

CHAPTER 7

QWL AND HIERARCHICAL LEVELS
—AN EMPIRICAL ANALYSIS

Statistical analysis of responses and discussion of results of 650 employees of selected five sugar mills viz., Syampur Sugar Mills Ltd., Rajshahi Sugar Mills Ltd., Natore Sugar Mills Ltd., Rangpur Sugar Mills Ltd., and Joypurhat Sugar Mills Ltd. for the study are presented in this chapter. Data were obtained from subjects through a questionnaire and the responses from the subjects are analyzed. Quality of work life of various hierarchical levels (executive, supervisor, skilled employee, semi-skilled employee and unskilled employee) was compared through mean comparison, 't' test and analysis of variance.

7.1 Hierarchical Effect in Perceiving QWL

There are differences among five hierarchical levels across and between the department in perceiving employees quality of work life (Hypothesis-3).

Relevant QWL factors for this hypothesis are—*adequate income and fair compensation, safe and healthy working conditions, immediate opportunity to develop human capacity, opportunity to continued growth and security, social integration in the work organization, constitutionaism in the work organization, work and total life space, the social relevance of working life and job stress.*

Table 49 : Mean Scores and SD Scores of all Levels Across the Department for Factor One of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administration N = 167	3.43 N = 31	1.34	3.23 N = 26	1.55	2.92 N=44	1.49	2.36 N=34	1.45	2.57 N=32	1.47
Cane N = 146	3.66 N = 27	1.32	3.15 N = 29	1.18	2.69 N=58	1.58	2.24 N=15	1.41	2.03 N=17	1.34
Factory N = 244	3.39 N = 38	1.43	3.37 N = 30	1.35	2.57 N=84	1.38	1.98 N=31	1.30	1.93 N=61	1.22
Finance N = 93	3.50 N = 25	1.36	3.29 N = 8	1.40	2.41 N=45	1.51	2.48 N=8	1.63	2.08 N=7	1.34

The above table presents the mean scores for QWL factor one, i.e., *adequate income and fair compensation* of all levels across the departments. The table shows that the highest score on QWL factor one was obtained by executives of cane department followed by executives of finance department and executives of administration department. The minimum score was obtained by unskilled employees of factory department followed by semiskilled employees of the same department.

Table 50 : Mean Scores and SD Scores of all Levels Across the Department for Factor Two of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	3.83 N = 31	1.44	3.47 N = 26	1.32	3.69 N=44	0.95	3.04 N=34	1.40	3.06 N=32	1.31
Cane N = 146	3.69 N = 27	1.17	2.85 N = 29	1.45	3.25 N=58	1.43	3.47 N=15	1.63	2.76 N=17	1.26
Factory N = 244	3.28 N = 38	1.29	3.58 N = 30	1.29	2.90 N=84	1.47	3.75 N=31	1.21	3.26 N=61	0.94
Finance N = 93	3.64 N = 25	1.25	3.88 N = 8	0.99	3.38 N=45	1.41	3.79 N=8	1.35	2.67 N=7	1.53

The above table presents the mean scores of QWL factor two *safe and healthy working conditions* for all levels across the departments. The table shows that the highest score on QWL factor two was obtained by supervisors of finance department followed by executives of administration department and semiskilled employees of finance department. The lowest score was obtained by unskilled employees of finance department followed by unskilled employees of cane department.

Table 51 : Mean Scores and SD Scores of all Levels Across the Department for Factor Three of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	4.16 N = 31	0.99	3.54 N = 26	1.28	3.19 N=44	1.16	3.57 N=34	1.21	3.39 N=32	1.50
Cane N = 146	3.85 N = 27	1.31	3.86 N = 29	1.12	3.56 N=58	1.38	3.33 N=15	1.29	3.18 N=17	1.22
Factory N = 244	4.00 N = 38	1.05	3.72 N = 30	1.32	3.79 N=84	1.39	2.92 N=31	1.37	3.34 N=61	1.33
Finance N = 93	3.98 N = 25	1.05	3.17 N = 8	1.46	3.61 N=45	1.37	3.03 N=8	1.37	3.13 N=7	1.50

Table-51 presents the mean scores of QWL factor three, i.e., *immediate opportunity to develop human capacity* for all levels across the departments. The table shows that the highest score on QWL factor three was obtained by executives of administration department followed by executives of factory department. The lowest score was obtained by skilled employees of factory department followed by semiskilled employees of the same department.

