Quality of Work Life of Women Employees in Fireworks and Match Industries in Sivakasi, Tamil Nadu

R. Padmaja

PG and Research Department of Commerce, AyyaNadarJanakiAmmal College, Sivakasi, Tamil Nadu, India E-Mail: padmaja.r.bcom@gmail.com

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Abstract - Generally the quality of work life of employees is based on Hours of work and arrangements of working time; Work organization and job content; Impact of new technologies on working conditions; Working conditions of women, young workers, older workers and other special categories; Work-related welfare services and facilities. This paper highlights about the quality of work life of the women employees working in the various fireworks and match industries in Sivakasi.

Keywords: QWL, Fireworks, Match works

I. INTRODUCTION

Quality of work life is a broad concept and it refers to the degree to which work provides an opportunity for an individual to satisfy the personal needs such as to survive with some security, to interact with others, to be recognized for achievement and to have an opportunity to improve one's skill and knowledge. The concept of quality of work life in short is related to job satisfaction, humanization, work or individualizing the organization and organization development programs.

The present era is an era of knowledge workers and the society in which we are living has come, to be known as knowledge society. The intellectual pursuits have taken precedence over the physical efforts. Some workers work for more than 60 hours a week. As a result of this, their personal hobbies and interests clash with their work. Life is a bundle that contains all the strands together and hence there is a need to balance work life with other related issues. One must have both love and work in one's life to make it healthy. With the increasing shift of the economy towards knowledge economy, the meaning and quality of work life has undergone a drastic change.

II. STATEMENT OF THE PROBLEM

Quality of work life is considered to be a most important factor that has to be considered in order to maintain a good relationship with the employees. In the study area more number of fireworks and match industrial units are functioning. As many fire accidents are occurring every year in the particular two industries in the study area, it is very essential to study the QWL. These two are industries providing employment opportunity to the daily wage earners, women in particular. Fireworks and match

industrial units attract women employees particularly for the reason of punctuality, sincerity and work involvement. Generally, productivity of these two industries is based on the number of women employees. The researcher has undertaken this study to analyse the quality of work life of women employees working in these two industries, with the aim of to identify the existing Quality of Work Life and offer suggestions to improve the Quality of Work Life of women employees.

III. REVIEW OF LITERATURE

Harish Metha and R. Thandavan (2011) conducted a study on "Work Environment Factors in QWL among College Teachers in Chennai", and identified factors of job analysis, organizational culture, educational climate and welfare measurements. The QWL depends on these factors. The scholars suggested that the need to improve physical working environment, coordination, personal goal, institutional goals, and also internal and external environment, interrelations are influencing the working environment.

Mohan and Ashok (2011) in their study, "Measuring of Quality of Work Life in Textile Industries - An Integration of Conceptual Relationship with Productivity", analyzed the drastic role of quality of work life on employees' work performance with reference to the employees of weaving mills. This study covers three major factors of quality of work life, such as welfare facilities, growth opportunities and interpersonal relationship to assess the most appropriate aspect that helps for extracting best performance from the workers. The results of the study implied that the welfare measures have important implications for the employees' job performance as well as the interpersonal relations and growth opportunities may inspire the employees' work performance. These factors may be taken into account in case of future study while determining the quality of work life in an organization.

Mohanasundaram (2011) conducted "A Study on Quality of Work Life in Tamil Nadu Newsprint andPaper Limited, Karur". The factors considered for the study are safe and healthy working conditions, adequate and fair compensation, opportunities to use and develop human capacities, opportunities for career growth, social relevance of work, social integration in the work force, work and

quality of life, constitutionalism in the work place organization and welfare measures. The study revealed that most of the employees are satisfied with the pay and future career prospects provided by their company than other aspects. This kind of studies is very essential in all sectors to make the organizations aware of their position and make them follow the necessary quality of work life measures to attain better performance.

PremaManoharan (2011) conducted a study on "Quality of Work Life among Bank Professionals: A Study Undertaken at Indian Bank, Chennai", and identified seven factors. They are: pay, employee benefits, job security, alternative work schedules, occupational stress, and participation and democracy in the workplace. The study revealed that the pay is the most unsatisfactory issue, and the remaining other factors such as job satisfaction, occupational stress, alternative work schedules have reached their satisfactory levels but the general awareness about welfare measures is low. Trade unions and the management have to provide several facilities, improve the interpersonal relations, and reduce stress.

