the High QWL group.

In the present study, the Mean value of QWL scores was found to be 173.33 with a standard deviation (σ) of 28.32. M + ½ σ equals 187.49 and M - ½ σ equals 159.17. Therefore professionals whose scores were 187 and above

were included in the HQWL group and those whose scores were 159 or less were placed in the LQWL group. The remaining subjects (with scores 160 to 186) were grouped in the Average QWL group.

The frequencies under each group are as follows:

	LQWLG	AQWLG	HQWLG	Total
Sample size	85 (28.3%)	105 (35%)	110 (36.7%)	300 (100%)

xvii) <u>Classification on the basis of 'Occupational Stress'</u>

The total sample was divided into three groups (viz.) High Occupational Stress Group (HOSG), Average OS Group (AOSG) and Low OS Group (LOSG) on the basis of the 'Occupational Stress' scores of the respondents. Assuming a normal distribution of stress scores, the procedure of taking ½ σ distances from the mean score (M) for dividing the sample in to three groups was used.

In the present study Mean (M) of Occupational Stress scores was found to be 118.887 with a standard deviation (σ) of 14.39. M + ½ σ equals 126.082 and M - ½ σ equals 111.692. Therefore librarians whose stress scores were 126 and above were included in the HOSG, and those whose scores were 112 or less were placed in the LOSG. The remaining respondents (with scores 113 to 125) were grouped as AOSG.

The actual number of librarians falling under each group is as follows:

	LOSG	AOSG	HOSG	Total
Sample size	69 (23%)	146 (48.7%)	85 (28.3%)	300 (100%)

3.4.4.2 Statistical Techniques

The main statistical techniques employed in the study are enumerated as follows :

(i) For preliminary analysis

For the preliminary analysis of the test scores, the raw scores were converted into frequency distributions. The measures of central tendency and dispersion of the scores were computed for the total sample to see the extent of normality of the distributions.

(ii) For detailed analysis

To find out the general nature of the QWL and OS among the Library Professionals and to compare the mean scores of relevant subsamples, the following statistical techniques were employed.

(a) Test of significance for percentage.

(b) Two-tailed test of significance for difference between means of large independent samples.

(c) Two-tailed test of significance of difference between means of small independent samples.

(d) One-Way Analysis of Variance (one-way ANOVA) for comparing the means of more than two groups.

(e) Scheffe' test for Multiple Comparison.

Analysis of Variance was followed by post-hoc comparison procedure to find out which two pairs of means contributed to make a statistical difference. For this purpose, Scheffe's test of Multiple Comparison (Ferguson, 1976) was applied. The F-ratio between pairs of means by using the within group variance and the F' by using the table value of F was calculated. The values of F were compared with the values of F' at the 0.05 level and 0.01 level. A significant difference between the pairs of means was judged at the required levels only when the value of F was equal to or greater than F'.

(f) Chi-square test of independence to examine the nature of relationship between two variables and C-coefficient to measure the magnitude of association between the variables.

The analysis and interpretations of results are given in chapter 4.

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ANALYSIS

Preliminary Analysis of the Test Scores of QWL and OS
Extent and Level of QWL & OS among the Library Professionals
   Investigation of Group Differences in Mean Scores of QWL and OS
Estimation of Association between QWL and the Independent Variables
Estimation of Association between OS and Independent Variables
Findings

ANALYSIS

Analysis of the data and discussion of the results are presented in this chapter. They are detailed under the following sections:

4.1   PRELIMINARY ANALYSIS OF THE SCORES OF THE TESTS.

4.2   EXTENT AND LEVELS OF 'QWL' AND 'OS' AMONG THE LIBRARY PROFESSIONALS.

4.3   INVESTIGATION OF GROUP DIFFERENCES IN MEAN SCORES OF 'QWL'.

4.4   INVESTIGATION OF GROUP DIFFERENCES IN MEAN SCORES OF 'OS'.

4.5   ESTIMATION OF ASSOCIATION BETWEEN 'QWL' AND THE INDEPENDENT VARIABLES.

4.6   ESTIMATION OF ASSOCIATION BETWEEN 'OS' AND THE INDEPENDENT VARIABLES.

4.7   ESTIMATION OF ASSOCIATION BETWEEN 'QWL' AND 'OS'.

4.8   DISCUSSION OF RESULTS AND CONCLUSIONS.

4.1   PRELIMINARY ANALYSIS OF THE TEST SCORES OF 'QUALITY OF WORK LIFE' AND 'OCCUPATIONAL STRESS'

The distribution of the scores of the tests (viz.) scores of Quality of Work Life and scores of Occupational Stress relating to the total sample was studied to understand the nature of distributions of the scores. The details of analysis are presented below:

4.1.1 Frequency Distribution and Statistical Indices of QWL Scores

The QWL scores of the total sample were converted into frequency distribution and presented in Table 4.1.

Table 4.1

Frequency Distribution of QWL scores for total sample
(N = 300)

Class interval	Frequency	Cumulative frequency
95 – 105	4	4
105 - 115	5	9
115 - 125	9	18
125 – 135	20	38
135 – 145	16	54
145 – 155	22	76
155 – 165	26	102
165 – 175	38	140
175 – 185	45	185
185 – 195	48	233
195 – 205	41	274
205 – 215	13	287
215 – 225	7	294
225 – 235	4	298
235 - 245	2	300

The measures of central tendency and dispersion of the QWL scores were computed to see the nature of the distribution of the scores. The statistics are given in Table 4.2.

Table 4.2

Statistical Constants for the distribution of QWL scores for the total sample
(N = 300)

Sl.No	Statistics	Values obtained
1	Maximum possible score	250
2	Minimum possible score	50
3	Maximum scores obtained	245
4	Minimum scores obtained	95
5	Range	150
6	Mean	173.33
7	Median	178
8	Mode	184
9	Standard Deviation	28.32
10	Variance	801.92
11	Skewness	- 0.421
12	Kurtosis	- 0.096

The distribution was further examined graphically for its shape. The frequency curve is given in figure 4.
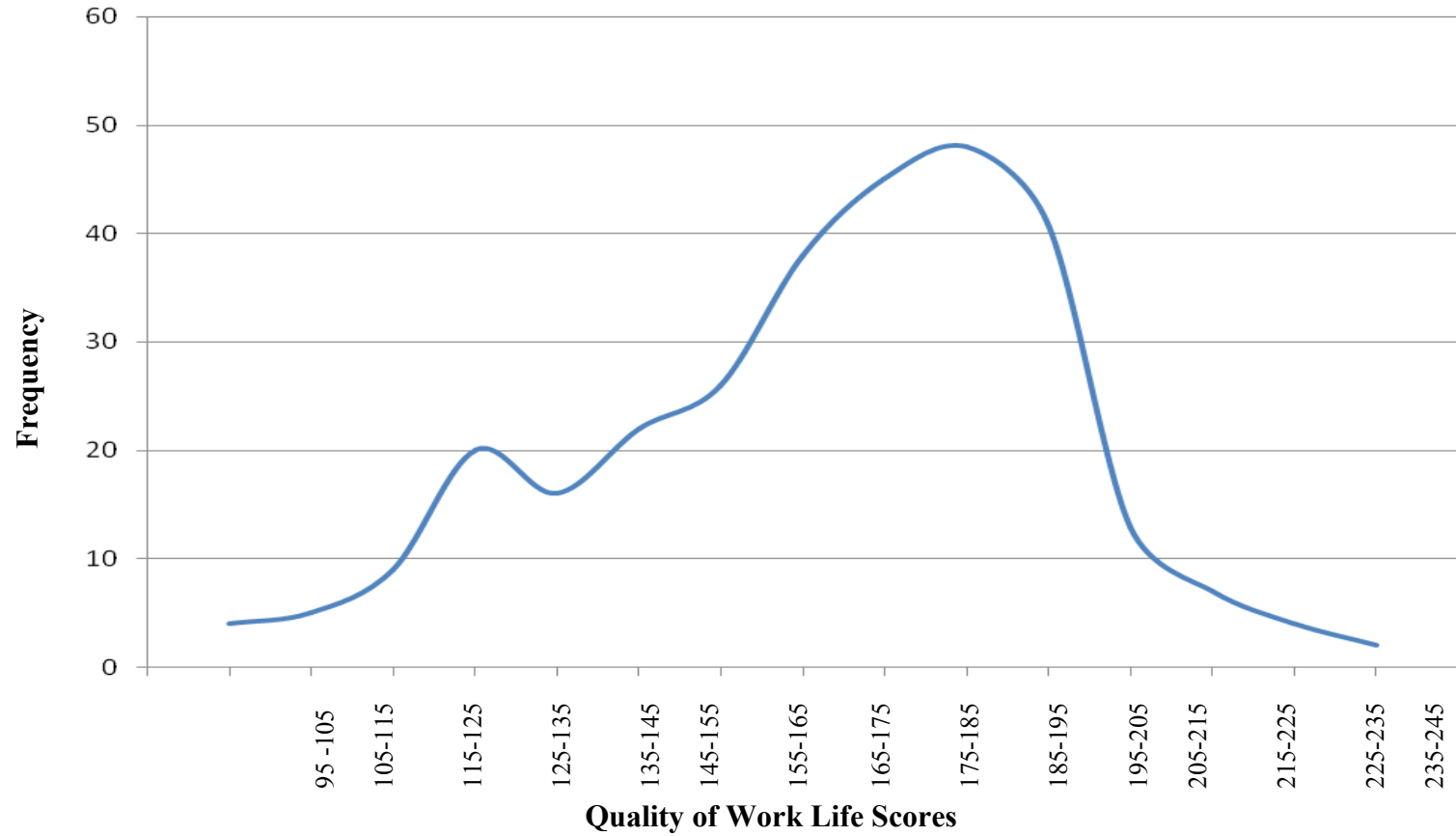
Fig. 4
Distribution of respondents on QWL scores

4.1.2 Frequency Distribution and Statistical Indices of OS Scores

The frequency distribution of the OS scores in respect of the total sample is presented in Table 4.3.

Table 4.3

Frequency distribution of OS scores for total sample
(N = 300)

Class interval	Frequency	Cumulative frequency
60 - 70	3	3
70 – 80	2	5
80 – 90	7	12
90 – 100	18	30
100 – 110	27	57
110 – 120	118	175
120 – 130	80	255
130 – 140	29	284
140 - 150	12	296
150 - 160	4	300

The measures of central tendency and dispersion of the OS scores were computed. The statistics are given in Table 4.4.

Table 4.4

Statistical constants for the distribution of OS scores for the total sample
(N = 300)

Sl.No.	Statistics	Values obtained
1	Maximum possible score	300
2	Minimum possible score	60
3	Maximum scores obtained	160
4	Minimum scores obtained	60
5	Range	100
6	Mean	118.89
7	Median	119.00
8	Mode	118.00
9	Standard Deviation	14.39
10	Variance	207.06
11	Skewness	- 0.647
12	Kurtosis	2.223

The distribution was further examined graphically for its shape. The frequency curve is given in figure 5.
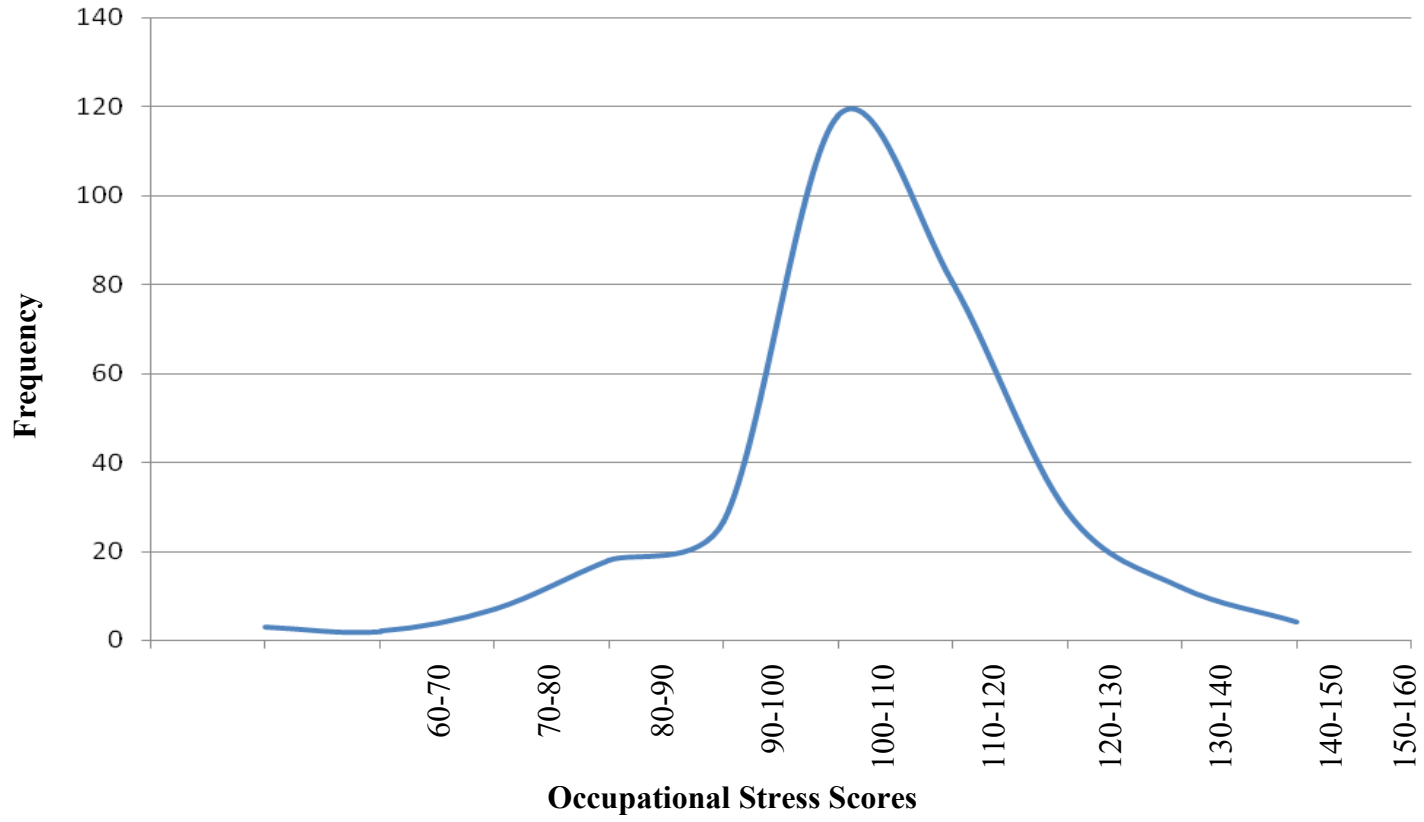
Fig. 5
Distribution of respondents on OS scores

Discussion

The preliminary analysis section seeks to analyse the basic statistical properties possessed by the scores of the total sample in the case of both the variables QWL and OS. This type of analysis is not strictly warranted by the objectives of the study. However, this was included since the finding will help to know the nature of the distribution of the tests scores and also to make more valid interpretations of the statistical indices used in the study.

The values obtained for the measures of central tendency and the values for skewness and kurtosis show that both the distributions of QWL and OS are almost normal and are not badly skewed. The graphical representations also revealed that the distribution approximated to normality. The normality exhibited by the distributions suggests that the sample chosen for the study is fairly representative of the population.

4.2   **EXTENT AND LEVELS OF 'QWL' AND 'OS' AMONG THE LIBRARY PROFESSIONALS**

The extent and level of the Quality of Work Life and Occupational Stress present among the professionals in Kerala are found out as given below:

a) **Quality of Work Life**

In order to know the extent and level of QWL, the sum of the neutral scores of the 50 items in the scale (QWLSLP) was taken as the cut off point.