Table 52 : Mean Scores and SD Scores of all Levels Across the Department for Factor Four of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	3.73 N = 31	1.30	2.93 N = 26	1.43	3.34 N=44	1.47	2.67 N=34	1.54	2.60 N=32	1.32
Cane N = 146	3.75 N = 27	1.34	3.11 N = 29	1.32	3.12 N=58	1.65	3.03 N=15	1.56	2.35 N=17	1.12
Factory N = 244	3.01 N = 38	1.47	3.01 N = 30	1.46	2.99 N=84	1.46	2.46 N=31	1.44	2.39 N=61	1.07
Finance N = 93	3.70 N = 25	1.31	4.34 N = 8	0.94	2.89 N=45	1.51	2.91 N=8	1.49	2.75 N=7	1.65

Table-52 presents the mean scores of QWL factor four *opportunity for continued growth and security* for all levels across the departments. The table depicts that supervisors of finance department and executives of cane department scored higher on QWL factor four where as unskilled employees of cane department and unskilled employees of factory department had low scores on QWL factor four.

Table 53 : Mean Scores and SD Scores of all Levels Across the Department for Factor Five of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	4.01 N = 31	1.22	2.99 N = 26	1.47	3.64 N=44	1.43	3.66 N=34	1.28	3.19 N=32	1.48
Cane N = 146	4.12 N = 27	1.10	3.70 N = 29	1.52	3.55 N=58	1.48	2.89 N=15	1.49	3.44 N=17	1.40
Factory N = 244	3.88 N = 38	1.21	3.34 N = 30	1.53	3.22 N=84	1.49	3.72 N=31	1.26	2.87 N=61	1.51
Finance N = 93	4.01 N = 25	1.25	3.79 N = 8	1.22	3.86 N=45	1.35	3.36 N=8	1.37	3.38 N=7	1.45

The above table presents the mean scores of QWL factor five *social integration of work organization* for all levels across the departments. It is observed from the table that the highest score on QWL factor five was obtained by executives of cane department followed by executives of administration and finance departments. The minimum score was obtained by unskilled employees of factory department and semiskilled employees of cane department. The remaining levels across the departments fall on medium range of scores.

Table 54 : Mean Scores and SD Scores of all Levels Across the Department for Factor Six of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	3.63 N = 31	1.22	2.88 N = 26	1.40	3.36 N=44	1.09	3.23 N=34	1.03	3.44 N=32	1.28
Cane N = 146	3.72 N = 27	1.33	3.61 N = 29	1.42	3.29 N=58	1.24	2.78 N=15	1.55	3.35 N=17	0.82
Factory N = 244	3.42 N = 38	1.36	3.72 N = 30	1.25	3.04 N=84	1.17	2.69 N=31	1.35	2.96 N=61	1.28
Finance N = 93	4.00 N = 25	1.00	3.13 N = 8	1.39	2.87 N=45	1.55	3.13 N=8	1.92	3.62 N=7	0.97

Table-54 presents the mean scores of QWL factor six, i.e., *constitutionalizm in the work organization* of all levels across the departments. This table shows that the executives of finance department had highest score on this factor followed by the executives of cane department and supervisors of factory department. The minimum score was obtained by semiskilled employees of factory department and semiskilled employees of cane department.

Table 55 : Mean Scores and SD Scores of all Levels Across the Department for Factor Seven of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	4.34 N = 31	1.00	3.77 N = 26	1.48	3.37 N=44	1.54	3.26 N=34	1.53	3.15 N=32	1.60
Cane N = 146	4.23 N = 27	1.16	3.93 N = 29	1.28	3.24 N=58	1.65	4.13 N=15	1.07	2.99 N=17	1.61
Factory N = 244	4.23 N = 38	1.11	3.06 N = 30	1.78	3.39 N=84	1.35	3.68 N=31	1.49	3.32 N=61	1.31
Finance N = 93	4.13 N = 25	1.26	3.16 N = 8	1.14	3.90 N=45	1.37	3.78 N=8	1.29	3.21 N=7	1.52

The above table presents the mean scores of QWL factor seven *work and total life space* for all levels across the departments. This table shows that executives of administration department had the highest score on QWL factor seven and the lowest score was obtained by unskilled employees of cane department. The remaining levels across the departments had high scores on QWL factor seven.