Celia. B. R. and Karthick. M. (2012) conducted "A study on the Quality of Work Life of IT Professionals in Chennai". They identified the satisfaction on various factors related to the Quality of Work Life and the perceptions. They are working conditions, hours of work, welfare measures, job security, salary and rewards, skill development, opportunity for growth and superior subordinate relationship. The study revealed that the IT companies should provide a conductive environment for IT professionals to work in the organization, which helps the employees to contribute their best to the company benefiting the nation at a large.

Chitale. C.M and DeeptiLele (2012) conducted an empirical study on "Employees perception on Quality of Work Life in Police Department with Special Reference to Pune Police". Examined police employees and their personal life, and they identified suitable QWL factors in Police Department, viz, work profile, perception of police about their position in society, family life, personal growth and wellness. The study suggested that the Police Department has to improve working conditions, innovative training with adaptation of new technologies and creating satisfaction of economical, social, psychological needs and reducing stress in junior level personnel.

IV. SCOPE OF THE STUDY

Quality of work life has become the watchword in today's industrial scene, because when there is a proper quality of work life for the employees it will lead to the satisfaction of the employees. More amount of attrition in these two industrial units affect the quality of work life of the employees, women in particular. Hence the researcher has made an attempt to explore various dimensions of Quality of Work Life (QWL) and factors affecting quality of work life of the women employees of fireworks and match industrial units in the study area.

V. OBJECTIVES

The following are the objectives of the study

- 1. To examine the socio-economic profile of the respondents.
- 2. To analyse the Quality of Work Life of the women employees selected for the study.
- 3. To offer suitable suggestions for the improvement of Quality of Work Life of the women employees working in these industries than the existing level.

VI. HYPOTHESES

- 1. There is no significant association between work status of the respondents and their Various Satisfaction level.
- 2. There is no significant association between work status of the respondents and their satisfaction.

VII. METHODOLOGY

The present study is based on both primary and the secondary data.

A. Primary Data

The study is mainly based on primary data. The primary data is derived from the views obtained from the respondents with the help of pre tested interview schedule.

B. Secondary Data

The study also depends on the secondary data regarding the history of fireworks and match works in India. The secondary data were collected from standard text books, journals and websites.

VIII. SAMPLE SIZE

Data is collected from the 180 women employees working in the fireworks and match industrial units functioning in the study area. These 180 employees are selected by using snow ball sampling technique.

IX. ANALYSIS AND INTREPRETATION OF DATA

A. Work Experience

TABLE I WORK EXPERIENCE

S. No.	Work Experience	No. of Respondents	Percentage
1	Below 2 years	18	10.00
2	2-4 years	40	22.20
3	4-6 years	46	25.60
4	Above 6 years	76	42.20
	Total	180	100.00

Source: Primary Data

It is found that most of the respondents (42.20 per cent) have above 6 years of work experience.

B. Association between Work Experience And Opinion About Overall QWL

To know the significant association between experience and opinion about Overall QWL analysis has been made with the following hypothesis.

1. Hypothesis

"There is no significant association between experience of the respondents and their Opinion about Overall QWL".

To test the above hypothesis Chi-Square Test is applied and the result is presented in the following tables.

TABLE II WORK EXPERIENCE AND SATISFACTION TOWARDS OVERALL QUALITY OF WORK LIFE - CROSS TABULATION

S. No.	Work Experience		Sati	Total		
S. NO. WORK E		xperience	Fair	Satisfied	Highly Satisfied	1 Otal
		Count	2	12	4	18
1	Below 2 years	Expected Count	2.2	13.4	2.4	18.0
		% of Total	1.1%	6.7%	2.2%	10.0%
		Count	0	34	6	40
2	2-4 years	Expected Count	4.9	29.8	5.3	40.0
		% of Total	.0%	18.9%	3.3%	22.2%
		Count	8	32	6	46
3	4-6 years	Expected Count	5.6	34.2	6.1	46.0
		% of Total	4.4%	17.8%	3.3%	25.6%
		Count	12	56	8	76
4	Above 6 years	Expected Count	9.3	56.6	10.1	76.0
		% of Total	6.7%	31.1%	4.4%	42.2%
		Count	22	134	24	180
	m . 1	Expected Count	22.0	134.0	24.0	180.0
	Total	% of Total	12.2%	74.4%	13.3%	100.0%