Each item is to be rated on a five point scale, i.e. SA, A, NAD, D, and SD. Here 'Neither Agree Nor Disagree' (NAD) is the neutral point with weightage of 3. Hence the total score of 150 (i.e. 50 x 3) is taken as the neutral point. Allowing a grace value of five to the neutral value, subjects who got the total score in the scale QWLSLP above 155 were treated as having high Quality of Work Life. Agreement (A) to a positive statement or Disagreement (D) to a negative statement in the scale indicates higher QWL. This point is assigned a weightage of 4. Hence the score of 200 (i.e. 50 x 4) is taken as the lower limit for highest QWL. Allowing a grace value of five, respondents who got the total score 205 and above were treated as having highest QWL. Frequency of subjects who got a score 155 and above was counted and percentage of incidence was computed. Again frequency of subjects who got a score of 205 and above was counted and percentage of incidence was computed.

Similarly Disagreement (D) to a positive statement or Agreement (A) to a negative statement in the scale indicates lower level of QWL. This point is assigned a weightage of 2. Hence the score of 100 (i.e. 50 x 2) is taken as the upper limit for lowest level of QWL. Allowing a grace value of 5, respondents who got the total score of 95 and below were treated as having lowest level of QWL. Thus the different levels of QWL were taken with limits of scores as follows:

<u>Low Level</u>	-	<u>Below Scores 155</u>
Lowest level of QWL	-	Up to 95
Lower level of QWL	-	95 – 155
<u>High Level</u>	-	<u>Scores 155 and above</u>
Higher level of QWL	-	155 - 205
Highest level of QWL	-	205 and above

Standard Error of percentages were calculated using the formula

$SE\% = \sqrt{\dfrac{PQ}{N}}$ (Guilford and Fruchter, 1981), P being the percentage and

Q = 100 - P. 95% confidence limits for the percentages were then

calculated. The results are presented in table 4.5.

Table 4.5

Frequency and percentage of library professionals in the different levels of QWL.
(N = 300)

Level	Frequency	Percentage	95% confidence interval for the percentage
Lowest Level (upto score 95)	2	0.66	− 0.26 – 1.58
Lower Level (scores 95 – 155)	71	23.66	18.85 – 28.47
Higher Level (scores 155 – 205)	201	67.00	61.68 – 72.32
Highest level (scores 205 and above)	26	8.66	5.48 – 11.84
Low level (below scores 155)	73	24.33	19.47 – 29.19
High level (scores 155 and above)	227	75.67	70.81 – 80.53

b) <u>Occupational Stress</u>

In order to know the extent and level of Occupational Stress experienced by the Library Professionals in Kerala, the sum of the neutral scores of the 60 items in the scale (OSILP) was taken as the cut off point. Each item is to be rated on a five point scale i.e. SA, A, NAD, D, and SD. Here NAD (Neither Agree Nor Disagree) is the neutral point with weightage of 3. Hence the total score of 180 (i.e. 60 x 3) is taken as the neutral point. Allowing a grace value of five to the neutral value, subjects who got the total score in the scale above 185 were treated as having high occupational stress. Disagreement (D) to a positive statement or Agreement (A) to a negative statement in the scale indicates higher OS. This point is assigned a weightage of 4. Hence the score of 240 (i.e. 60 x 4) is taken as the lower limit for highest level of OS. Allowing a grace value of five, respondents who got the total score 245 and above were treated as having highest level of OS. Frequency of subjects who got a score 185 and above was counted and percentage of incidence computed. Similarly frequency of subjects who got a score of 245 and above was counted and percentage of incidence was computed.

Standard Error of percentages was calculated. 95% confidence limits for percentages were then calculated. The results are presented in Table 4.6.

Table 4.6

Frequency and Percentage of Library Professionals having high level of OS
(N = 300)

Level	Frequency	Percentage	95% Confidence Interval for the percentage
Stressful (scores 185 – 245)	0	0	_
Most stressful (scores 245 and above)	0	0	_
Low stress (up to score 185)	300	100	_

Discussion

It is observed that the percentage of Library Professionals having high level of Quality of Work Life is significantly high. The population value is found to lie between 70.81 and 80.53 at 95% confidence level. However Librarians with highest level of QWL is only about nine percentage in the sample. The population value of this group lies between 5.48 and 11.84 percentage at 95% confidence level. It is also seen that the percentage of Librarians with low level QWL lie in between 19.47 and 29.19 at 95 % confidence level.

The mean QWL score of the sample is 173.33 and the standard deviation is 28.32. Standard Error of the mean is 1.635. Hence the 95% confidence limits for the population mean are 170.13 and 176.5. Therefore it can be considered that the Library Professionals in Kerala are having high level of QWL.

However the percentage of Librarians having high level of OS is zero. The mean OS score of the sample is 118.89 with a standard deviation of 14.39. Therefore it can be concluded that the professionals do not have Occupational Stress.

4.3   INVESTIGATION OF GROUP DIFFERENCES IN MEAN SCORES OF 'QWL'

This part of the analysis was taken up to compare the mean QWL scores of the relevant subsamples categorised on the basis of the following characteristics.

1. Gender

2. Age

3. Marital status

4. Number of children

5. Educational background

6. Job category

7. Professional experience

8. Primary functional area

9. Salary range

10. Involvement in IT applications

11. Number of supervisors

12. Work schedule

13. Type of Library

14. Size of Library

15. Type of Library management

For this analysis, the total sample (N = 300) was divided into relevant subsamples as mentioned in section 3.4.4.1. The QWL scores obtained by the respondents of the different groups in each case were used to construct separate frequency tables. The means and standard deviations of each group were also calculated. The difference in means of each relevant pairs of groups was subjected to statistical test of significance for difference between means for independent samples.

To compare the means of two groups, a t-test was employed with 0.05 level of significance. To compare the means of more than two groups, One-way Analysis of Variance (One-way ANOVA) was used. F-probability of appropriate significance level was considered to determine the significance of the test. Whenever there was a significant difference between the means, Scheffe' test was applied as a post-hoc comparison to identify which two pairs of means contributed to make the statistical difference.

Details and results of the comparisons of the mean QWL scores of relevant subsamples with respect to each characteristic of categorisation are presented in the following subsections.

4.3.1 Difference in Mean QWL Scores between 'Male' and 'Female' Library Professionals

The significance of the difference between the mean QWL scores of male and female Librarians was tested using t-test; Mean and Standard

Deviation of the two groups and the t-value obtained for this comparison are given in table 4.7.

Table 4.7

Result of the t-test for the significance of difference between mean QWL scores of male and female Library Professionals
(N = 300)

Groups	Sample size (n)	Mean	Standard Deviation	Standard Error	't' Value	2-tail probability	Level of significance
Male	176	173.267	26.9589	2.0321	-0.046	0.964	Not significant
Female	124	173.4194	30.2545	2.7169			

It is seen that the t-value obtained (-0.046) is less than the critical limit set at 0.05 level of significance (1.96). Therefore there is no significant difference between men and women librarians in their mean QWL scores. Male and female professionals can therefore be considered similar in their Quality of Work Life.

4.3.2 Difference in Mean QWL Scores among Librarians categorised on The basis of 'Age'

The mean QWL scores of four groups of the total sample of library professionals categorised on the basis of Age (details given in chapter 3 section 4.4.1) were compared using one-way ANOVA. The data and results of the comparison are presented in Table 4.8.

Table 4.8

Summary of one-way ANOVA for group difference in QWL of library professionals of four different age groups
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	3	668.237	222.746			
				0.276	0.843	Not significant
Within groups	296	239106.09	807.791			
Total	299	239774.33				

The result of the one-way ANOVA given in Table 4.8 shows that the calculated value of F-ratio (0.276) for 3, 296 degrees of freedom is less than the tabled value of 2.60 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference (even at 0.05 level) is found to exist in the mean QWL scores between any of the group pairs categorised on the basis of Age.

Therefore the Age of the Librarians cannot be considered as a discriminating factor of the Quality of Work Life of the Library Professionals.

4.3.3. **Difference in Mean QWL Scores between 'Married' and 'Unmarried' Library Professionals**

As per the details given in section 3.4.4.1, the total sample belongs to two groups when classified on the basis of their marital status. The groups are 'married librarians' and 'unmarried (single) librarians'. The mean scores of QWL of the two groups were compared using t-test. The result of this comparison is given in Table 4.9.

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Table 4.9

Result of the t-test for the significance of difference between mean QWL scores of married and unmarried library professionals
professionals
(N = 300)

Groups	Sample size (n)	Mean	Standard deviation	Standard Error	't' value	2-tail probability	Level of significance
Married	252	173.3452	28.4863	1.7945			
					0.021	0.983	Not significant
Single	48	173.2500	27.7124	3.9999			

It is seen that the t-value obtained (0.021) is less than the critical limit set at 0.05 level of significance. Therefore there is no significant difference between married and unmarried Library Professionals in their mean QWL scores.

Thus, in the case of QWL, both married and unmarried librarians are found similar.

4.3.4 **Difference in Mean QWL Scores among Library Professionals categorised on the basis of the 'Number of Children' they have**

The total sample was classified into four groups on the basis of the number of children the respondents have (details given in chapter 3, section 4.4.1). The four groups are: (1) No child group (2) One child group (3) Two children group (4) Three or more children group. The mean QWL scores of these four groups were compared by using one-way ANOVA. The data and results of the comparison are presented in Table 4.10.

Table 4.10

Summary of one-way ANOVA for group difference in QWL of library professionals categorised on the basis of the number of children they have
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F Probability	Level of significance
Between groups	3	2539.201	846.400	1.056	0.368	Not significant
Within groups	296	237235.13	801.470			
Total	299	239774.33				

The result of the one-way ANOVA shown in Table 4.10 reveals that the calculated value of F-ratio (1.056) for 3, 296 degrees of freedom is less than the tabled value of 2.65 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference is found to exist in the mean QWL scores between any of the group pairs.

Therefore the number of children the librarians have cannot be considered to discriminate their Quality of Work Life.

4.3.5 **Difference in Mean QWL Scores among the five groups of Librarians categorised on the basis of their 'Professional Qualification'**

The total sample was classified into five groups on the basis of their Professional Qualifications. Details of the categorization are given in section 3.4.4.1.

The mean scores of QWL of the five groups were compared using one-way ANOVA. The results of the comparison are given in Table 4.11.

Table 4.11

Summary of one-way ANOVA for group difference in QWL among groups of Library Professionals formed on the basis of their professional qualifications

(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of Significance
Between groups	4	3319.090	829.773			
				1.035	0.389	Not significant
Within groups	295	236455.24	801.543			
Total	299	239774.33				

As per the results of the one-way ANOVA shown in Table 4.11, the calculated value of F-ratio (1.035) for 4, 295 degrees of freedom is less than the tabled value of 2.41 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference is found to exist in the mean QWL scores between any of the group pairs.

Therefore professional Qualification cannot be considered to discriminate the QWL of library professionals.

4.3.6 **Difference in Mean QWL Scores between 'Supervisory Professionals' and 'Non-Supervisory Professionals'**

The total sample was categorised into two groups (viz.) Supervisory Professionals and Non-supervisory Professionals on the basis of the Job Title Category. The details of the classification are given in 3.4.4.1. The mean scores of QWL of the two groups were compared using t-test. Result of the comparison is given in Table 4.12.

Table 4.12

Result of the t-test for the significance of difference between mean QWL scores of Supervisory and Non-supervisory library professionals
(N = 300)

Groups	Sample size (n)	Means	Standard Deviation	Standard Error	't' Value	2 - tail probability	Level of significance
Supervisory professional	118	178.1949	27.3275	2.5157			
					2.415	0.016	0.05
Non-supervisory professional	182	170.1758	28.5754	2.1182			

From Table 4.12, it is seen that the t-value obtained (2.415) is greater than the critical limit set at 0.05 level of significance (1.960). Therefore the two groups are significantly different with respect to their mean QWL scores. The mean score of Supervisory Librarians is higher than that of Non-supervisory Librarians. Thus Job Category of Librarians can be considered as a discriminating factor of the Quality of Work Life. Supervisory librarians have greater QWL than Non-supervisory librarians.

4.3.7. **Difference in Mean QWL Scores among the four groups of Librarians categorised on the basis of 'Professional Experience'**

The total sample of Librarians was grouped into four on the bass of their length of service in library work. The groups formed were:

1. Those below 10 years of experience.

2. Those having 10 – 20 years of experience.

3. Those having 20 – 30 years of experience.

4. Those having 30 – 40 years of experience.

Details of classification given in chapter 3.

One-way ANOVA was used to compare the mean QWL scores of the four groups. The summary of the results of ANOVA is given in Table 4.13.

Table 4.13

Summary of one-way ANOVA for Group Difference in QWL among the four groups of library professionals categorised on the basis of Professional Experience
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	3	6241.276	2080.425			
				2.637	0.050	0.05 level
Within groups	296	233533.05	788.963			
Total	299	239774.33				

As per Table 4.13, the F-ratio obtained (2.637) is greater than the table value set at 0.05 level (2.64) for 3, 296 degrees of freedom. Hence significant difference exists among the four groups with respect to the mean QWL scores.

Since the groups were found to be significantly different in one- way ANOVA, Scheffe' test of multiple comparison was employed to identify the pairs of groups that contributed to the significant difference. The results of the comparison are summarised in Table 4.14.

Table 4.14

Result of Scheffe' Test of multiple comparison between means of QWL based on four groups of Professional Experience
(N = 300)

Groups compared	Means		F-value	Value of F'		Level of significance
	M1	M2		0. 05	0.01	
G0-G1	178.4015	168.5566	7.22	7.8	11.34	NS
G0-G2	178.4015	170.6909	2.93	7.8	11.34	NS
G0-G3	178.4015	170.7143	0.498	7.8	11.34	NS
G1-G2	168.5566	170.6909	0.209	7.8	11.34	NS
G1-G3	168.5566	170.7143	0.039	7.8	11.34	NS
G2-G3	170.6909	170.7143	0.000	7.8	11.34	NS

Note: (1) G0 – Group of Librarians with less than 10 year experience
G1 – Group of Librarians having 11 - 20 years of experience
G2 – Group of Librarians having 20 - 30 years of experience
G3 – Group of Librarians having 30 - 40 years of experience

(2) NS – Not significant

The result of the Scheffe' test of multiple comparison in Table 4.14 shows that no two groups when taken in pairs are significantly different even at 0.05 level. This finding may be due to the fact that Scheffe' method is a very rigorous and robust test of comparison for social service research. If a less rigorous significance level (ie.) 0.10 level may be used instead of the 0.05 level to reject the hypothesis on the basis of chance occurrence, the group pair G0 vs. G1 may show significant difference at 0.10 level.

Hence it may be concluded that the length of Professional Experience of the library professionals cannot contribute to the Quality of Work Life.

4.3.8 **Difference in Mean QWL Scores among the Eight Groups of Library Professionals categorised on the basis of their 'Primary Functional Area'**

The total sample of library professionals was grouped into eight on the basis of their primary functional area in the libraries. Details of the classification are given in Chapter3.

One-way ANOVA was employed to compare the mean QWL scores of the eight groups. Summary of the results of ANOVA is given in Table 4.15.

Table 4.15

Summary of one-way ANOVA for Group Difference in QWL among the eight groups of library professionals categorised on the basis of Primary Functional Area
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between Groups	7	8540.213	1220.030			
				1.541	0.153	Not significant
Within Groups	292	231234.12	791.898			
Total	299	239774.33				

The result of the one-way ANOVA given in table 4.15 shows that the calculated value of

F-ratio (1.541) for 7, 292 degrees of freedom is less than the tabled value of 2.04 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference (even at 0.05 level) is found to exist in the mean QWL scores between any of the group pairs categorised on the basis of Primary Functional Area.

Therefore, Primary Functional Area cannot be considered as a discriminating factor of the QWL of the library professionals.

4.3.9 **Difference in Mean QWL Scores among the Five Groups of Library Professionals categorised on the basis of their 'Monthly Salary'**

The total sample was categorised into five groups on the basis of their Monthly Salary. Details of the classification are given in chapter 3.

One- way ANOVA was employed to compare the mean QWL scores of the five groups. Summary of the results of ANOVA is presented in Table 4.16.