Table 56 : Mean Scores and SD Scores of all Levels Across the Department for Factor Eight of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administration N = 167	4.08 N = 31	1.02	2.71 N = 26	1.39	3.70 N=44	1.20	3.71 N=34	1.14	3.14 N=32	1.31
Cane N = 146	3.89 N = 27	0.98	3.69 N = 29	1.38	3.59 N=58	1.42	3.03 N=15	1.42	2.91 N=17	1.26
Factory N = 244	3.92 N = 38	1.12	3.76 N = 30	1.20	3.03 N=84	1.31	3.22 N=31	1.16	3.32 N=61	1.17
Finance N = 93	3.87 N = 25	1.20	2.77 N = 8	1.78	3.64 N=45	1.29	3.13 N=8	1.53	3.70 N=7	1.01

Table-56 presents the mean scores of QWL factor eight *the social relevance of working life* for all levels across the departments. This table shows that the executives of administration department had the highest score on QWL factor eight, whereas supervisors of administration department, supervisors of finance department and unskilled employees of cane department had low scores on this factor.

Table 57 : Mean Scores and SD Scores of all Levels Across the Department for Factor Nine of QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	4.20 N = 31	0.87	3.40 N = 26	1.35	3.77 N=44	1.12	3.85 N=34	0.97	3.28 N=32	1.39
Cane N = 146	4.12 N = 27	1.04	3.97 N = 29	1.05	3.64 N=58	1.19	3.76 N=15	0.93	3.57 N=17	0.81
Factory N = 244	4.08 N = 38	1.11	4.08 N = 30	1.25	3.86 N=84	1.18	3.20 N=31	1.49	3.56 N=61	1.08
Finance N = 93	4.07 N = 25	1.21	3.17 N = 8	1.46	3.51 N=45	1.38	3.71 N=8	1.20	3.00 N=7	1.55

Table-57 presents the mean scores of QWL factor nine *job stress* for all levels across the departments. It is evident from this table that the executives of administration department had the highest score on QWL factor nine, whereas unskilled employees of finance department had the lowest score on this factor. The remaining levels across the departments had high scores on QWL factor nine.

Table 58 : Mean and SD Scores of all Levels Across the Department for Total QWL.

Departments	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Administra- tion N = 167	3.96 N = 31	1.16	3.20 N = 26	1.44	3.41 N=44	1.33	3.32 N=34	1.38	3.11 N=32	1.46
Cane N = 146	3.90 N = 27	1.21	3.59 N = 29	1.34	3.36 N=58	1.49	3.10 N=15	1.47	2.96 N=17	1.35
Factory N = 244	3.76 N = 38	1.27	3.52 N = 30	1.41	3.02 N=84	1.41	3.05 N=31	1.44	2.98 N=61	1.36
Finance N = 93	3.89 N = 25	1.19	3.36 N = 8	1.44	3.40 N=45	1.48	3.17 N=8	1.50	3.09 N=7	1.47

The above table presents the mean scores of *total QWL* for all levels across the departments. This table shows that the executives of administration department obtained the highest score on total QWL. The high scores on total QWL were obtained by executives of cane department, executives of finance department, executives of factory department, supervisors of cane department and supervisors of factory department. On the other hand, low scores were obtained by unskilled employees of cane and factory departments.

Table 59 : Mean and SD Scores on QWL for all Levels of the Sampled Sugar Mills.