Source: Computed Data

TABLE III ASSOCIATION BETWEEN EXPERIENCE AND OPINION ABOUT OVERALL QWL - RESULT OF CHI-SQUARE TEST

Chi-Square Tests								
	Value	df	Asymp. Sig. (2-sided)					
Pearson Chi-Square	9.204	6	.162					
Likelihood Ratio	13.743	6	.033					
Linear-by-Linear Association	4.059	1	.044					
N of Valid Cases	180							

Source: Computed Data

From the above result of Chi-Square Test it is found that the employees are not varied in the opinion about Overall QWL when they are classified based on the experience. That is the significance value is more than 0.05. Hence the null

hypothesis is accepted and it is concluded that there is no significant association between the work experience of the respondents and their opinion about the Overall QWL.

C. Overall Satisfaction of the Employees

The researcher has analyzed the Overall Satisfaction of Employees. In this regard the researcher has used the weighted Arithmetic Mean score value. The results and the allocation of points are given below.

1. Result

For Highly Satisfied = 5 points
For Satisfied = 4 points
For No opinion = 3 points
For Dissatisfied = 2 points
For Highly Dissatisfied = 1 points

TABLE IV OVERALL SATISFACTION OF EMPLOYEES

S. No.	Particulars		S	NO	DS	HDS	Total
1	Satisfaction towards Bonus	0	114	56	10	0	180
2	Satisfaction towards Safety measures	22	116	30	10	2	180
3	Satisfaction towards Infrastructural Facilities			26	4	0	180
4	Satisfaction towards First Aid Facilities		108	36	12	0	180
5	Satisfaction towards relationship with Co-workers	54	120	4	2	0	180
6	Satisfaction towards relationship with employers	54	98	26	2	0	180
7	Satisfaction towards QWL		134	22	0	0	180
8	Satisfaction towards wages	8	105	59	8	0	180

Source: Primary Data

TABLE V WEIGHTED AVERAGE ARITHMETIC MEAN

S. No.	Particulars	HS	S	NO	DS	HDS	Total
1.	Satisfaction towards Bonus	0	456	168	20	0	644
2.	Satisfaction towards Safety measures		464	90	20	2	686
3.	Satisfaction towards Infrastructural Facilities	150	480	78	8	0	716
4.	Satisfaction towards First Aid Facilities	120	432	108	24	0	684
5.	Satisfaction towards relationship with Co-workers	270	480	12	4	0	766
6.	Satisfaction towards relationship with employers	270	392	78	4	0	744
7.	Satisfaction towards QWL	120	536	66	0	0	722
8.	Satisfaction towards wages	40	420	177	16	0	653

TABLE VI RANKING THE OVERALL SATISFACTION

S. No.	PARTICULARS	WAM	RANK
1.	Satisfaction towards Bonus	3.58	VIII
2.	Satisfaction towards Safety measures	3.81	V
3.	Satisfaction towards Infrastructural Facilities	3.98	IV
4.	Satisfaction towards First Aid Facilities	3.80	VI
5.	Satisfaction towards relationship with Co-workers	4.26	I
6.	Satisfaction towards relationship with employers	4.13	П
7.	Satisfaction towards overall QWL	4.01	III
8.	Satisfaction towards wages	3.63	VII

Source: Primary Data

The above scaling technique shows that Satisfaction towards relationship with Co-workers is ranked first, followed by the Satisfaction towards relationship with employers, Third rank is given to Satisfaction towards overall QWL attracts the respondents, followed by the Infrastructural Facilities, Safety measures, First Aid Facilities, wages and then by bonus. From the above analysis, it is clearly indicated that most of the employees are satisfied by the relationship with the co-workers.

D. Facilities Offered in the Working Place

The respondents are asked to rank their responses about the facilities offered in the working place to them. To identify the most effective facilities offered to the respondents, the

researcher has used Garret's ranking test. Based on the facilities offered in the working place the following classification is made

1. Garrett Scores

The Garrett ranks are calculated by using appropriate Garrett ranking formula. First, the percent positions are calculated by using appropriate Garrett ranking formula. Then based on the facilities offered, the Garrett values are ascertained. The Garrett value and scores of each facilities offered are multiplied to find out the Garrett scores for each sources. Finally, by adding each row, the total Garrett scores have been obtained.