Table 4.16

Summary of one-way ANOVA for group difference in QWL among five groups of library professionals categorised on the basis of Monthly Salary

(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between Groups	4	5054.576	1263.644			
				1.588	0.177	Not significant
Within Groups	295	234719.75	795.660			
Total	299	239774.33				

The result of the one-way ANOVA in Table 4.16 shows that the calculated value of F-ratio (1.588) for 4, 295 degrees of freedom is less than the table value of 2.40 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference is found to exist in the mean QWL scores between any of the group pairs.

Hence, Salary Range cannot be considered to discriminate the QWL of the library professionals.

4.3.10 **Difference in Mean QWL Scores Between the Professionals Involved in IT Applications and Professionals Not Involved in IT Applications**

The total sample was categorised into two groups on the basis of their involvement in IT applications at work place. The two groups are (1) Those involved in IT applications (2) Those not involved in IT applications. The details of the classification are given in chapter 3.

The mean scores of QWL of the two groups were compared using t-test. Result of the comparison is given in Table 4.17.

Table 4.17

Result of the t-test for the significance of difference between mean QWL scores of the two groups of Library Professionals involved in IT applications and not involved in IT applications
(N = 300)

Groups	Sample Size(n)	Mean	Standard Deviation	Standard Error	t-value	2-tail probabi-lity	Level of signifi-cance
Involved in IT applications	222	174.1577	29.8295	2.002	0.956	0.341	Not significant
Not involved in IT applications	78	170.9744	23.5057	2.6615			

As per Table 4.17, the 't' value obtained (0.956) is less than the critical limit set at 0.05 level of significance (1.960). Therefore there exists no significant difference in the mean QWL scores of the two groups.

Hence involvement in IT applications cannot be considered to discriminate the Quality of Work Life of the library professionals.

4.3.11 **Difference in Mean QWL Scores Among the Five Groups of Library Professionals Categorised on the Basis of the Number of Supervisors**

The total sample of library professionals were grouped into five on the basis of the number of Supervisors they have. The five groups are:

1) Those with no Supervisors
2) Those with one Supervisor
3) Those with two Supervisors
4) Those with three Supervisors
5) Those with more than three Supervisors

Details of the classification are given in chapter 3.

One-way ANOVA was employed to compare the mean QWL scores of the five groups. Summary of the results of ANOVA is given in Table 4.18.

Table 4.18

Summary of one-way ANOVA for Group Difference in QWL among the five groups of Library Professionals categorised on the basis of the Number of Supervisors
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	4	3441.504	860.376			
				1.074	0.37	Not significant
Within groups	295	236332.83	801.128			
Total	299	239774.33				

As per Table 4.18 the calculated value of F-ratio (1.074) for 4, 295 degrees of freedom is less than the tabled value of 2.40 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference is found (even at 0.05 level) to exist in the mean QWL scores between any of the group pairs.

Therefore number of supervisors cannot be considered as a discriminating factor of the QWL of the library professionals.

4.3.12 Difference in Mean QWL Scores Among the Four Groups of Library Professionals Categorised on the Basis of 'Work Schedule'

The total sample of library professionals were grouped into four on the basis of their work schedule depending on whether they attended shift duties or not. Details of the classification are given in chapter 3.

One-way ANOVA was employed to compare the mean QWL scores of the four groups. Summary of the results of ANOVA is presented in Table 4.19.

Table 4.19

Summary of one-way ANOVA for group difference in QWL among the four groups of Library Professionals categorised on the basis of Work Schedule
(N = 300)

Source of variation	Degrees of freedom.	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	3	4729.431	1576.477	1.985	0.116	Not significant
Within groups	296	235044.90	794.071			
Total	299	239774.33				

As per Table 4.19, the calculated value of F-ratio (1.985) for 3, 296 degrees of freedom is less than the tabled value of 2.63 at 0.05 level for the corresponding degrees of freedom. Therefore no significant difference is found (even at 0.05 level) to exist in the mean QWL scores between any of the group pairs categorised on the basis of 'Work Schedule'.

Hence 'Work Schedule' cannot be considered to discriminate the Quality of Work Life of the Library Professionals.

4.3.13 Difference in Mean QWL Scores Among the Four Groups of Library Professionals Categorised on the Basis of the 'Type of Library'

The total sample of Library Professionals was grouped into four on the basis of the Type of Library in which they were working. Details of the classification are given in chapter 3.

One-way ANOVA was employed to compare the mean QWL score of the four groups. Summary of the result of ANOVA is given in Table 4.20.

Table 4.20

Summary of one-way ANOVA for Group Difference in QWL among the four groups of library professionals categorised on the basis of Type of Library
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	3	6786.288	2262.096			
				2.874	0.037	0.05
Within groups	296	232988.04	787.122			
Total	299	239774.33				

As per Table 4.20, the F-ratio obtained (i.e. 2.874) is greater than the table value set at 0.05 level (2.63) for 3, 296 degrees of freedom. Hence significant difference exists among the four groups with respect to the mean QWL scores.

Since the groups were found significantly different in one-way ANOVA, Scheffe' test of multiple comparison was employed to identify the pairs of groups that contributed to the significant difference. The results of the comparison are summarised in Table 4.21.

Table 4.21

Result of Scheffe' Test of Multiple Comparisons between means of QWL based on four groups of Type of Library.

Groups compared	Means		F-value	Value of F'		Level of significance
	M1	M2		0.05	0.01	
G0-G1	177.00	171.5116	2.227	7.80	11.34	NS
G0-G2	177.00	151.3000	7.668	7.80	11.34	NS
G0-G3	177.00	174.5273	0.281	7.80	11.34	NS
G1-G2	171.5116	151.3000	4.817	7.80	11.34	NS
G1-G3	171.5116	174.5273	0.445	7.80	11.34	NS
G2-G3	151.3000	174.5273	5.78	7.80	11.34	NS

Note: 1) NS – Not significant

2) G0 – University Library Group
   G1 – College Library Group
   G2 – Public Library Group
   G3 – Special Library Group

The result of the Scheffe' procedure of multiple comparisons in Table 4.21 shows that no two groups when taken in pairs are significantly different even at 0.05 level. If a less rigorous significance level, i.e., 0.10 level was chosen instead of the 0.05 level, it would have been led to fewer significant results.

Hence it can be concluded that the 'Type of Library' where professionals work cannot be considered as a discriminatory factor of the QWL.

4.3.14 Difference in Mean QWL Scores Among Groups of Librarians Categorised on the basis of 'Size of the Library'

Size of the libraries where the respondents were working at the time of the survey was considered in terms of the major three criteria relating to the libraries (viz.) Number of books (volume count), Number of journal titles subscribed, and Number of staff in the library. Categories were formed in the sample on the basis of the above mentioned criteria (details of classification given in chapter 3). Mean QWL scores of the categories were compared separately for each of the above three cases.

4.3.14.1 <u>Difference in mean QWL scores among the ten groups of librarians categorized on the basis of 'size of the library in terms of number of books'</u>

The librarians were categorised into ten groups on the basis of the size of their libraries in terms of number of books. The groups are:

G0 – Librarians working in libraries with holdings less than 5000 volumes.

G1 – Librarians working in libraries with holdings more than 5000 and less than 10000 volumes.

G2 – Librarians working in libraries with holdings more than 10000 and less than 15000 volumes.

G3 – Librarians working in libraries with holdings more than 15000 and less than 20000 volumes.

G4 – Librarians working in libraries with holdings more than 20000 and less than 25000 volumes.

G5 – Librarians working in libraries with holdings more than 25000 and less than 30000 volumes.

G6 – Librarians working in libraries with holdings more than 30000 and less than 50000 volumes.

G7 – Librarians working in libraries with holdings more than 50000 and less than 75000 volumes.

G8 – Librarians working in libraries with holdings more than 75000 and less than one lakh volumes.

G9 – Librarians working in libraries with holdings more than one lakh volumes.

The mean QWL scores of the ten groups were compared using one-way ANOVA. The summary of the results of the ANOVA is given in Table 4.22.

Table 4.22

Summary of one-way ANOVA for Group Difference in QWL scores of ten groups of librarians categorised on the basis of size of library in terms of number of books
(N=300)

Source of Variation	d.f.	Sum of Squares	Mean Squares	F-ratio	F-value	Level of significance
Between groups	9	20022.686	2224.743	2.936	0.002	0.01
Within groups	290	219751.64	757.764			
Total	299	239774.33				

The F-ratio given in Table 4.22 (i.e. 2.936) is greater than the tabled value 2.48 set for 0.01 level of significance for 9, 290 d.f. Hence the groups are significantly different at 0.01 level with respect to their mean QWL.

Since the groups were found to be significantly different, Scheffe' test was used to know how the means differed. The results of the comparison are summarised and presented in Table 4.23.

Table 4.23

Result of the Scheffe' test of multiple comparison between means of QWL scores of the ten groups of librarians based on the size of library in terms of number of books
(N=300)

Groups compared	Means		F-value	Value of F'		Level of significance
	M1	M2		0.05	0.01	
G0-G1	177.1455	181.3023	0.55	17.19	22.32	NS
G0-G2	177.1455	162.8788	5.54	17.19	22.32	NS
G0-G3	177.1455	174.0385	0.225	17.19	22.32	NS
G0-G4	177.1455	168.5714	1.08	17.19	22.32	NS
G0-G5	177.1455	176.5000	0.004	17.19	22.32	NS
G0-G6	177.1455	177.3788	0.002	17.19	22.32	NS
G0-G7	177.1455	183.4545	0.482	17.19	22.32	NS
G0-G8	177.1455	164.7429	4.343	17.19	22.32	NS
G0-G9	177.1455	144.1111	11.139	17.19	22.32	NS
G1-G2	181.3023	162.8788	8.364	17.19	22.32	NS
G1-G3	181.3023	174.0385	1.128	17.19	22.32	NS
G1-G4	181.3023	168.5714	2.259	17.19	22.32	NS
G1-G5	181.3023	176.5000	0.205	17.19	22.32	NS
G1-G6	181.3023	177.3788	0.529	17.19	22.32	NS
G1-G7	181.3023	183.4545	0.054	17.19	22.32	NS
G1-G8	181.3023	164.7429	6.983	17.19	22.32	NS
G1-G9	181.3023	144.1111	13.585	17.19	22.32	NS
G2-G3	162.8788	174.0385	2.390	17.19	22.32	NS
G2-G4	162.8788	168.5714	0.420	17.19	22.32	NS
G2-G5	162.8788	176.5000	1.577	17.19	22.32	NS
G2-G6	162.8788	177.3788	6.105	17.19	22.32	NS

Groups compared	Means		F-value	Value of F'		Level of significance
	M1	M2		0.05	0.01	
`	162.8788	183.4545	4.609	17.19	22.32	NS
G2-G8	162.8788	164.7429	0.078	17.19	22.32	NS
G2-G9	162.8788	144.1111	3.287	17.19	22.32	NS
G3-G4	174.0385	168.5714	0.359	17.19	22.32	NS
G3-G5	174.0385	176.5000	0.049	17.19	22.32	NS
G3-G6	174.0385	177.3788	0.275	17.19	22.32	NS
G3-G7	174.0385	183.4545	0.904	17.19	22.32	NS
G3-G8	174.0385	164.7429	1.701	17.19	22.32	NS
G3-G9	174.0385	144.1111	7.903	17.19	22.32	NS
G4-G5	168.5754	176.5000	0.422	17.19	22.32	NS
G4-G6	168.5754	177.3788	1.182	17.19	22.32	NS
G4-G7	168.5754	183.4545	1.801	17.19	22.32	NS
G4-G8	168.5754	164.7429	0.193	17.19	22.32	NS
G4-G9	168.5754	144.1111	4.325	17.19	22.32	NS
G5-G6	176.5000	177.3788	0.007	17.19	22.32	NS
G5-G7	176.5000	183.4545	0.296	17.19	22.32	NS
G5-G8	176.5000	164.7429	1.188	17.19	22.32	NS
G5-G9	176.5000	144.1111	5.863	17.19	22.32	NS
G6-G7	177.3788	183.4545	0.459	17.19	22.32	NS
G6-G8	177.3788	164.7429	4.819	17.19	22.32	NS
G6-G9	177.3788	144.1111	11.568	17.19	22.32	NS
G7-G8	183.4545	164.7429	3.867	17.19	22.32	NS
G7-G9	183.4545	144.1111	10.111	17.19	22.32	NS
G8-G9	164.7429	144.1111	4.022	17.19	22.32	NS

Note : NS – Not significant

The result of the Scheffe' test of multiple comparison in Table 4.23 reveals that no two groups when taken in pairs are significantly different even at 0.05 level. Hence it can be concluded that size of the library by number of books cannot discriminate QWL of the librarians in these libraries.

4.3.14.2 <u>Difference in mean QWL scores among the five groups of librarians categorised on the basis of 'library size in terms of number of journal titles'</u>

The sample of librarians was further classified into five groups on the basis of the library size in terms of number of journal titles subscribed. The groups formed are:-

G0 – Those working in libraries subscribing to less than 50 journals.
G1 – Those working in libraries subscribing 50 – 100 journals.
G2 – Those working in libraries subscribing 100 – 150 journals.
G3 – Those working in libraries subscribing 150 – 200 journals.
G4 – Those working in libraries subscribing more than 200 journals.
Details of classification are given in chapter 3.

One-way ANOVA was employed on the five groups of librarians to compare the mean QWL of the groups. The summary of the results of the ANOVA is presented in Table 4.24.

Table 4.24

Summary of one-way ANOVA for group difference in QWL scores of five groups of librarians categorised on the basis of size of library in terms of number of journals
(N=300)

Source of Variation	d.f.	Sum of Squares	Mean Squares	F-ratio	F-probability	Level of significance
Between groups	4	4931.706	1232.927			
				1.549	0.188	Not significant
Within groups	295	234842.62	796.077			
Total	299	239774.33				

As per Table 4.24 the F-ratio (1.549) computed was less than the tabled value (2.40) set at the 0.05 level with 4, 295 degrees of freedom Hence the groups are not significantly different even at 0.05 level with respect to the QWL.

4.3.14.3 <u>Difference in mean QWL scores among the seven groups of librarians categorised on the basis of the 'size of library in terms of number of staff'</u>

The librarians included in the study were categorised into seven groups on the basis of size of the library in terms of number of staff. Classification details are given in chapter 3.

The mean QWL scores of the seven groups of librarians from the above library categories were compared using one-way ANOVA. The summary of the results of the ANOVA is given in Table 4.25.

Table 4.25

Summary of one-way ANOVA for group difference in QWL scores of seven groups of librarians categorised on the basis of size of library in terms of number of staff
(N=300)

Source of Variation	d.f.	Sum of Squares	Mean Squares	F-ratio	F-probability	level of significance
Between groups	6	4602.180	767.030			
				0.956	0.456	Not significant
Within groups	293	235172.15	802.635			
Total	299	239774.33				

As per Table 4.25 the F-ratio (0.456) computed was less than the tabled value (3.68) set at the 0.05 level with 6, 293 degrees of freedom. Hence the groups are not significantly different even at 0.05 level with respect to the QWL.

4.3.15 **Difference in mean QWL scores among the four groups of Library Professionals categorised on the basis of 'Type of Library Management'.**

The total sample of Library Professionals wee categorised into four groups on the basis of the 'Type of Library Management'. The four groups are: (1) Those working under Private management (2) Those working in Government Libraries (3) Those working in Semi Government Libraries (4) Those working in Libraries under Autonomous Institutions (Details of classification given in chapter 3). One- way ANOVA was employed to compare the mean QWL scores of the four groups of library professionals. Summary of the results of ANOVA is given in Table 4.26.

Table 4.26

Summary of one-way ANOVA for Group Difference in QWL among the four groups of Library Professionals categorised on the basis of the Type of Management of the libraries
(N = 300)

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F-ratio	F-probability	Level of significance
Between groups	3	914.376	304.792			
				0.378	0.769	Not significant
Within groups	296	238859.95	806.959			
Total	299	239774.33				

As per Table 4.26, the calculated value of F-ratio (0.378) for 3, 296 degrees of freedom is less than the tabled value of 8.54 at 0.05 level for the corresponding degrees of freedom. Hence no significant difference is found (even at 0.05 level) to exist in the mean QWL scores between any of the group pairs.

Therefore, it can be concluded that Type of Management of the libraries cannot be considered to discriminate the QWL of the Library Professionals.