QWL Factors	Levels									
	Executive N = 121		Supervisor N = 93		Skilled employee N = 231		Semi-skilled employee N = 88		Unskilled employee N = 117	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
X ₁	3.48	1.37	3.25	1.36	2.64	1.49	2.22	1.42	2.13	1.34
X ₂	3.59	1.23	3.35	1.37	3.23	1.39	3.43	1.41	3.10	1.15
X ₃	4.00	1.10	3.66	1.28	3.22	1.39	3.25	1.32	3.32	1.38
X ₄	3.50	1.40	3.13	1.42	3.07	1.53	2.68	1.52	2.46	1.19
X ₅	3.99	1.17	3.39	1.51	3.51	1.47	3.53	1.35	3.07	1.50
X ₆	3.66	1.26	3.40	1.40	3.13	1.27	2.95	1.35	3.19	1.23
X ₇	4.26	1.09	3.54	1.55	3.45	1.49	3.60	1.45	3.22	1.45
X ₈	3.95	1.08	3.36	1.45	3.42	1.35	3.37	1.27	3.23	1.23
X ₉	4.12	1.06	3.77	1.28	3.72	1.22	3.59	1.22	3.45	1.18
Total QWL	3.87	1.21	3.44	1.41	3.25	1.44	3.17	1.43	3.02	1.40

Table-59 presents the mean and SD scores on all factors of QWL for all five levels of the industry. The following observations were made from the table:

Factor 1: *Adequate income and fair compensation* : The highest score was obtained by executives (3.48) followed by supervisors, skilled employees, semiskilled employees and unskilled employees (2.13).

Factor 2 : *Safe and healthy working conditions* : The highest score was obtained by executives (3.59) followed by semi-skilled employees, supervisors, skilled employees and unskilled employees (3.10).

Factor 3: *Immediate opportunity to develop human capacity* : The highest score was obtained by executives (4.00) followed by supervisors, unskilled employees, semiskilled employees and skilled employees (3.22).

Factor 4 : *Opportunity for continued growth and security* : The highest score was obtained by executives (3.50) followed by supervisors, skilled employees, semiskilled employees and unskilled employees (2.46).

Factor 5: *Social integration in the work organization* : The highest score was obtained by executives (3.99) followed by semiskilled employees, skilled employees, supervisors and unskilled employees (3.07).

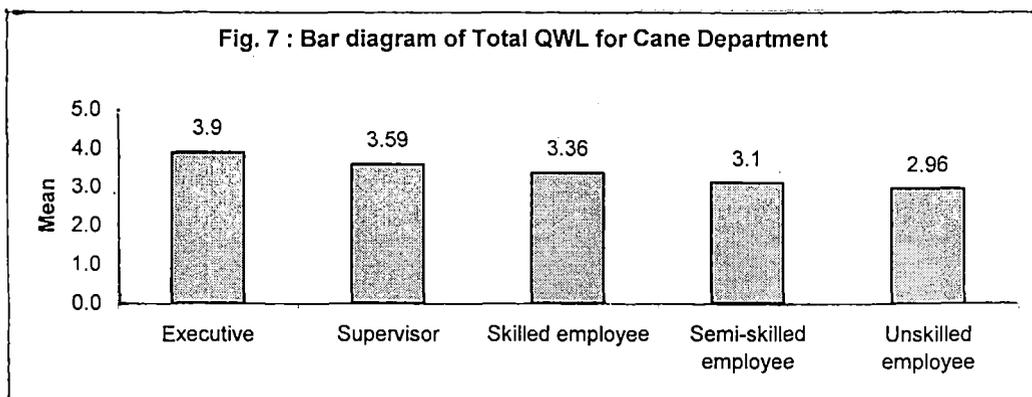
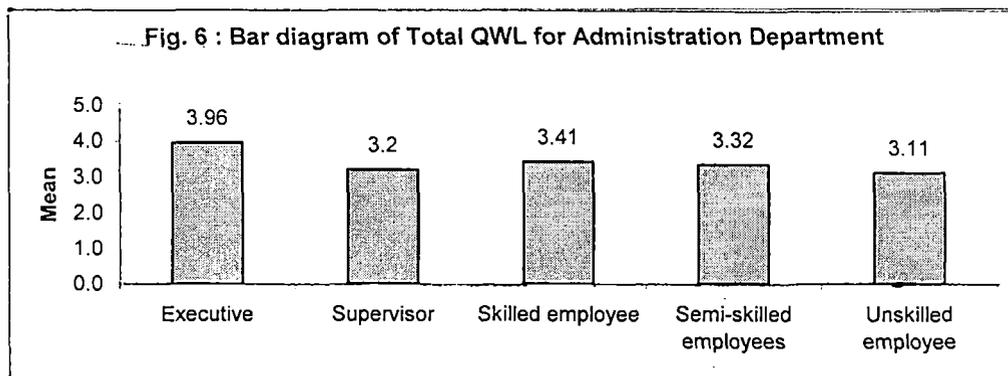
Factor 6: *Constitutionalism in the work organization* : The highest score was obtained by executives (3.66) followed by supervisors, unskilled employees, skilled employees and semiskilled employees (2.95).