Percent position = 100 (Rij - 0.5)/Nj

Rij = Rank given for ith item by the j^{th} sample respondents Nij = Total rank given by the j^{th} sample respondents

TABLE VII FACILITIES OFFERED IN THE WORKING PLACE

C No	Facilities Offered	Rank							Total
S. No.		I	II	Ш	IV	V	VI	VII	Total
1	Transport facilities	22	30	10	26	52	8	32	180
2	Restroom facilities	42	52	68	12	4	2	-	180
3	Ventilation facilities	36	28	56	42	10	8	-	180
4	Medical facilities	20	28	18	74	38	2	-	180
5	Water facilities	58	42	22	18	20	14	6	180
6	Housing facilities	2	-	-	4	42	86	46	180
7	Education to employees children	-	-	6	4	14	60	96	180
	Total	180	180	180	180	180	180	180	

Source: Primary Data

TABLE VIII GARRETT SCORES -PERCENT POSITION AND GARRETT VALUE

S. No.	100(RIJ – 0.5)/NJ	Calculated Value	Garrett Value
1.	100 (1 – 0.5)/7	7.14	79
2.	100 (2 – 0.5)/7	21.43	66
3.	100 (3 – 0.5)/7	35.71	57
4.	100 (4 – 0.5)/7	50.00	50
5.	100 (5 – 0.5)/7	64.29	43
6.	100 (6 – 0.5)/7	78.57	34
7.	100 (7 – 0.5)/7	92.86	21

Source: Computed data

TABLE IX CALCULATION OF GARRETT SCORE

C M.	E 2124				Rank				T. 4 - 1
S. No.	Facilities	I	II	III	IV	V	VI	VII	Total
1	Transport facilities	22*79	30*66	10*57	26*50	52*43	8*34	32*21	8768
1.		=1738	=1980	=570	=1300	=2236	=272	=672	0/00
2.	Restroom facilities	42*79	52*66	68*57	12*50	4*43	2*34	0*21	0*21 11466
۷.	Restroom facilities	=3318	=3432	=3876	=600	=172	=68	=0	
3.	Ventilation Facilities	36*79	28*66	18*57	42*50	10*43	8*34	0*21	10686
3.	ventuation Facilities	=2844	=1848	=3192	=2100	=430	=272	=0	10080
4.	Medical Facilities	20*79	28*66	13*57	74*50	38*43	2*34	0*21	9422
4.	Wedical Facilities	=1580	=1848	=741	=3700	=1634	=68	=0	9422
5.	Water Facilities	58*79	42*66	8*57	18*50	20*43	14*34	6*21	10970
3.	water Facilities	=4582	=2771	=456	=900	=860	=476	=126	10970
6.	Housing Facilities	2*79	0*66	12*57	4*50	42*43	86*34	46*21	6054
υ.	Housing Facilities	=158	=0	=684	=200	=1806	=2924	=966	0034
7.	Education to employees children	0*79	14*66	13*57	4*50	14*43	60*34	96*21	5200
7.	Education to employees children	=0	=0	=741	=200	=602	=2040	=2016	3200

Source: Computed data

The above table shows that the Garret scores. First the Garret values are calculated by using appropriate Garret ranking formula. Then based on the Garret values, the Garret table scores are ascertained. The Garret values and

the scores of facilities offered in table IX are multiplied to find out score. Finally by adding each row, the total Garret scores are obtained.

TABLE X FACILITIES OFFERED IN THE WORKING PLACE – GARRETT RANKING

S. No.	Facilities Offered	Garrett Score	Garrett Rank
1.	Transport facilities	8768	V
2.	Restroom facilities	11466	I
3.	Ventilation facilities	10686	III
4.	Medical Facilities	9422	IV
5.	Water Facilities	10970	II
6.	Housing Facilities	6054	VI
7.	Education to employees children	5200	VII

Source: Computed data

The above table shows that the scores for facilities offered. The Garrett scores are ranked according to their values. The I rank is given for Restroom facilities, II rank is given for water facilities, III rank is given for ventilation facilities, IV rank is given for medical facilities, V rank is given for transport facilities, VI rank is given for housing facilities and VII rank is given for education to employees' children.