Summary of results

Group difference in means of QWL scores were investigated among relevant subgroups formed on the basis of select fifteen characteristics. Results of the analysis are summarised below:-

I. Significant difference was found to exist between groups categorised on the basis of the characteristic "job category". The mean QWL scores and the 't' value of the result of comparison that showed significant mean difference are:

Group	Mean QWL	t-value	Level of significance
Supervisory librarians	178.1949	2.415	0.05
Non-supervisory librarians	170.1758		

Higher mean value is associated with the supervisory librarians.

II.   No significant difference in mean QWL was noticed among the groups of librarians categorised on the other characteristics (taken in pairs) (viz.): Gender, Age, Marital status, Number of children, Educational background, Professional experience, Primary functional area, Salary, Involvement in IT application, Number of supervisors, Work schedule, Type of library, Size of library and Type of library management.

4.4   INVESTIGATION OF GROUP DIFFERENCES IN MEAN SCORES OF 'OS'

As revealed in section 4.2, Table 4.6 all the respondents in the sample experience only low stress in their occupation. Consequently it can be concluded that the library professionals in Kerala do not have any Occupational Stress at all. Hence comparison of the mean OS scores of the relevant subsamples became irrelevant in the context of the study and no attempt has been made to compare the group difference in the mean OS scores.

4.5   ESTIMATION OF ASSOCIATION BETWEEN 'QWL' AND THE INDEPENDENT VARIABLES

The nature and extent of the relationship between QWL and each of the independent variables were examined in this part of the analysis. Since most of the independent variables of the study are based on descriptive characteristics,

tests of independence using χ2 (chi-square) statistics (Lindquist, 1970) was employed for this purpose.

The analysis involved a two-way cross-tabulation of QWL scores with each of the independent variables. The sample of librarians was classified into Low QWL Group (LQWLG), Average QWL Group (AQWLG) and High QWL Group (HQWLG) on the basis of QWL score (details of the classification are given in chapter 3). Contingency tables with these three QWL groups as columns and the subcategories of each of the independent variables as rows were drawn up. χ2 value was computed in each case to test the independence of the respective variable with QWL. The χ2 value was interpreted with reference to its table value at appropriate degrees of freedom and level of significance. When the calculated value was higher than the 5% value given in the table, it was concluded that significant association existed between the independent variable and 'QWL'.

Wherever the χ2 value showed significant relationship, the magnitude of association was measured by the C-coefficient (Coefficient of Contingency). (Garrett and Woodworth, 1966) (Lewin and Fox, 1991).

The value of C can be found by the formula $C = \sqrt{\left(\dfrac{\chi2}{(N+\chi2)}\right)}$

Where χ2 = the calculated chi-square value

      N = total number of cases

      C = the contingency coefficient

The chi-square tests were done using computers and the summary of the results are presented in Table 4.27.

Table 4.27

Summary of the results of chi-square tests of independence between QWL and each of the independent variables

(N=300)

Sl.No.	Independent variables	Degrees of freedom	Chi-Square value	P-value	Significance	Value of C-coefficient
1	Gender	2	0.731	0.694	NS	
2	Age	6	11.483	0.075	NS	
3	Marital status	2	0.337	0.845	NS	
4	Number of children	10	10.388	0.407	NS	
5	Educational background	8	6.844	0.554	NS	
6	Job title category	2	7.313	0.026	Significant at 5%	0.154261417
7	Professional experience	6	21.726	0.001	Significant at 1%	0.25986441
8	Primary functional area	14	14.875	0.387	NS	
9	Salary range	8	13.828	0.086	NS	
10	Involvement in IT application	2	5.640	0.060	NS	
11	Number of supervisors	8	6.700	0.569	NS	
12	Work schedule	6	11.075	0.086	NS	
13	Type of library	6	8.888	0.180	NS	
14	Library size in terms of number of books	18	31.309	0.027	Significant at 5%	0.307409931
15	Library size in terms of number of journals	8	14.824	0.063	NS	
16	Library size in terms of number of staff	12	16.831	0.156	NS	
17	Type of management	6	4.948	0.550	NS	

As per Table 4.28, there exists significant association between QWL and the three independent variables Job title category, Professional experience and Size of the library in terms of the number of books. The values of C are 0.1543, 0.2599 and 0.3074 respectively. This shows that the associations of the variables with QWL are only negligible.

4.6 ESTIMATION OF ASSOCIATION BETWEEN 'OS' AND THE INDEPENDENT VARIABLES

The nature and extent of relationships between OS and each of the independent variables were examined through the tests of independence using $\chi 2$ statistic. The analysis involved two-way cross tabulation of the OS scores with each of the independent variables. The sample of librarians was classified into Low OS Group (LOSG), Average OS Group (AOSG) and High OS Group (HOSG) on the basis of OS score (details of the classification are given in chapter 3). Contingency tables with the three OS groups as columns and the sub categories of each of the independent variables as rows were drawn up. $\chi 2$ value was computed in each case to test the independence of the respective variable with OS. Wherever $\chi 2$ value showed significant relationship, the magnitude of association was measured by calculating the C-coefficient.

The chi-square tests were done using computer and the summary of the results are given in Table 4.28.

Table 4.28

**Summary of the results of Chi-Square tests of independence between OS
and each of the independent variables**
(N=300)

Sl.No.	Independent variables	Degrees of freedom	Chi-Square value	P-value	Significance	Value of C-coefficient
1	Gender	2	0.729	0.695	NS	
2	Age	6	17.275	0.008	0.01	0.233341025
3	Marital status	2	4.886	0.087	NS	
4	Number of children	10	12.659	0.243	NS	
5	Educational background	8	8.226	0.412	NS	
6	Job title category	2	4.457	0.108	NS	
7	Professional experience	6	6.830	0.337	NS	
8	Primary functional area	14	19.593	0.143	NS	
9	Salary range	8	8.678	0.370	NS	
10	Involvement in IT application	2	7.699	0.021	0.05	0.158180924
11	Number of supervisors	8	5.690	0.682	NS	
12	Work schedule	6	2.319	0.888	NS	
13	Type of library	6	4.601	0.596	NS	
14	Library size in terms of number of books	18	25.240	0.118	NS	
15	Library size in terms of number of journals	8	4.374	0.822	NS	
16	Library size in terms of number of staff	12	22.638	0.031	0.05	0.264887379
17	Type of management	6	5.473	0.485	NS	

As per Table 4.28 significant association is found to exist between OS and the independent variables - Age, Involvement in IT applications, and Number of staff. The values of C are 0.2333, 0.1582, and 0.2649 respectively. This shows that the associations of the variables with OS are only negligible.

4.7   ESTIMATION OF ASSOCIATION BETWEEN 'QWL' AND 'OS'

Attempt was made to examine the nature and extent of the association between the variables QWL and OS. The three groups LQWLG, AQWLG and HQWLG of the sample formed on the basis of QWL scores (Details of the classification is given in chapter 3) were cross tabulated with the three Occupational Stress groups LOSG, AOSG, and HOSG of the sample to form a 3x3 contingent table. Chi-square test of independence was performed using the contingent table to test the association between the two variables. The results of the test are presented in Table 4.29.

Table 4.29

Data and results of Chi-Square tests of independence between QWL and OS
(N=300)

QWL	OS			Total
	LOSG	AOSG	HOSG	
LQWLG	13	34	38	85
AQWLG	13	59	33	105
HQWLG	43	53	14	110
Total	69	146	85	300
Chi-square = 40.116 with 4df p-value = 0.000 c = 0.3434				

Table 4.29 shows that the chi-square value equal to 40.116 for 4 degrees of freedom is greater than the 1% table value of 13.277. Therefore QWL is significantly related to OS. However the degree of association between the variables is not high as the value of C-coefficient comes only to 0.3434. The Pearson Correlation Coefficient computed between QWL and OS shows that the variables are negatively correlated. The correlation is significant at 0.01 level with a value − 0.377.

4.8   DISCUSSION OF RESULTS AND CONCLUSIONS

In the light of the findings of the investigation, the following conclusions have been made:

1) The survey showed that the percentage of library professionals in Kerala having high level of Quality of Working Life is significantly high. The population value of the percentage lie between 70 to 80 at 95% confidence level. However, librarians with highest level of QWL are only 5 to 11 percent at 95% confidence level. Moreover, the magnitude of the mean value of QWL is 173.33. From these findings it can be concluded that the library professionals in Kerala do not have very high level of QWL eventhough they possess moderately high level of QWL. These findings are supported by Topper (2008) who revealed that library professionals were very much satisfied in their job. A dissimilar result was observed by Uma Sekaran (1985) in the case of Banking Professionals. When the QWL in the Indian Nationalised Banking industry was examined, she found that the Quality of Working Life of

Banking Profession is not high. Kavoussi *et.al*. (1978) recommended that closer attention be paid for improving Quality of Working Life to reduce absenteeism.

2) The percentage of librarians in Kerala having high level of Occupational Stress is zero. All the librarians experience only low stress. Even the percentage of librarians who experience moderate level of stress is also zero. The magnitude of the mean score of OS is 118.89 in the sample with a standard deviation of 14.39. Therefore it can be concluded that the library professionals working in different types of libraries in Kerala do not experience any stress in their occupation. The result of the present investigation is in line with the findings of Poole and Denny (2001) who investigated the aspects of technostress of librarians and found that library professionals experienced a negligible stress as regards to the introduction of technological changes. However it differs from the results of the study by Haridasan and Sultan (2002) which revealed that librarians were under stress as they were affected by role overload, role conflict, unreasonable group and political pressure and under participation and also found that librarians experienced high burn out on the emotional exhaustion dimension.

Awasthi (2002) also investigated the stress and burnout of the library professionals and found that library professionals were maintaining moderate level of burnout, significant sex difference in respect of stress and burnout etc. Sornam and Sudha (2003) also arrived at similar results that age, experience

and marital status had significant association with organisational Role stress. Thus the present results with regard to the OS of librarians in Kerala are not consistent with the results of some other studies conducted elsewhere.

3) The present study revealed that Quality of Work Life of librarians in Kerala is significantly related to Occupational Stress. The $\chi 2$ test of independence showed significant association between the variables at 0.01 level but the degree of association is not high as the value of C-coefficient is only 0.3434. The value of Pearson Correlation Coefficient between the variables also shows that the variables are significantly but negatively correlated. This finding is not contrary to what is expected. Ahmad and Mehta (1997) endorse this finding. The results of their study indicated that the dimensions of Occupational Stress were negatively correlated with the Quality of Work Life. Similarly Mishra (1996) ascertained that stress was correlated negatively and significantly with job satisfaction. Contrarily, Simon and Santoro (1982) observed that the teachers surveyed were satisfied with their job regardless of the low, moderate or high levels of stress.

4) The Quality of Work Life of librarians in Kerala is significantly related to their 'Job title category'. While the chi-square result supported this fact at 0.05 level of significance, the magnitude of the C-coefficient suggested only a low association between these two variables. Comparison of mean differences showed that supervisory librarians have significantly greater QWL than non-supervisory librarians. This finding is in close agreement with Nzotta

(1987) who noticed that the management librarians and public service librarians derived greater satisfaction from their social status than the technical service librarians.

5) The study revealed that there is no significant difference between men and women librarians in Kerala in their mean QWL scores. Male and female library professionals are similar in their perception to Quality of Work Life. Whereas, Rao (1986) evaluated the difference between Quality of Work Life of men and women employees doing comparable job and found contradiction to the findings of the present study. He observed that men employees had significantly higher composite Quality of Working Life score than women employees. The observation by Navalani (1990) in this respect is also contrary to the present result. The findings of Navalani revealed that there was a difference in the perception of most of the attributes of work by men and women.

6) The demographic characteristics such as age, marital status, number of children, educational background are not found as discriminating factors of the Quality of Work Life of librarians in Kerala. No significant difference (even at 0.05 level) was found to exist in the mean QWL scores of the four different age groups. The $\chi 2$ test of independence also showed no significant relationships between the groups in respect of QWL. However, this finding is not in agreement with the results of many other investigations. The survey of Phillips *et.al*. (1994) indicated that the age and satisfaction relationship was

correlated and the librarians were increasingly pleased with their profession over age. Similarly, Rao (1986) found that age had a positive impact on perceived Quality of Working Life for women. The observation by Mehta (1982) in this regard is also contradictory to the present result. He found that younger and entry cadre employees in organisation showed greater work related dissatisfaction, which tended to decrease with the increase of age of employees.

No significant difference is found to exist between the mean QWL scores of married library professionals and unmarried library professionals in Kerala. In χ^2 test of independence also, no significant association was found between the two groups. Therefore marital status of the library professionals does not have any effect on their QWL. Similar results were found in the study of McCormick (2000) in which there were no differences in satisfaction with pay between married and unmarried females and married and unmarried males.

Similarly, QWL of the professionals is not related to their educational background. There is no significant difference in the mean QWL scores between any pairs of groups categorized on the basis of their professional qualifications. The χ^2 value was also not significant when association between the five groups was studied. However the observation by McCormick (2000) is contrary to the present result. He concluded that librarians with post graduate degree or other higher degrees of professional education had higher satisfaction with opportunities for promotion and status.

7) When group differences in mean QWL scores on the basis of respondants' length of professional experience were studied it was found that the four groups showed a significant difference at 0.05 level. But the Scheffe' test of multiple comparison showed that no two groups when taken in pairs were significantly different. While the chi-square test of independence revealed a significant difference at 0.01 level, the magnitude of C-coefficient indicated only a very low relationship. From these findings it is evident that librarians having varying length of professional experience do not differ in their Quality of Work Life. However this finding is contrary to the observations of Lynch and Verdin (1983) and Reenen (1998). Lynch and Verdin, when studied the job satisfaction differences among library units and among occupational groups within librarians, found that job satisfaction tended to increase with experience. Likewise Reenen found that experienced employees were more satisfied than the less experienced.

8) When group difference in QWL on the basis of respondent's primary functional area were studied, it was found that none of the group pairs differed significantly. χ^2 test of independence also revealed no significant association. From these findings it is evident that the different types of professional work such as classification, cataloguing, reference service etc. cannot be considered as discriminating factors of the QWL. Stated otherwise, primary functional area of librarians does not influence the Quality of Work Life. However, the conclusion of the study of Vaszkb (1975) differs. Vaszkb found working environment in the working area created favourable or unfavourable influence

on work activity and created optimum working environment which add to the QWL.

9) Contrary to the expectations, no significant difference was found to exist in the mean QWL scores between any pair of groups categorised on the basis of Salary range. Thus Salary range cannot be considered as a discriminating factor of Quality of Work Life of library professionals in Kerala.

Studies located from other professions indicate varying results. Kapoor (1967) found that wages were ranked first in importance by Indian workers because of inflationary economy. Herrick (1981) found disagreement with the present result as regards to the 'Pay' factor. Cherrington and Cherrington (1974) emphasized on the use of wage incentive to improve job satisfaction. The study by Fitch (1990) found that 'Pay' and 'Promotion' were the least satisfying areas which increase the Quality of Work Life.

10) The tests of significance of group difference and the chi-square test of independence revealed that the 'Involvement in IT applications' did not contribute to the Quality of Work Life of the library professionals. Palmini (1994) conducted a survey exploring the impact of computerization on staff engaged in academic libraries and found that support staff was deeply concerned not only with their job specifics and roles but also with the questions facing the academic libraries which disagree with the present findings. In the dimension of involvement in IT applications, Daniels (1995) found that introduction of computers in libraries to impart quality service to clients, did

not disturb the non professionals, instead it helped to reduce their work. Taylor (2000) surveyed the job tasks and roles of the ARL library, webmasters ascertained that most of the professionals felt additional responsibilities besides the web development. Thus earlier studies indicate varying results in the dimension of involvement in IT applications.

11) The present findings revealed that the number of supervisors cannot be considered as a discriminating factor of the QWL of the library professionals, which do not conform to the study conducted by Nitish (1984). He concluded that lesser the managers and supervisors level in an organisation, the better would be the Quality of Work Life.