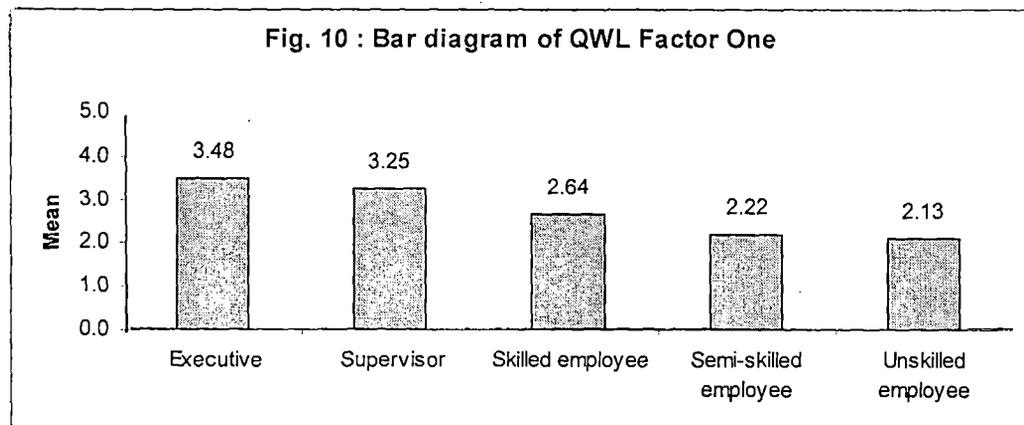
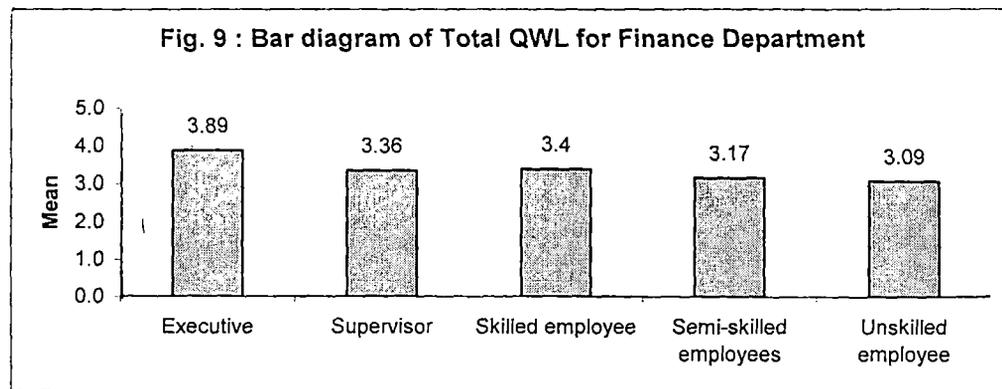
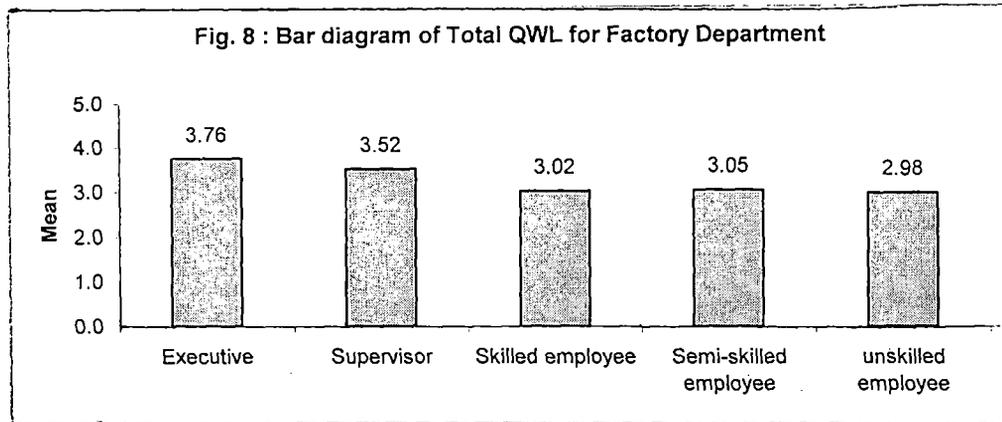
Factor 7: *Work and total life space* : The highest score was obtained by executives (4.26) followed by semiskilled employees, supervisors, skilled employees and unskilled employees (3.22).