2. Association between Work Status and Various Satisfaction Levels of the Employees

To know the Association between Work status and Satisfaction level of the employees' analysis has been made with the following hypothesis.

3. Hypothesis

"There is no significant association between work status of the respondents and their satisfaction".

To test the above hypothesis Kruskal-Wallis test is applied and the result is presented in the following tables.

From the above result of Kruskal-Wallis Test it is found that the employees are varied in the satisfaction towards safety measures, infrastructural facilities, first aid, relationship with employers and co-workers and Quality of Work Life when they are classified based on their job status.

That is the significance value is less than 0.05. Hence the null hypothesis is rejected and it is concluded that there is a significant association between the work status of the employees and their various satisfaction level.

TABLE XI ASSOCIATION BETWEEN WORK STATUS AND VARIOUS SATISFACTION LEVEL OF THE EMPLOYEES - RESULT OF KRUSKAL-WALLIS TEST-RANKS

Factors	Work Status	N	Mean Rank
	Temporary	26	94.81
	Contract	56	81.68
Satisfaction towards Bonus	Permanent	98	94.40
	Total	180	
	Temporary	26	61.73
Satisfaction towards Safety	Contract	56	82.25
Measures	Permanent	98	102.85
	Total	180	
	Temporary	26	65.88
Satisfaction towards	Contract	56	77.61
Infrastructural Facilities	Permanent	98	104.40
	Total	180	
	Temporary	26	61.42
Satisfaction towards First Aid Facilities	Contract	56	77.43
	Permanent	98	105.68
	Total	180	
	Temporary	26	106.65
Satisfaction towards	Contract	56	75.82
relationship with Co-workers	Permanent	98	94.60
	Total	180	
	Temporary	26	107.81
Satisfaction towards	Contract	56	65.21
relationship with employers	Permanent	98	100.36
	Total	180	
	Temporary	26	95.58
Satisfaction towards overall	Contract	56	75.64
QWL	Permanent	98	97.64
	Total	180	
	Temporary	26	97.15
Satisfaction towards wasses	Contract	56	89.25
Satisfaction towards wages	Permanent	98	89.45
	Total	180	ated Data

Source: Computed Data

TABLE XII ASSOCIATION BETWEEN WORK STATUS AND VARIOUS SATISFACTION LEVEL OF THE EMPLOYEES – KRUSKAL-WALLIS TEST

Factors	Chi Square	Df	Asymp. Sig. (2-tailed)
Satisfaction towards Bonus	3.257	2	.196
Satisfaction towards Safety Measures	20.438	2	.000
Satisfaction towards Infrastructural Facilities	23.278	2	.000
Satisfaction towards First Aid Facilities	25.787	2	.000
Satisfaction towards relationship with Co-workers	11.158	2	.004
Satisfaction towards relationship with employers	24.194	2	.000
Satisfaction towards overall QWL	11.387	2	.003
Satisfaction towards wages	.648	2	.723

Source: Computed Data

X. FINDINGS OF THE STUDY

The following are findings of the study.

- 1. Most of the respondents (42.20 per cent) have above 6 years of work experience.
- There is a significant association between the age of the respondents and their work stress.
- Satisfaction towards relationship with Co-workers is ranked first, followed by the Satisfaction towards relationship with employers, Third rank is given to Satisfaction towards QWL attracts the respondents, followed by the Infrastructural Facilities, Safety measures, First Aid Facilities, wages and then by bonus.
- 4. The I rank is given for Restroom facilities, II rank is given for water facilities, III rank is given for ventilation facilities, IV rank is given for medical facilities, V rank is given for transport facilities, VI rank is given for housing facilities and VII rank is given for education to employees' children.

XI. SUGGESTIONS

The researcher has offered the following suggestions based on the above findings.

- Education to the children of employees can be provided as it ranks last in the facilities provided to the employees
- Safety measures can be given to the employees by means of providing them with facial mask and gloves which make the employees feel safer and highly satisfied regarding the safety measures.

3. Bonus and wages can be increased in the short run as the employees are feeling that was not mere sufficient for them.

XII. CONCLUSION

From the study it is understood that the QWL of the employees of fireworks and match works industry in Sivakasi is based on the various factors like relationship with owners and co-workers, income, bonus, working time and welfare measures. If the above suggestions offered by the researcher are considered by the employers of the fireworks and match works industry, QWL of the employees of the match works industry will be improved.

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