12) No significant difference exists in the mean QWL scores between any of the group pairs categorised on the basis of work schedule. The chi-square test also revealed no relationship between the variables. Hence, work schedule cannot be considered to discriminate the Quality of Work Life of the library professionals. Lansbury (1974) noted that poor social environment and bad working conditions lead to low 'QWL'. He has suggested improved communication, better training, recreational facilities, flexible working hours and job redesign to enhance QWL which do not endorse the present findings. Walton (1974), one of the major interpreters of the Quality of Working Life (QWL) movement, had commented that a more efficient distribution of work hours is inevitable for QWL. The present study contradicts the above findings.

13) There is no significant difference found to exist among the four groups of library professionals categorised by "Type of library". Though the ANOVA test showed significant difference at 0.5 level, the Scheffe' test of multiple comparison made in Table 4.21 revealed no significant difference. The $\chi2$ test of independence also showed no relationship between the variables. Hence 'type of library' where the professionals work cannot be considered as a discriminating factor of QWL. Contrary to the above finding, Lynch and Verdin (1983) found that reference librarians working in academic libraries were more satisfied than catalog librarians.

14) The size of the library did not contribute to the Quality of Work Life of the professionals, which is not in agreement with earlier studies. Murray (1999) ascertained that professionals were more satisfied than paraprofessionals in the areas of enjoyment of the work itself and coworkers in an Academic Affairs Library of University of North Carolina having a large number of staff.

15) The "type of management of the libraries" cannot be considered to discriminate the QWL of the library professionals. Contrary to the above result, Ghosh (1993) found that the core determinant of QWL in an organisation is the management's perception of Quality of Work Life in effecting the organisation's effectiveness. Similarly, Suri *et.al.* (1991) in their study depicted that both public and private sector organisations least preferred the job and work place redesign programmes. Hoque and Rahman (1999) in

their attempt to assess and compare the quality of Working Life of industrial workers of public and private organisations revealed that the perceived QWL of the private sector workers was higher than their counter parts in the public sector.

16) When the association between Occupational Stress and the independent variables were studied, the $\chi 2$ test of independence revealed significant relationship between OS and 'Age' at 0.01 level, OS and 'Involvement in IT application' at 0.05 level, OS and 'Library size in terms of number of staff' at 0.05 level. The magnitudes of C-coefficient suggested only a very low association between these variables and Occupational Stress.

Agreeing to the results of the study in respect of the Occupational Stress and 'age', Kirby (1990) found that the variable of age significantly related to OS. Manthei (1989) expressed that older subjects experienced lesser stress than younger subjects, which also purport to the present findings. Whereas, Beena and Poduval (1991) found that stress is increased by the advancing of age. Sornam and Sudha (2003) identified that age had a significant association with stress, which also add to the support of the present findings.

The observation that application of IT had significant relationship with Occupational Stress is disproved in the study by Poole and Denny (2001). Whereas Routray and Satpathy (2007) concluded that the introduction of IT causes technostress which totally was in agreement with the present observation.

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SUMMARY, FINDINGS AND SUGGESTIONS

Study in retrospect
Major findings
Tenability of hypotheses
Implications of the study
Suggestions for further research

SUMMARY, FINDINGS AND SUGGESTIONS

In this chapter, an overview of the important aspects of the investigation, the major findings, their practical implications and proposals for further research are presented in brief.

5.1 STUDY IN RETROSPECT

The different stages of the investigation such as the statement of the problem, selection of variables, objectives and hypotheses, methodology used, are viewed retrospectively.

5.1.1 Restatement of the Problem

As stated earlier, the investigation was intended to examine the extent of Quality of Work Life and Occupational Stress among the library professionals in Kerala and to identify the correlates of these variables. The problem for the study was stated as '***Quality of Work Life and Occupational Stress among the Library Professionals in Kerala'.***

5.1.2 Variables of the Study

The study was designed with the following two sets of variables:-

(1) <u>Dependent Variables</u>

The study warrants two dependent variables :

(i) Quality of Work Life   (ii) Occupational Stress.

(2) <u>Independent Variables</u>

The dependent variables were analysed in relation with the independent variables (viz.) Gender, Age, Marital status, Number of children, Educational background, Job title category, Professional experience, Primary functional area, Salary range, Involvement in IT applications, Number of supervisors, Work schedule, Type of library, Size of library, and Type of management.

5.1.3 Objectives of the Study

The study has been designed to attain the following objectives.

1. To find out the extent and levels of 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

2. To compare the 'Quality of Work Life' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of select independent variables.

3. To compare the level of 'Occupational Stress' among the Library Professionals in Kerala (taken in pairs) categorised on the basis of select independent variables.

4. To estimate the relationship between the 'Quality of Work Life' of Library Professionals in Kerala and each of the select independent variables.

5. To estimate the relationship between the 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables.

6. To study the extent of association between 'Quality of Work Life' and 'Occupational Stress' among the Library Professionals in Kerala.

5.1.4 Methodology

The methodology used for the study is briefly described as follows:

5.1.4.1 <u>Tools used for measurement</u>

The following two tools were specifically constructed and standardised by the investigator for the purpose of the study.

i) Quality of Work Life Scale for Library Professionals (QWLSLP)

The QWLSLP was designed in Likert format to get the index of Quality of Work Life of the sample.

ii) Occupational Stress Inventory for Library Professionals (OSILP)

The OSILP was constructed by the investigator to measure the Occupational Stress of Library Professionals. The scale was constructed in five point scale format.

Besides, data on independent variables were collected using a General Data Sheet.

5.1.4.2 <u>Sample for the Study</u>

The target population for the study is the professionally qualified librarians working in various libraries of Kerala State. The study was conducted on a representative sample of 300 professional librarians drawn from various libraries in Kerala. Stratified sampling procedure was used to draw the sample.

5.1.4.3 <u>Analysis of Data</u>

The following statistical techniques were used to analyse the data collected, to throw light on the information sought from the investigation (listed objectives).

a) Percentage Analysis

b) Pearson's Product Moment Coefficient of Correlation.

c) Test of significance of difference between means.

d) One-way ANOVA for comparing the means of more than two groups.

e) Scheffe' test of multiple comparison for the post-hoc comparison of different groups.

f) Chi-Square test of independence to examine the nature of relationship between the dependent variables and each of the independent variables.

5.2 MAJOR FINDINGS

The major findings of the study are given below:

5.2.1 Extent and Level of Quality of Work Life among the Library Professionals

The percentage of library professionals having high level of QWL is significantly high. The population value of the percentage lies between 70 and 80 at 95% confidence level. However librarians with highest level of QWL are only 5 to 11 percentage at 95% confidence level. Further, the magnitude of the mean value of QWL suggests that the QWL experienced by the librarians in Kerala are not very high.

5.2.2 Extent and Level of Occupational Stress among the Library Professionals

The percentage of librarians having high level of 'Occupational Stress' is zero. The magnitude of the mean score of OS is 118.89 in the sample with a standard deviation of 14.39.   Therefore it is observed that the library professionals working in different types of libraries in Kerala do not experience any Stress in their occupation.

5.2.3 Group Difference in mean QWL scores

Group difference in mean QWL scores were investigated among relevant subgroups formed on the basis of select independent characteristics. The results of the comparisons are summarised as follows:

a) Significant difference in mean QWL scores was found to exist between supervisory librarians and non-supervisory librarians at 0.01 level.

b) No significant difference in mean QWL scores was noticed among the groups of librarians categorised on the basis of the following characteristics (taken in pairs):

(i) Gender (ii) Age (iii) Marital status (iv) Number of children (v) Educational background (vi) Professional experience (vii) Primary functional area (viii) Salary range (ix) Involvement in IT applications (x) Number of supervisors (xi) Work schedule (xii) Type of library (xiii) size of library (xiv) Type of management.

5.2.4 Group Difference in Mean OS scores

All the respondents in the sample experienced only low stress in their occupation. Consequently, it was concluded that the library professionals in Kerala did not have Occupational Stress at all. Therefore comparisons of the mean OS scores of relevant subsamples were not attempted.

5.2.5 Association between QWL and the Independent Variables

Association between QWL and select independent variables were investigated using Chi-square test of independence. The results are summarised as follows :

a) Significant association was found to exist between QWL and three out of seventeen independent variables selected for the study. These variables are listed in the descending order of the magnitude of C-coefficient.

	Independent variables	Chi-square value	Value of C-coefficient	Level of significance
1.	Library size in terms of number of books	31.309	0.3074	0.05
2.	Professional experience	21.726	0.2599	0.01
3.	Job title category	7.313	0.1543	0.05

b) QWL of the professional librarians in Kerala was found not related significantly with the following independent variables:

(i) Gender (ii) Age (iii) Marital status (iv) Number of children v) Educational background (vi) Primary functional area (vii) Salary range (viii) Involvement in IT applications (ix) Number of supervisors (x) Work schedule (xi) Type of library (xii) size of library in terms of number of journal titles (xiii) size of library in terms of number of staff (xiv) Type of management.

5.2.6 Association between OS and Independent Variables

Association between OS and select independent variables were studied using Chi-square test. The results are summarised as follows

a) Significant association was found to exist between OS and three out of seventeen independent variables selected for the study. These variables are listed below:

	Independent variables	Chi-square value	Value of C-coefficient	Level of significance
1.	Library size in terms of number of staff	22.638	0.2649	0.05
2.	Age	17.275	0.2333	0.01
3.	Involvement in IT applications	7.699	0.1582	0.05

b) Occupational Stress of the library professionals in Kerala was found not related significantly with the following independent variables:

(i) Gender (ii) Marital status (iii) Number of children (iv) Educational background (v) Job title category (vi) Professional experience (vii) Primary functional area (viii) Salary range (ix) Number of supervisors (x) Work schedule (xi) Type of library (xii) Size of library in terms of number of books (xiii) Size of library in terms of number of journals (xiv) Type of management.

5.2.7 Association between Quality of Work Life and Occupational Stress

Relationship between QWL and OS was studied using Chi-square test and Pearson's Coefficient of Correlation. The variables were found to be

significantly related at 0.01 level. The Coefficient of correlation showed that the variables were negatively correlated.

5.3 TENABILITY OF HYPOTHESES

Seven hypotheses were formulated for the study. On the light of the major findings, the tenability of these hypotheses is tested:

5.3.1 The **first** hypothesis states: *"The percentage of Library Professionals in Kerala having high level of 'Quality of Work Life' will be significant"*.

It was found that 75.67 percentage of library professionals in the sample have high level of QWL. The population value for this lies in the interval (70.81-80.53) at 95% confidence level. Hence the first hypothesis is substantiated fully.

5.3.2 The **second** hypothesis states: *"The percentage of Library Professionals in Kerala having high level of 'Occupational Stress' will be significant"*.

As per table 4.6, the Occupational Stress scores of all the respondents in the sample are less than 185 which is the lower limit set for high stress. The magnitude of the mean score of OS in the sample is 118.89. Thus the percentage of library professionals in Kerala having high level of OS is found to be zero at 95% confidence level. Hence the second hypothesis is rejected.

5.3.3 The **third** hypothesis states: "*There will be significant difference in the mean 'Quality of Work Life' scores of the subsamples (taken in pairs) when Library Professionals categorised on the basis of each of the select independent variables are compared.*"

The group difference in means of QWL scores were investigated among relevant subgroups formed on the basis of fifteen characteristics. Only one group pair formed on the basis of the characteristic 'Job category' showed significant difference at 0.05 level in their mean QWL scores. All the other group pairs formed on the basis of other select characteristics showed no significant difference even at 0.05 level. Hence the third hypothesis is only partially substantiated.

5.3.4 The **fourth** hypothesis states: "*There will be significant difference in the mean 'Occupational Stress' scores of the subsamples (taken in pairs) when Library Professionals categorised on the basis of each of the select independent variables are compared*".

Since all the respondents in the sample showed low level of stress (as revealed in section 4.2), group comparisons of the mean OS scores of relevant subsamples were not necessary in the context of the study. Therefore the fourth hypothesis is rejected.

5.3.5 The **fifth** hypothesis states: "*The relationship between 'Quality of Work Life' of Library Professionals in Kerala and each of the select*

independent variables (viz) gender, age, marital status, number of children, educational background, job title category, professional experience, primary functional area, salary range, involvement in IT applications, number of supervisors, work schedule, type of library, size of library, type of management   will be significant".

While estimating the association between QWL and the select independent variables using chi-square test of independence, only three independent variables showed significant relationship with QWL as per Table 4.28. The values of C-coefficient computed showed that the associations were only negligible. All the other 14 chi-square tests revealed no significant association. Hence the fifth hypothesis is only partially substantiated.

5.3.6 The **sixth** hypothesis states: *"The relationship between 'Occupational Stress' of Library Professionals in Kerala and each of the select independent variables (viz) gender, age, marital status, number of children, educational background, job title category, professional experience, primary functional area, salary range, involvement in IT applications, number of supervisors, work schedule, type of library, size of library, type of management   will be significant".*

When chi-square test of independence was applied, significant association was found to exist between OS and the independent variables age, involvement in IT applications and library size in terms of number of staff

(Table 4.29). OS was found not related significantly with other 14 variables. Hence the sixth hypothesis is also partially substantiated.

5.3.7 The **seventh** hypothesis sates: *"The relationship between 'Quality of Work Life' and 'Occupational Stress' of Library Professionals in Kerala will be significant".*

Chi-square test of independence was applied to find out whether significant relationship existed between QWL and OS. The chi-square value in Table 4.30 shows that QWL is significantly related to OS. Again, the Pearson's Correlation Coefficient computed shows that the variables are negatively correlated at 0.01 level of significance. Hence the seventh hypothesis is accepted fully.

5.4 IMPLICATIONS OF THE STUDY

The main aim of the study was an in-depth examination of the relationship of Quality of Work Life and Occupational Stress of librarians with the independent variables. Based on the findings evolved from the investigation, the investigator made an attempt to put forth the following suggestions regarding the QWL and OS of library professionals in Kerala.

1) To improve the Quality of Work Life of the librarians in Kerala, Work Assessment Committees may be constituted in the organisations, headed by a qualified professional. The Committee shall meet frequently and

assess the performance and appreciate the sincere efforts made by the professionals.

2) The librarians may be given due participation while framing policies in the organisation they serve, which will give them a feeling of being a part of the whole. This will help them to contribute to the achievement of the institution's goals.

3) Professionals at entry cadres and junior level librarians may be given on-the-job training to make the job and the service more qualitative and useful. Also efforts may be made to find out the skills and talents and the area of interest of the professionals and tap it for the improvement of ones own welfare and that of the organisation, which may improve the work efficiency.

4) In the current scenario, the librarians do not identify their position in the organisation they serve and in the society they live. To solve the identity crisis, their present designations as Librarian, Catalogue Assistant, Reference Librarian, Archivist etc. may be changed to Scientist, Jr. Scientist, Sr. Scientist, Information Scientist etc.

5) There shall be chances of open forums for professionals to have better exchange of their professional matters and discuss their problems to improve their service quality and to make themselves satisfied in their job. The proposed 'Quality Circle's are small informal units of

professionals formed in the organisation for meeting the professionals at frequent intervals. The professionals shall meet at short intervals in their work place to discuss their professional matters which will help them to make radical changes in their services and may also help to find remedies in the crisis they confront in their day today professional life. This may improve the quality of work life of the individuals.

6) Fringe benefits given to the library staff may be enhanced. The employees shall be provided with canteen, crèche, recreation and entertainment, health facilities etc. in their work place.

7) Librarians may be made very friendly with usages of modern information gadgets like Internet and computer technologies. They shall be imparted proper training and orientation to equip themselves to rise up to meet the current requirements.

8) QWL and OS of librarians are found significantly and negatively correlated. So reducing the levels of stress is one of the best ways to enhance QWL. Hence it is suggested that, on the basis of the outcome of the study, effective stress management programmes may be adopted in libraries in Kerala to maintain the stress at reasonable and acceptable levels.

5.5 SUGGESTIONS FOR FURTHER RESEARCH

The findings of the present study are reasonably limited in its scope with regard to many aspects. The results can be made more elaborate if a number of future scientific enquiries are conducted in this area. Hence the following research areas are identified and suggested for further research on the Quality of Work Life and Occupational Stress of librarians.