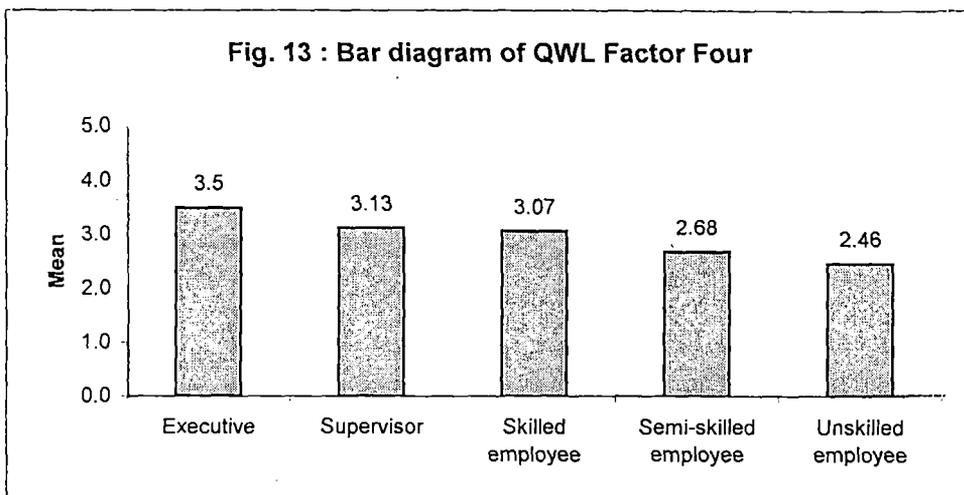
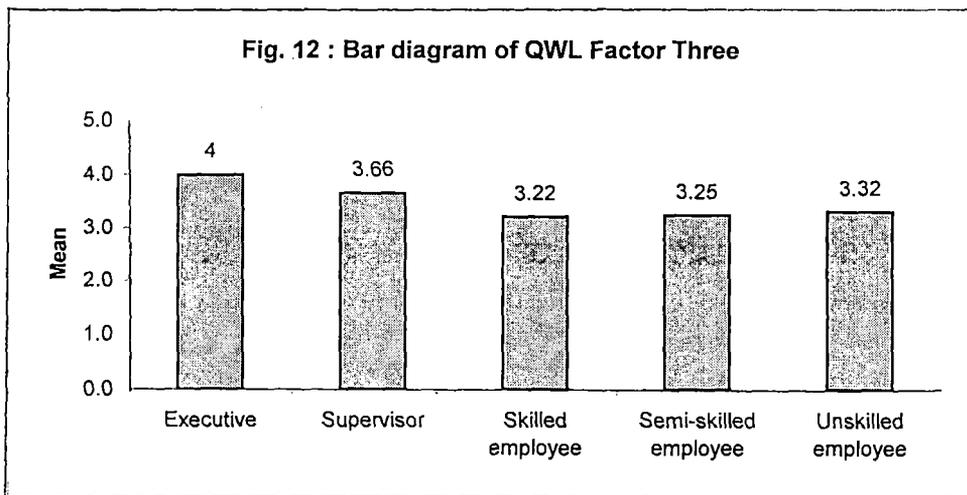
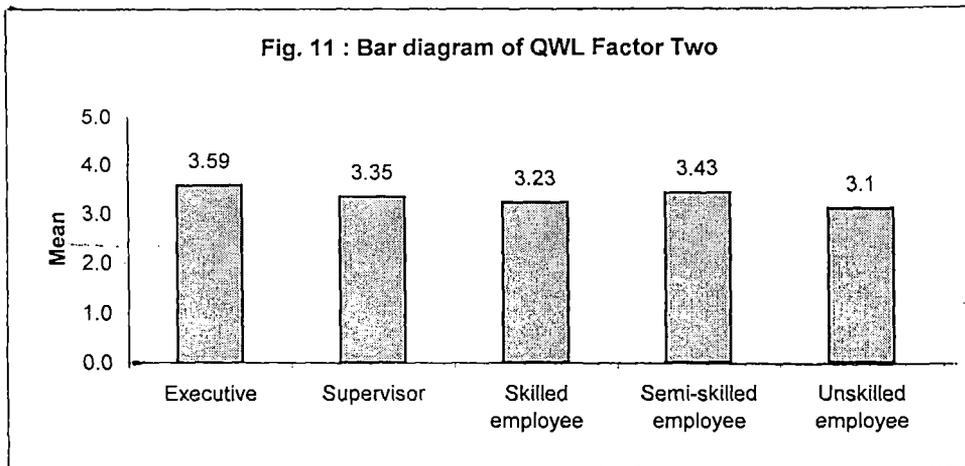
Factor 8: The social relevance of working life : The highest score was obtained by executives (3.95) followed by skilled employees, semiskilled employees, supervisors and unskilled employees (3.23).