1. The study can be extended to identify the pattern of relationship among different dimensions of Quality of Work Life of library professionals.

2. A factor comparison of Quality of Work Life of librarians in Kerala with respect to select variables can be made.

3. The study can be extended to identify the major stressors in the library and information profession in Kerala.

4. The study can be extended incorporating psychological and institutional variables such as

    a) Self concept

    b) Achievement motivation

    c) Motivation to manage

    d) Amount of technology

    e) Organisational climate

5.   A study can be conducted to explore the Quality of Work Life and Occupational Stress of semi professionals in the libraries and to compare the results with that of professional librarians.

6.   Quality of Work Life and Occupational Stress of other professionals like teachers and scientists can be explored and compared with that of librarians.

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University of Calicut
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QUALITY OF WORK LIFE SCALE FOR

LIBRARY PROFESSIONALS
(2004)

Author: Reena, K.K.   Time: approximately 45 minutes
      (Part-time Research Scholar)

INSTRUCTIONS

      Each of the following statements is intended to get your feeling as library professional about the values and attitudes contained in your working life. Kindly express your response to each one of these statements in terms of your own agreement or disagreement with the statements. The extent of your agreement or disagreement may be indicated on a five-point scale. The five points are:

1. Strongly Agree (SA)
2. Agree (A)
3. Neither Agree nor Disagree (NAD)
4. Disagree (D)
5. Strongly Disagree (SD)

      Please read each statement carefully and encircle (O) the code letters (given on the right side of the statement), which you think is applicable in your case. An example for responding is given below:

Statement	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
My job is enjoyable	SA	A	NAD	D	SD

In case you strongly agree with the statement given above, then you may circle 'SA' as shown above.

Give only one response for each statement. Please respond to all statements.

If by any reason you have to change any of your response, you may put a cross (X) on the wrongly marked one and encircle the right choice.

It is assured that your response will be kept strictly confidential and will be used for research purpose only. So try to give your response as accurately and honestly as you can.

Thanking you for your co-operation.

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	I do not get opportunities to attend library-sponsored activities	SA	A	NAD	D	SD
2	I have to work with people whom I do not like much	SA	A	NAD	D	SD
3	I feel comfortable using computers, online resources (internet etc.) and other devices necessary for my work	SA	A	NAD	D	SD
4	I feel happy with my chances for salary increases	SA	A	NAD	D	SD
5	When I do a good job I receive the recognition for it from my clients	SA	A	NAD	D	SD
6	I get impartial treatment in all matters like employee compensation, job security etc.	SA	A	NAD	D	SD
7	I receive training for doing my job when new technology and procedures are adopted at the workplace	SA	A	NAD	D	SD
8	In my institution, adhoc instructions and orders by superior officers override the rules and procedures	SA	A	NAD	D	SD
9	There is too much bickering and fighting among the staff of my institution	SA	A	NAD	D	SD
10	Non-professionals in my library have a greater say over the plans and policies of the institution	SA	A	NAD	D	SD
11	I would like to continue in the library profession regardless of the pay received	SA	A	NAD	D	SD

12	I feel, policies and procedures are quite clear and consistently followed within the library and within my dept./section	SA	A	NAD	D	SD
13	My shift duties do not create dislocation in my family programmes	SA	A	NAD	D	SD
14	My organisation is generous in granting extra benefits to the employees	SA	A	NAD	D	SD
15	I feel that my organisation takes care for the welfare of its employees and their families	SA	A	NAD	D	SD
16	I have a great sense of commitment towards my organisation due to the generosity of its management	SA	A	NAD	D	SD
17	I do not get opportunities to participate in the planning of my work	SA	A	NAD	D	SD
18	I do not get opportunities to interact with professionals outside	SA	A	NAD	D	SD
19	I feel that the work I do is not appreciated	SA	A	NAD	D	SD
20	Red tapism in my organisation hinders my efforts to do good things to the users	SA	A	NAD	D	SD
21	My immediate supervisor is quite competent and capable in doing his/her duties as a manager	SA	A	NAD	D	SD
22	The benefits package for library staff in my institution is as good as most other organisations offer	SA	A	NAD	D	SD
23	I have an aversion towards my work due to the unexpected and frequent transfers	SA	A	NAD	D	SD
24	I believe that librarians have no status in the society	SA	A	NAD	D	SD
25	My organisation does not provide for any facility and opportunity for the creative activity of its staff members	SA	A	NAD	D	SD
26	Librarians' salary in my organisation is as fair as that of other categories of staff	SA	A	NAD	D	SD

27	There is little chance for me to develop my career if I continue in this organization	SA	A	NAD	D	SD
28	The benefits package for library staff in my institution is not so good as that of other categories of staff	SA	A	NAD	D	SD
29	I think I could make a better living by accepting some other occupation	SA	A	NAD	D	SD
30	The top management of my institution considers library and librarians as the backbone of the institution	SA	A	NAD	D	SD
31	I feel I would have got more promotions if I were in the ministerial cadre of this organisation	SA	A	NAD	D	SD
32	My present workplace is unhygienic and congested liable to create health problems	SA	A	NAD	D	SD
33	I have to work harder at my job than I should because of the incompetence and laziness of the people I work with	SA	A	NAD	D	SD
34	I am happy with the current benefits package (Insurance, Pension, Overtime, House loan etc.) in our institution	SA	A	NAD	D	SD
35	I am not able to meet the requirements of users due to the inadequacy of infrastructure available in my library	SA	A	NAD	D	SD
36	The job of a library professional happens to lower his social status and prestige	SA	A	NAD	D	SD
37	Most of my comments and feedback are taken into consideration by the authorities	SA	A	NAD	D	SD
38	My present job gives me decent living conformable with my status and qualifications	SA	A	NAD	D	SD
39	I am informed of all developments, decisions and activities in my organisation	SA	A	NAD	D	SD
40	Within the library, I feel I am encouraged to provide comments and feedback	SA	A	NAD	D	SD

41	Often I ignore my health due to work related aspects	SA	A	NAD	D	SD
42	My ideas and efforts to introduce new services to the users are appreciated by the management	SA	A	NAD	D	SD
43	The chances of getting promotions are considerably good in my present job	SA	A	NAD	D	SD
44	I am happy that I come out with success regularly in the evaluations of my work	SA	A	NAD	D	SD
45	I do not enjoy freedom of expression in my institution	SA	A	NAD	D	SD
46	If I do not understand job related procedures, I feel comfortable asking for assistance from my colleagues	SA	A	NAD	D	SD
47	My Chief Librarian/Department Head has a clear set of policies and programmes that are enforced consistently	SA	A	NAD	D	SD
48	In my organisation, each one is identified on the basis of skill and potentialities and not on the basis of race, sex, age etc.	SA	A	NAD	D	SD
49	My organisation does not encourage librarians for attending professional seminars and conferences	SA	A	NAD	D	SD
50	Physical facilities and conveniences available in my library are not congenial to staff and users	SA	A	NAD	D	SD
51	Promotions of library staff in my institution are unnecessarily delayed due to red tapism	SA	A	NAD	D	SD
52	Many of the rules and procedures in my institution make doing a good job difficult	SA	A	NAD	D	SD
53	I enjoy the presence of my professional colleagues and coworkers	SA	A	NAD	D	SD
54	Librarians are kept away from the main stream of my organisation	SA	A	NAD	D	SD

55	My institution allows top priority in keeping the library and its premises neat and clean	SA	A	NAD	D	SD
56	My Chief Librarian/Department Head does not give due consideration to the feelings of subordinates	SA	A	NAD	D	SD
57	Staff members at different levels and cadres in my institution work as members of one team	SA	A	NAD	D	SD
58	Library staff in my institution can avail extra facilities like canteen, medical benefits, residential accommodation etc.	SA	A	NAD	D	SD
59	My energy and time are wasted on my job affecting my life adversely	SA	A	NAD	D	SD
60	My worklife is in tune with the social life I lead	SA	A	NAD	D	SD
61	My superiors discuss job related matters with me before implementing them	SA	A	NAD	D	SD
62	The library users treat me as a friend	SA	A	NAD	D	SD
63	My job fits well with all my other engagements	SA	A	NAD	D	SD
64	I am happy that I can maintain pleasant relationship with the users of the library	SA	A	NAD	D	SD
65	I feel humiliated as most of my time is spent on doing non-professional work such as issue and return of books, collecting fine etc.	SA	A	NAD	D	SD
66	Inter-group relations are strong in my organisation	SA	A	NAD	D	SD
67	Dusting and cleaning are done regularly in my library	SA	A	NAD	D	SD
68	I sometimes feel my job is meaningless	SA	A	NAD	D	SD
69	I feel that my skill and proficiency in the present job are reasonable in relation to the job requirements	SA	A	NAD	D	SD

70	In my institution, librarians are not provided with proper working facilities such as convenient seat, fan, table etc.	SA	A	NAD	D	SD
71	I feel I am overcompensated for my job	SA	A	NAD	D	SD
72	I have no freedom for taking decisions of my own and implement them in my work	SA	A	NAD	D	SD
73	I have plenty of opportunities to try my innovative ideas in this organisation	SA	A	NAD	D	SD
74	The promotion prospects for library staff in my organisation are bleak compared to that of other categories of staff	SA	A	NAD	D	SD
75	I feel my social and individual requirements are neglected in my organisation	SA	A	NAD	D	SD
76	There is no job security for my present job	SA	A	NAD	D	SD
77	I do not get due respect and recognition in my institution	SA	A	NAD	D	SD
78	Libraries are social institutions, librarians are rendering a noble service to the people and to the nation	SA	A	NAD	D	SD
79	It is not easy to get supplies, equipments and stationary items required to perform my work	SA	A	NAD	D	SD
80	I do not have duties and responsibilities corresponding to my qualifications, seniority and cadre status	SA	A	NAD	D	SD
81	My organisation does not permit me to attend refresher courses and training programmes that enable me to update skill and proficiency of work	SA	A	NAD	D	SD
82	My family expenditure is beyond the limits of my salary income	SA	A	NAD	D	SD
83	I have an overall satisfaction in my working life	SA	A	NAD	D	SD

84	I feel that the pay structure of my job is not reasonable in relation to the nature of work	SA	A	NAD	D	SD
85	My institution should give preference to internal candidates in open recruitments to higher posts	SA	A	NAD	D	SD
86	My immediate supervisor is unfair to me	SA	A	NAD	D	SD
87	I am very much dejected with the present promotion policies in my institution	SA	A	NAD	D	SD
88	I cannot be sincere in my work as I do not get transfer to my convenience	SA	A	NAD	D	SD
89	I am over paid in my job	SA	A	NAD	D	SD
90	My job is enjoyable	SA	A	NAD	D	SD
91	My work timings are convenient for me to get on with my family affairs	SA	A	NAD	D	SD
92	I become really depressed when I think about my career prospects	SA	A	NAD	D	SD
93	My financial needs are adequately fulfilled with my salary income	SA	A	NAD	D	SD
94	I like my supervisors	SA	A	NAD	D	SD
95	I do not feel that disputes and grievances among staff members in my institution are handled impartially	SA	A	NAD	D	SD
96	Senior staff members do not pay attention to the grievances of juniors	SA	A	NAD	D	SD
97	I am not provided with a table and sufficient working space suitable to my official status and cadre	SA	A	NAD	D	SD
98	Library wide programmes and events are communicated to me regularly	SA	A	NAD	D	SD
99	I have plenty of opportunities to use my newly acquired skills and knowledge in my work assignments	SA	A	NAD	D	SD

100	My organisation gives every chance for the self-improvement of staff	SA	A	NAD	D	SD
101	My duties and responsibilities are clearly defined	SA	A	NAD	D	SD
102	I feel unhappy over the divide and rule policy adopted by the chief librarian	SA	A	NAD	D	SD
103	I do not receive help and cooperation from my co-workers in solving work related problems	SA	A	NAD	D	SD
104	The details relating to my job-role are vague and insufficient	SA	A	NAD	D	SD
105	I do not get opportunity to utilise my abilities and experience independently	SA	A	NAD	D	SD
106	Present job has enhanced my social status	SA	A	NAD	D	SD
107	I do not like my children entering the library profession	SA	A	NAD	D	SD

Library wise break-up of the sample selected for the try-out

Sl.No	Name of the Library	No. of persons responded the questionnaire
1	Centre for Water Resources Devt & Management (CWRDM), Kozhikode	3
2	College of Nursing, Kozhikode	1
3	Collegeate Education, Kannur	1
4	Dental College, Kozhikode	2
5	Govt. College of Teacher Education, Kozhikode	1
6	Govt. Engineering College, Kozhikode	2
7	Govt. Engineering College, Thrissur	4
8	Govt. Homeo Medical College, Kozhikode	1
9	Govt. Institute of Education, Thrissur	1
10	Govt. Law College, Kozhikode	2
11	Higher Education Department, Govt. of Kerala, Thrissur	2
12	Institute of Advanced Studies in Education (IASE), Thrissur	1
13	IHRD, Thiruvananthapuram	1
14	Indian Institute of Spices Research (IISR), Kozhikode	2
15	Jyothi Engg. College, Thrissur	1
16	Kerala Agricultural University, Thrissur	5
17	Kerala Institue of Local Administration, Thrissur	1

18	Kerala Sahitya Academy, Thrissur	1
19	K.M.C.T. College of Engineering, Kozhikode	2
20	Kozhikode Public Library and Research Centre, Kozhikode	6
21	Little Flower College, Guruvayoor	4
22	Malabar Christian College, Kozhikode	1
23	M.A.M.O. College, Manassery, Kozhikode	1
24	M.E.S. College, Ponnani, Malappuram	1
25	M.E.S. College of Engineering, Kuttippuram	3
26	National Institute of Technology (NIT), Kozhikode	13
27	Providence Womens College, Kozhikode	1
28	PSMO College, Thirurangadi	1
29	Sree Kerala Varma College, Thrissur	1
30	St. Joseph's College, Devagiri, Kozhikode	2
31	St.Thomas College, Thrissur	1
32	University of Calicut, Kozhikode	9
33	Zamorin's Guruvayoorappan College, Kozhikode	2
	Total =	80

University of Calicut
C.H. Mohammed Koya Library

QUALITY OF WORK LIFE SCALE
FOR
LIBRARY PROFESSIONALS
(2005)

Author: Reena, K.K.   Time: approximately 30 minutes
        (Part-time Research Scholar)

INSTRUCTIONS

        Each of the following statements is intended to get your feeling as library professional about the values and attitudes contained in your working life. Kindly express your response to each one of these statements in terms of your own agreement or disagreement with the statements. The extent of your agreement or disagreement may be indicated on a five-point scale. The five points are:

1. Strongly Agree (SA)
2. Agree (A)
3. Neither Agree nor Disagree (NAD)
4. Disagree (D)
5. Strongly Disagree (SD)

        Please read each statement carefully and encircle (O) the code letters (given on the right side of the statement), which you think is applicable in your case. An example for responding is given below:

Statement	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
My job is enjoyable	SA	A	NAD	D	SD

In case you strongly agree with the statement given above, then you may circle 'SA' as shown above.
Give only one response for each statement. Please respond to all statements.
If by any reason you have to change any of your response, you may put a cross (X) on the wrongly marked one and encircle the right choice.

It is assured that your response will be kept strictly confidential and will be used for research purpose only. So try to give your response as accurately and honestly as you can.

Thanking you for your co-operation.

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	I do not get opportunities to attend library-sponsored activities	SA	A	NAD	D	SD
2	I receive training for doing my job when new technology and procedures are adopted at the workplace	SA	A	NAD	D	SD
3	In my institution, adhoc instructions and orders by superior officers override the rules and procedures	SA	A	NAD	D	SD
4	There is too much bickering and fighting among the staff of my institution	SA	A	NAD	D	SD
5	I feel, policies and procedures are quite clear and consistently followed within the library and within my dept./section	SA	A	NAD	D	SD
6	My organisation is generous in granting extra benefits to the employees	SA	A	NAD	D	SD
7	I feel that my organisation takes care for the welfare of its employees and their families	SA	A	NAD	D	SD
8	I have a great sense of commitment towards my organisation due to the generosity of its management	SA	A	NAD	D	SD
9	I do not get opportunities to participate in the planning of my work	SA	A	NAD	D	SD
10	I do not get opportunities to interact with professionals outside	SA	A	NAD	D	SD
11	I feel that the work I do is not appreciated	SA	A	NAD	D	SD

12	The benefits package for library staff in my institution is as good as most other organisations offer	SA	A	NAD	D	SD
13	I believe that librarians have no status in the society	SA	A	NAD	D	SD
14	My organisation does not provide for any facility and opportunity for the creative activity of its staff members	SA	A	NAD	D	SD
15	There is little chance for me to develop my career if I continue in this organization	SA	A	NAD	D	SD
16	I think I could make a better living by accepting some other occupation	SA	A	NAD	D	SD
17	I feel I would have got more promotions if I were in the ministerial cadre of this organisation	SA	A	NAD	D	SD
18	I am informed of all developments, decisions and activities in my organisation	SA	A	NAD	D	SD
19	Within the library, I feel I am encouraged to provide comments and feedback	SA	A	NAD	D	SD
20	My ideas and efforts to introduce new services to the users are appreciated by the management	SA	A	NAD	D	SD
21	The chances of getting promotions are considerably good in my present job	SA	A	NAD	D	SD
22	I do not enjoy freedom of expression in my institution	SA	A	NAD	D	SD
23	My organisation does not encourage librarians for attending professional seminars and conferences	SA	A	NAD	D	SD
24	Many of the rules and procedures in my institution make doing a good job difficult	SA	A	NAD	D	SD
25	Librarians are kept away from the main stream of my organisation	SA	A	NAD	D	SD
26	My institution allows top priority in keeping the library and its premises neat and clean	SA	A	NAD	D	SD

27	Staff members at different levels and cadres in my institution work as members of one team	SA	A	NAD	D	SD
28	My superiors discuss job related matters with me before implementing them	SA	A	NAD	D	SD
29	In my institution, librarians are not provided with proper working facilities such as convenient seat, fan, table etc.	SA	A	NAD	D	SD
30	I have no freedom for taking decisions of my own and implement them in my work	SA	A	NAD	D	SD
31	I have plenty of opportunities to try my innovative ideas in this organisation	SA	A	NAD	D	SD
32	The promotion prospects for library staff in my organisation are bleak compared to that of other categories of staff	SA	A	NAD	D	SD
33	I feel my social and individual requirements are neglected in my organisation	SA	A	NAD	D	SD
34	I do not get due respect and recognition in my institution	SA	A	NAD	D	SD
35	I do not have duties and responsibilities corresponding to my qualifications, seniority and cadre status	SA	A	NAD	D	SD
36	My organisation does not permit me to attend refresher courses and training programmes that enable me to update skill and proficiency of work	SA	A	NAD	D	SD
37	My family expenditure is beyond the limits of my salary income	SA	A	NAD	D	SD
38	I feel that the pay structure of my job is not reasonable in relation to the nature of work	SA	A	NAD	D	SD
39	My immediate supervisor is unfair to me	SA	A	NAD	D	SD
40	My job is enjoyable	SA	A	NAD	D	SD
41	My work timings are convenient for me to	SA	A	NAD	D	SD

get on with my family affairs

42	I like my supervisors	SA	A	NAD	D	SD
43	Senior staff members do not pay attention to the grievances of juniors	SA	A	NAD	D	SD
44	Library wide programmes and events are communicated to me regularly	SA	A	NAD	D	SD
45	I have plenty of opportunities to use my newly acquired skills and knowledge in my work assignments	SA	A	NAD	D	SD
46	My organisation gives every chance for the self-improvement of staff	SA	A	NAD	D	SD
47	My duties and responsibilities are clearly defined	SA	A	NAD	D	SD
48	The details relating to my job-role are vague and insufficient	SA	A	NAD	D	SD
49	I do not get opportunity to utilise my abilities and experience independently	SA	A	NAD	D	SD
50	Present job has enhanced my social status	SA	A	NAD	D	SD

Appendix IV

University of Calicut
CH Mohammed Koya Library

STRESS INVENTORY FOR LIBRARY PROFESSIONALS
(2004)

Author: Reena, K K
          (Research student – Part time)

Each of the following statements is related to you and your professional work. The statements indicate the amount of stress you experience as a library professional. Please read each statement and decide how far you agree with each statement. The extent of your agreement or disagreement may be indicated on a five-point scale. The five points are:
(1) Strongly Agree (SA)
(2) Agree (A)
(3) Neither Agree nor Disagree (NAD)
(4) Disagree (D)
(5) Strongly Disagree (SD)

Please read each statement carefully and encircle (O) the code letters (given on the right side of the statement), which you think is applicable in your case.

It is assured that your response will be kept quite confidential and will be used only for research purpose.

Thank you for your co-operation.

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1	I maintain cordial relationship with my superiors	SA	A	NAD	D	SD
2	I feel boredom in continuing in this profession for a long time	SA	A	NAD	D	SD

3	Open access system in my library creates a lot of difficulties to the library staff including extra workload of reshelving and great loss of the reading materials	SA	A	NAD	D	SD
4	I feel comfortable and dignified with my seating arrangements in the library	SA	A	NAD	D	SD
5	I feel monotonous most time due to the shortage of users in my library	SA	A	NAD	D	SD
6	I am proud of being a librarian	SA	A	NAD	D	SD
7	I am anxious of losing my job due to the introduction of advance technologies (computers, internet etc.)	SA	A	NAD	D	SD
8	I get angry with the readers when they make noise by talking inside the library	SA	A	NAD	D	SD
9	Eventhough I have higher qualifications, I do not get responsibilities/duties corresponding to my qualifications	SA	A	NAD	D	SD
10	I feel difficulty in implementing illogical decisions about professional matters taken by non-professional supervisors	SA	A	NAD	D	SD
11	I am anxious about the possible retrenchment of staff in the emerging electronic scenario	SA	A	NAD	D	SD
12	As the credit of all my work goes to my supervisory officers, I feel I am unimportant in the organisation	SA	A	NAD	D	SD
13	The library lacks proper canteen facilities especially during extra working hours	SA	A	NAD	D	SD
14	I like to get a better job as my present job is not at par with that of my husband/wife	SA	A	NAD	D	SD
15	I am happy that adequate reading materials are available in my library to satisfy most of the users	SA	A	NAD	D	SD

16	Often I get duties, which I do not like	SA	A	NAD	D	SD
17	I can perform effectively as my duties/responsibilities are clearly mentioned	SA	A	NAD	D	SD
18	Reallocation of work due to computerization of the library badly affected me	SA	A	NAD	D	SD
19	I feel miserable to get the approval of the Head of institution even for simple matters	SA	A	NAD	D	SD
20	I feel irritated and annoyed due to the unfair behaviour of my boss	SA	A	NAD	D	SD
21	The staff attitude is not helpful for my plan to automate the library	SA	A	NAD	D	SD
22	Improper design of jobs in the computerized environment decreased the effectiveness of library services	SA	A	NAD	D	SD
23	I feel worried because most often I fail to satisfy the information needs of my users	SA	A	NAD	D	SD
24	I strive for adequate funds to computerise the library	SA	A	NAD	D	SD
25	I am not sincere in work due to the lack of transfer to my convenience	SA	A	NAD	D	SD
26	I feel uncomfortable and annoyed to sit in an open space very close to the readers	SA	A	NAD	D	SD
27	Improper design of the work area and ergonomics affect my health	SA	A	NAD	D	SD
28	I maintain pleasant relationship with the users of the library	SA	A	NAD	D	SD
29	I feel, as a librarian I have no status in the society	SA	A	NAD	D	SD
30	I maintain good relationship with my co-workers	SA	A	NAD	D	SD
31	I feel satisfaction in rendering services to the readers, even if I have to do extra work without any additional benefits	SA	A	NAD	D	SD

32	I am worried as librarians are not considered as academic staff	SA	A	NAD	D	SD
33	I feel difficult to control and manage some of my subordinates	SA	A	NAD	D	SD
34	I am annoyed to watch the readers to prevent them from stealing or destroying the reading materials	SA	A	NAD	D	SD
35	I feel tension in obeying the inconsistent instructions of my superiors overlooking the library rules and procedures	SA	A	NAD	D	SD
36	There is a good exchange of ideas with my co-workers	SA	A	NAD	D	SD
37	I do not hesitate to consult with seniors and experts to overcome the hurdles in my work	SA	A	NAD	D	SD
38	I feel distressed as professional ethics are continuously violated by my professional colleagues and supervisors	SA	A	NAD	D	SD
39	I feel that the importance of my role has been considerably reduced	SA	A	NAD	D	SD
40	As I feel tired when I come home after office duty, I am unable to attend home affairs	SA	A	NAD	D	SD
41	I appreciate the practices of collecting feed backs of performances at frequent intervals	SA	A	NAD	D	SD
42	Drawbacks in the design and plan of my library building makes a lot of functional inconveniences	SA	A	NAD	D	SD
43	Multiroles assigned to me give scope for use of my professional skill	SA	A	NAD	D	SD
44	I feel desperate for not reaching high positions in the profession	SA	A	NAD	D	SD
45	I feel frustrated about my failure to attend refresher programmes needed for promotion	SA	A	NAD	D	SD

46	I feel worried due to the lacking of adequate in-service training and refresher programs to introduce modern methods of information handling	SA	A	NAD	D	SD
47	I feel irritated over the external interference in professional matters	SA	A	NAD	D	SD
48	The proper maintenance of large collection of documents is a cumbersome job for me	SA	A	NAD	D	SD
49	I feel relaxed in my work both at office and home as I have an understanding husband/wife	SA	A	NAD	D	SD
50	I feel aversion towards my work place due to the large scale bickering and fighting among the staff members	SA	A	NAD	D	SD
51	I will have to continue in this organization till I get a better employment elsewhere	SA	A	NAD	D	SD
52	As my job position with that of my life partner is lower/higher, I suffer from inferiority/superiority feelings	SA	A	NAD	D	SD
53	I fear that my health is at risk as I remain inside the congested and dusty library rooms without proper ventilation and lighting	SA	A	NAD	D	SD
54	As I have to spend most of the time at the automated work environment, I cannot keep up my social contacts	SA	A	NAD	D	SD
55	I cannot adjust myself to the frequent changes in work and responsibility	SA	A	NAD	D	SD
56	The expected benefit of automation is not achieved as the work allotment is not based on the technological aptitude of individual staff members	SA	A	NAD	D	SD
57	Eventhough my boss expects quality and punctuality in work from me, often it is not possible for me to maintain the same due to	SA	A	NAD	D	SD

72	The compulsion to work during morning shift/night shift/evening shift creates dislocations in my family life.	SA	A	NAD	D	SD
73	I lose my patience to wait for a long time to get the faulty computer system repaired.	SA	A	NAD	D	SD
74	My superiority feeling does not allow me to come down to help the users.	SA	A	NAD	D	SD
75	The library has no satisfactory toilet facilities for the staff.	SA	A	NAD	D	SD
76	I feel I am unworthy of being a professional as I am not provided with suitable table, chair, fan, almirah etc. for my official use.	SA	A	NAD	D	SD
77	Lack of interpersonal relationship makes my work stressful.	SA	A	NAD	D	SD
78	I am very much worried since I do not have a fair salary income to meet my financial needs.	SA	A	NAD	D	SD
79	My workload is too heavy due to severe shortage of professional staff in the library.	SA	A	NAD	D	SD
80	I get duties corresponding to my aptitude.	SA	A	NAD	D	SD
81	My husband /wife has no active interest in my profession.	SA	A	NAD	D	SD
82	The reference collection in my library is not up to date to satisfy most of the reference queries from the users.	SA	A	NAD	D	SD
83	I have bitter experience of non co-operation when consulted for assistance in career development.	SA	A	NAD	D	SD
84	I feel dissatisfied in solving the complaints of the users related to functional problems of computers.	SA	A	NAD	D	SD
85	I get no chances to explain the problems in the library to my superiors.	SA	A	NAD	D	SD

86	As I have the skill and knowledge to work in a changing environment, I feel no insecurity in my job.	SA	A	NAD	D	SD
87	Fear of staff retrenchment due to computerisation caused to develop strained relation between the staff and management in my institution.	SA	A	NAD	D	SD
88	I am upset by the fear of falling the responsibility of the loss of books upon me.	SA	A	NAD	D	SD
89	Stack rooms of my library are too insecure to keep valuable and rare documents.	SA	A	NAD	D	SD
90	Office staff and faculty members of the institution view librarians including me as enemies.	SA	A	NAD	D	SD
91	I get punishment even for my inadvertent lapses.	SA	A	NAD	D	SD
92	I feel I cannot be a prospective professional.	SA	A	NAD	D	SD
93	My perceptions about professional matters do not agree with that of my managers.	SA	A	NAD	D	SD
94	I find it extremely difficult to manage my family affairs, as my husband/wife also is employed.	SA	A	NAD	D	SD
95	I enjoy freedom in initiating new activities in the library.	SA	A	NAD	D	SD
96	My husband/wife always complains about my failure to attend family matters due to my overinvolvement in the work.	SA	A	NAD	D	SD
97	I feel, my future may not be safe if I continue in this institution.	SA	A	NAD	D	SD
98	I am not regularly informed of the developments and changes in the organization.	SA	A	NAD	D	SD

99	I am anxious about my post retirement life.	SA	A	NAD	D	SD
100	I am worried about the ineffective and inefficient services of my library.	SA	A	NAD	D	SD
101	I need not fear about the loss or retrenchment of my job, as I have proper training on using the new technologies.	SA	A	NAD	D	SD
102	I am worried about my children since my husband/wife is employed at a distant place.	SA	A	NAD	D	SD
103	Location of my library provides great inconveniences to the readers and staff.	SA	A	NAD	D	SD
104	I feel greater boredom during the working days.	SA	A	NAD	D	SD
105	I discharge my duties with a sense of commitment to the users.	SA	A	NAD	D	SD
106	I have to do such work as ought to be done by the supporting staff.	SA	A	NAD	D	SD
107	I am forced to work with the traditional methods and techniques of information services.	SA	A	NAD	D	SD
108	The amount of work I have to do adversely affects the quality of my work.	SA	A	NAD	D	SD
109	I am worried to see that most of the librarians have no commitment to the library profession.	SA	A	NAD	D	SD
110	I enjoy the work as I am able to please both my superiors and subordinates equally.	SA	A	NAD	D	SD
111	Work in my institution goes on smoothly because there is no group and political forces to interfere in the affairs of the library.	SA	A	NAD	D	SD
112	I have to make extra effort and labour to arrange the reading materials as shelves and almirahs not conforming to library standards are used in my library.	SA	A	NAD	D	SD
113	My colleagues help me always by	SA	A	NAD	D	SD

understanding my problems.