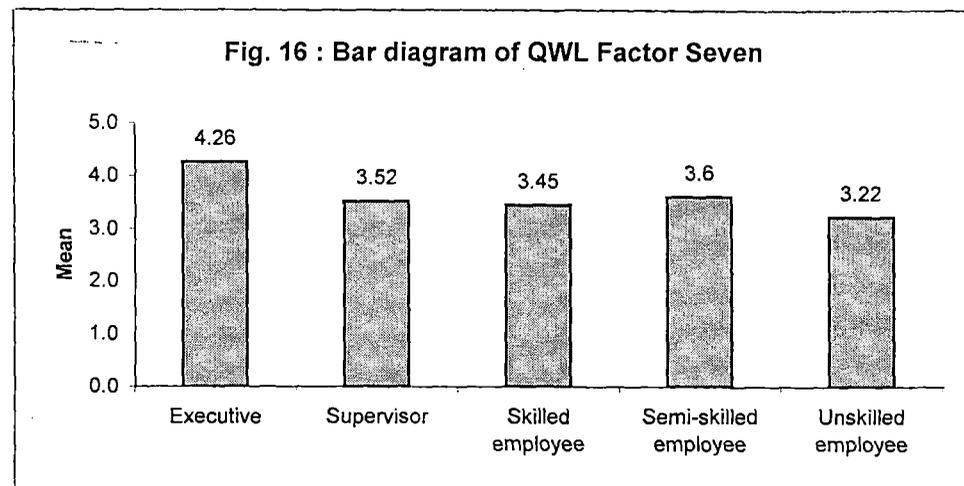
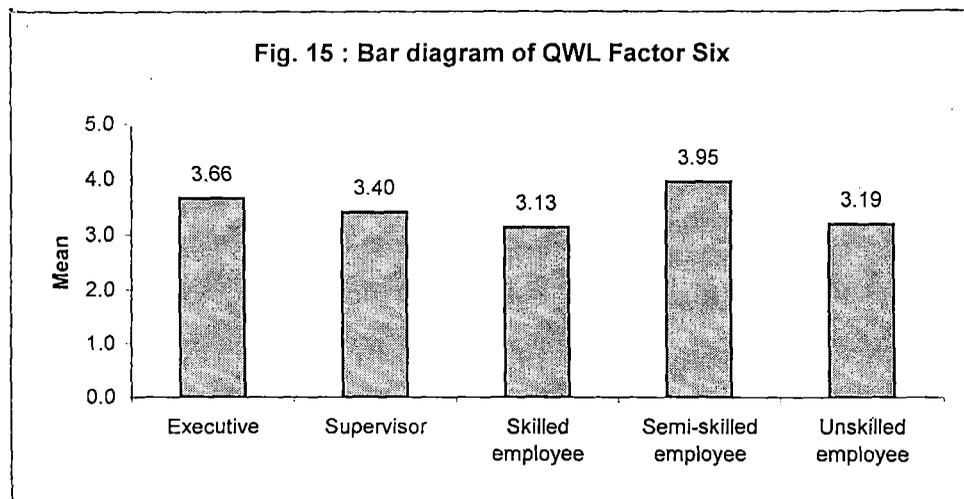
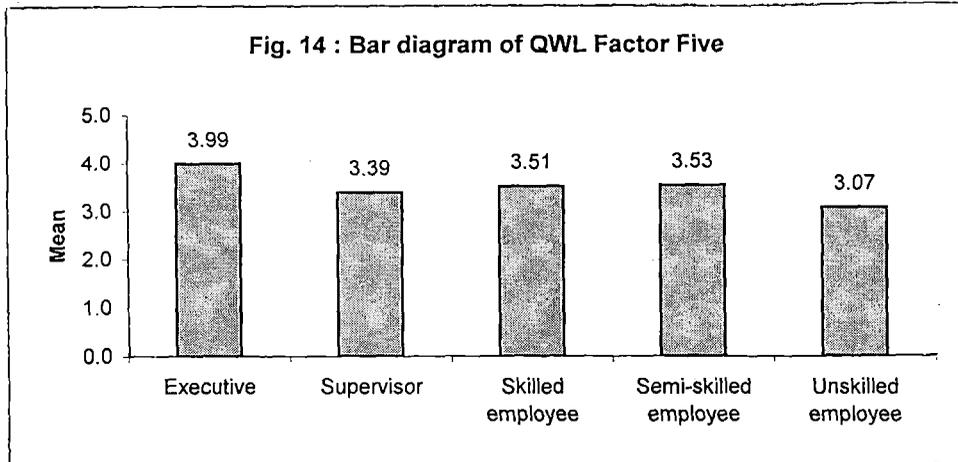
Factor 9: Job stress : The highest score was obtained by executives (4.12) followed by supervisors, skilled employees, semiskilled employees, and unskilled employees (3.45).