114	I am disappointed due to the monotonous and repetitive nature of my job in the library.	SA	A	NAD	D	SD
115	I find it difficult to change the conservative attitude of the management in automating the library procedures for the benefit of the users.	SA	A	NAD	D	SD
116	I have no authority in organizing the work in the library.	SA	A	NAD	D	SD
117	The shortage of funds on one side and the increasing demands for reading materials on the other side puts me in a bewildered situation.	SA	A	NAD	D	SD
118	I am very much worried about the lack of promotion chances in my present job.	SA	A	NAD	D	SD
119	Due to the present financial crisis in my family, I am unable to concentrate on my work.	SA	A	NAD	D	SD
120	I am unhappy over the irritating and unethical behaviour of some of the users in my library.	SA	A	NAD	D	SD
121	I struggle to carry out my home affairs along with the official duties.	SA	A	NAD	D	SD
122	I get due involvement in taking the policy decisions related to the library affairs.	SA	A	NAD	D	SD
123	I am too late to understand that the future prospects in this profession are bleak.	SA	A	NAD	D	SD
124	Due to political vengeance I am defamed and harassed over silly matters in the library.	SA	A	NAD	D	SD
125	I feel insulted as my employer keeps me away from discussions about using computers in my work place.	SA	A	NAD	D	SD
126	I feel that my hard work is not appreciated.	SA	A	NAD	D	SD
127	Continuous and uninterrupted work makes me dull and restless.	SA	A	NAD	D	SD

128	I feel worried to work extra time with out any additional remuneration.	SA	A	NAD	D	SD
129	The job satisfaction I enjoy now enables me to attend the family affairs smoothly.	SA	A	NAD	D	SD
130	I feel disgusted in the overinfluence of certain faculty members/distinguished users upon the library affairs.	SA	A	NAD	D	SD
131	I always fear that I may be thrown out from the present job at any time.	SA	A	NAD	D	SD
132	I feel rather insulted in my designation (like library assistant, catalogue assistant, professional assistant etc.) in place of information scientist, information analyst etc.	SA	A	NAD	D	SD
133	I feel that I am victimized in the annual assessment of performance.	SA	A	NAD	D	SD
134	I feel strained because I am alone to attend all sorts of work in the library.	SA	A	NAD	D	SD
135	I feel nervous in the presence of increased number of users in the library.	SA	A	NAD	D	SD
136	As I do the same type of non-intellectual work everyday, I feel monotonous in my job.	SA	A	NAD	D	SD

<div align="right">**Appendix V**</div>

<div align="center">

University of Calicut
CH Mohammed Koya Library

OCCUPATIONAL STRESS INVENTORY FOR LIBRARY PROFESSIONALS
(2005)

</div>

Author: Reena, K K
       (Research student – Part time)

Each of the following statements is related to you and your professional work. The statements indicate the amount of stress you experience as a library professional. Please read each statement and decide how far you agree with each statement. The extent of your agreement or disagreement may be indicated on a five-point scale. The five points are:
(1) Strongly Agree (SA)
(2) Agree (A)
(3) Neither Agree nor Disagree (NAD)
(4) Disagree (D)
(5) Strongly Disagree (SD)

Please read each statement carefully and encircle (O) the code letters (given on the right side of the statement), which you think is applicable in your case.

It is assured that your response will be kept quite confidential and will be used only for research purpose.

<div align="right">Thank you for your co-operation.</div>

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	DisAgreeStrongly
1	I maintain cordial relationship with my superiors	SA	A	NAD	D	SD

2	I feel comfortable and dignified with my seating arrangements in the library	SA	A	NAD	D	SD
3	I am proud of being a librarian	SA	A	NAD	D	SD
4	I am anxious of losing my job due to the introduction of advance technologies (computers, internet etc.)	SA	A	NAD	D	SD
5	As the credit of all my work goes to my supervisory officers, I feel I am unimportant in the organisation	SA	A	NAD	D	SD
6	I am happy that adequate reading materials are available in my library to satisfy most of the users	SA	A	NAD	D	SD
7	I feel irritated and annoyed due to the unfair behaviour of my boss	SA	A	NAD	D	SD
8	The staff attitude is not helpful for my plan to automate the library	SA	A	NAD	D	SD
9	I feel worried because most often I fail to satisfy the information needs of my users	SA	A	NAD	D	SD
10	Improper design of the work area and ergonomics affect my health	SA	A	NAD	D	SD
11	I maintain pleasant relationship with the users of the library	SA	A	NAD	D	SD
12	I maintain good relationship with my co-workers	SA	A	NAD	D	SD
13	I feel satisfaction in rendering services to the readers, even if I have to do extra work without any additional benefits	SA	A	NAD	D	SD
14	I feel difficult to control and manage some of my subordinates	SA	A	NAD	D	SD
15	There is a good exchange of ideas with my co-workers	SA	A	NAD	D	SD
16	I do not hesitate to consult with seniors and	SA	A	NAD	D	SD

experts to overcome the hurdles in my work

17	I feel distressed as professional ethics are continuously violated by my professional colleagues and supervisors	SA	A	NAD	D	SD
18	I feel that the importance of my role has been considerably reduced	SA	A	NAD	D	SD
19	I appreciate the practices of collecting feed backs of performances at frequent intervals	SA	A	NAD	D	SD
20	I feel frustrated about my failure to attend refresher programmes needed for promotion	SA	A	NAD	D	SD
21	I feel worried due to the lacking of adequate in-service training and refresher programs to introduce modern methods of information handling	SA	A	NAD	D	SD
22	I feel irritated over the external interference in professional matters	SA	A	NAD	D	SD
23	The proper maintenance of large collection of documents is a cumbersome job for me	SA	A	NAD	D	SD
24	I feel aversion towards my work place due to the large scale bickering and fighting among the staff members	SA	A	NAD	D	SD
25	I fear that my health is at risk as I remain inside the congested and dusty library rooms without proper ventilation and lighting	SA	A	NAD	D	SD
26	As I have to spend most of the time at the automated work environment, I cannot keep up my social contacts	SA	A	NAD	D	SD
27	I cannot adjust myself to the frequent changes in work and responsibility	SA	A	NAD	D	SD
28	I fear that constant use of computers and electronic equipments affect my physical health.	SA	A	NAD	D	SD
29	My position in the library is not influential.	SA	A	NAD	D	SD

30	I feel distressed with the present method of evaluation to assess the performance of library staff in my institution.	SA	A	NAD	D	SD
31	Reading materials kept at stray for want of enough furniture, creates a lot of chaos and confusion in locating them.	SA	A	NAD	D	SD
32	I am compelled to violate the rules and administrative procedures due to group/political pressures.	SA	A	NAD	D	SD
33	I feel I am unworthy of being a professional as I am not provided with suitable table, chair, fan, almirah etc. for my official use.	SA	A	NAD	D	SD
34	Lack of interpersonal relationship makes my work stressful.	SA	A	NAD	D	SD
35	I get duties corresponding to my aptitude.	SA	A	NAD	D	SD
36	I feel dissatisfied in solving the complaints of the users related to functional problems of computers.	SA	A	NAD	D	SD
37	I get no chances to explain the problems in the library to my superiors.	SA	A	NAD	D	SD
38	I am upset by the fear of falling the responsibility of the loss of books upon me.	SA	A	NAD	D	SD
39	Office staff and faculty members of the institution view librarians including me as enemies.	SA	A	NAD	D	SD
40	I get punishment even for my inadvertent lapses.	SA	A	NAD	D	SD
41	My perceptions about professional matters do not agree with that of my managers.	SA	A	NAD	D	SD
42	I find it extremely difficult to manage my family affairs, as my husband/wife also is employed.	SA	A	NAD	D	SD

43	I enjoy freedom in initiating new activities in the library.	SA	A	NAD	D	SD
44	I am not regularly informed of the developments and changes in the organization.	SA	A	NAD	D	SD
45	I am anxious about my post retirement life.	SA	A	NAD	D	SD
46	The amount of work I have to do adversely affects the quality of my work.	SA	A	NAD	D	SD
47	I enjoy the work as I am able to please both my superiors and subordinates equally.	SA	A	NAD	D	SD
48	Work in my institution goes on smoothly because there is no group and political forces to interfere in the affairs of the library.	SA	A	NAD	D	SD
49	Due to the present financial crisis in my family, I am unable to concentrate on my work.	SA	A	NAD	D	SD
50	I struggle to carry out my home affairs along with the official duties.	SA	A	NAD	D	SD
51	I get due involvement in taking the policy decisions related to the library affairs.	SA	A	NAD	D	SD
52	I am too late to understand that the future prospects in this profession are bleak.	SA	A	NAD	D	SD
53	Due to political/Trade union vengeance I am defamed and harassed over silly matters in the library.	SA	A	NAD	D	SD
54	I feel insulted as my employer keeps me away from discussions about using computers in my work place.	SA	A	NAD	D	SD
55	I feel that my hard work is not appreciated.	SA	A	NAD	D	SD
56	Continuous and uninterrupted work makes me dull and restless.	SA	A	NAD	D	SD
57	I feel worried to work extra time with out any additional remuneration.	SA	A	NAD	D	SD

58	The job satisfaction I enjoy now enables me to attend the family affairs smoothly.	SA	A	NAD	D	SD
59	I always fear that I may be thrown out from the present job at any time.	SA	A	NAD	D	SD
60	I feel nervous in the presence of increased number of users in the library.	SA	A	NAD	D	SD

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University of Calicut
C.H. Mohammed Koya Library

GENERAL DATA SHEET

(*Please fill in the blanks and insert tick mark (✔) in the appropriate brackets. Give response to every item, even if some items do not seem relevant*).

1. Name (in block letters)   : …………………………………………………

2. Designation   : …………………………………………………

3. Sex   : Male   [ ] Female   [ ]

4. Age   : ………..Years   …..……..Months

5. Place of residence   : Rural   [ ] Urban   [ ]

6. Marital status   : Married   [ ] Single   [ ]

                                      Divorced   [ ] Separated   [ ]

                                      Widowed   [ ]

7. Number of children   : Son   [ ] Daughter   [ ]

8. Whether your partner is employed : Yes   [ ] No   [ ]
    or not?

9. If yes to Qn.8, whether your partner : Yes   [ ] No   [ ]
    is a library professional or not?

10. Qualifications

    (a) General   : B.A.   [ ] M.A.   [ ]
                                      B.Sc.   [ ] M.Sc.   [ ]
                                      B.Com.   [ ] M.Ccom.   [ ]
                                      M.Phil.   [ ] Ph.D.   [ ]
                                      Others if any (please specify)…………………..

    (b) Professional   : B.L.I.Sc.   [ ] M.L.I.Sc.   [ ]
                                      M.Phil(Lib.Sc) [ ] Ph.D(Lib.Sc) [ ]
                                      Others if any (please specify)…………………..

11. Job Category   : Supervisory   [ ] Non-Supervisory   [ ]

12. Monthly Salary and Scale of Pay   : ………………………………………………………
13. Name of the parent institution in   : ………………………………………………………
    which you work

14. Type of management of your   : Private   [ ] Government   [ ]
    institution
                                             : Semi-government   [ ] Autonomous   [ ]

15. Professional Experience   : ….…..…Years   ….…..…Months

16. Number of supervisors you have in   : ………………………………………………………
    the hierarchy

17. Type of library in which you work   : University Library [ ] College   [ ]
                                                                        Library
                                               Public Library   [ ] Special Library [ ]

18. Size of your library   : No. of books………….   No. of journals……..
                                               No. of staff……………

19. Nature of present employment   : Temporary   [ ] Permanent   [ ]

20. Please specify the primary   : Acquisition Section   [ ]
    functional area in which you work   Technical Section   [ ]
                                               Journals Section   [ ]
                                               Stack Room   [ ]
                                               Reference Section   [ ]
                                               Counter   [ ]
                                               Others Specify …………………………………..

21. Whether you are attending shift   : Morning hours   [ ]
    duties? (tick all that applies to you)   Evening hours   [ ]
                                               Weekend (Saturday/Sunday)   [ ]
                                               Holidays   [ ]
                                               Not attending shift duty   [ ]

22. Are you involved in any type of IT   :   Yes [ ]   No   [ ]
    applications at your workplace?

Thank you.

Appendix VII

Name of the Library	Frequency
Amrita Institute of Medical Sciences (AIMS), Edappally, Kochi	6
Basalius College, Kottayam	1
B.C.M. College, Kottayam	1
Centre for Development Studies (CDS), Thiruvananthapuram	4
Centre for Water Resources Devt & Management (CWRDM), Kozhikode	3
Christ College Irinjalakkuda, Thrissur	1
Cochin University of Science and Technology, Kochi	28
College of Engineering, Thalassery	1
College of Nursing, Kozhikode	1
College of Nursing, Thiruvananthapuram	1
College of Pharmaceutical Sciences, Kozhikode	1
Collegeate Education, Kannur	1
Co-operative Academy of Professional Education, Kannur	1
CTCRI, Thiruvananthapuram	1
Dental College, Kozhikode	2
Department of Polymer Science & Rubber Technology, Kochi	1
District Institute of Educations (DIET), Kannur	1
Fluid Control Research Institute (FCRI), Palakkad	2
Govt. Brennen College, Thalassery	1
Govt. College of Teacher Education, Kozhikode	1
Govt. Dental College, Kozhikode	1
Govt. Engineering College, Kannur	1
Govt. Engineering College, Kozhikode	2
Govt. Engineering College, Thrissur	3
Govt. Homeo Medical College, Kozhikode	1
Govt. Institute of Education, Thrissur	1
Govt. Law College, Kozhikode	2
High Court of Kerala, Kochi	4
Higher Education Department, Govt. of Kerala, Thrissur	3
Institute of Advanced Studies in Education (IASE), Thrissur	1
IHRD, Thiruvananthapuram	4
Indian Institute of Spices Research (IISR), Kozhikode	3
JDT Islam Polytechnic, Kozhikode	1
Jubilee Mission College of Nursing, Thrissur	1
Jyothi Engg. College, Thrissur	1
Kannur University, Kannur	15
Kendriya Vidyalaya, Thrissur	2
Kerala Agricultural University, Thrissur	5
Kerala Forest Research Institute (KFRI), Thrissur	4

Kerala Govt. Secretariate, Thiruvananthapuram	2
Kerala Instiute of Local Administration (KILA), Thrissur	2
Kerala Legislative Library, Thiruvananthapuram	1
Kerala Sahitya Academy, Thrissur	2
Kerala University, Thiruvananthapuram	18
K.M.C.T. College of Engineering, Kozhikode	2
K.M.M.G. Women's College	1
Kottayam Public Library	2
Kozhikode Medical College	8
Kozhikode Public Library and Research Centre, Kozhikode	6
Lakshmibai National College of Physical Education (LNCPE),Thiruvananthapuram	1
Legislative Secretariat, Thiruvananthapuram	6
Little Flower College, Guruvayoor	4
Maharjas College, Ernakulam	1
Mahatma Gandhi Govt. Arts College, Mahe	1
Mahathma Gandhi University	32
Mahathma Gandhi University Study Centre, Thodupuzha	1
Malabar Christian College, Kozhikode	1
M.A.M.O. College, Manassery, Kozhikode	1
Medical College, Thiruvananthapuram	7
Mercy College, Palakkad	2
M.E.S. College, Ponnani, Malappuram	1
M.E.S. College of Engineering, Kuttippuram	3
National Institute of Oceanography, Kochi	1
National Institute of Technology (NIT), Kozhikode	14
NSS College, Changanassery	2
NSS College, Cherthala	1
NSS College of Engineering, Palakkad	1
OSHM Lakkidi, Wynad	1
Providence Womens College, Kozhikode	1
PSMO College, Thirurangadi	1
Regional Cancer Centre, Thiruvananthapuram	2
Rajagiri College of Social Sciences, Cochin	2
Sacred Heart College, Thevara, Kochi	1
Sacred Heart College, Chalakkudy	3
Sanatana Dharma College, Alappuzha	2
School of Behavioural Sciences (MGU)	1
School of BioSciences (MGU)	1
School of Chemical Sciences (MGU)	1
School of Computer Sciences (MGU)	1
School of Environmental Sciences (MGU)	1
School of Gandhian & Devt. Studies (MGU)	1
School of Indian Legal Thought (MGU)	1
School of International Relations (MGU)	1
School of Padagogical Science (MGU)	1

School of Pharmacy, Angamali	1
School of Technology & Applied Sciences (STAS), Edappally, Kochi	2
Secretariat of Kerala Legislature, Thiruvananthapuram	5
Sir. Syed College, Thaliparambu	1
SME Gandhi Nagar, Kannur	1
SN College, Kannur	2
Sree Chitra Tirunal Institute for Medical Sciences & Technology (SCTIMST),TVM.	5
Sree Kerala Varma College, Thrissur	1
St. Joseph's College, Irinjalakkuda, Thrissur	1
St. Joseph's College, Devagiri, Kozhikode	2
St. Michael's College, Cherthala	1
St. Paul's College, Ernakulam	1
St.Thomas College, Thrissur	1
Training College, Mala	1
University Engineering College, Thodupuzha	1
University of Calicut, Kozhikode	10
University Teacher Education, Paipadu	1
VCET (MGU), Vaikom	1
Zamorin's Guruvayoorappan College, Kozhikode	2
Total =	300