Total QWL: The highest score was obtained by executive's (3.87) followed by supervisors, skilled employees, semiskilled employees, and unskilled employees (3.02).









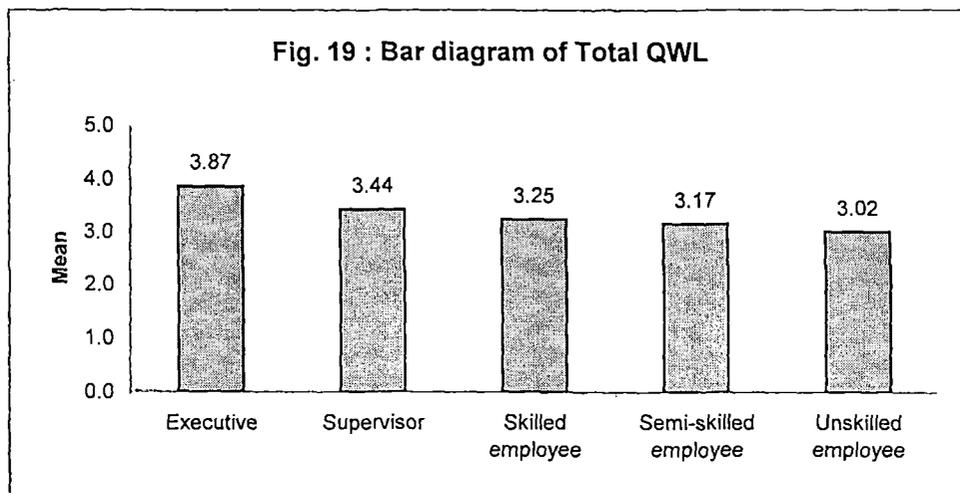
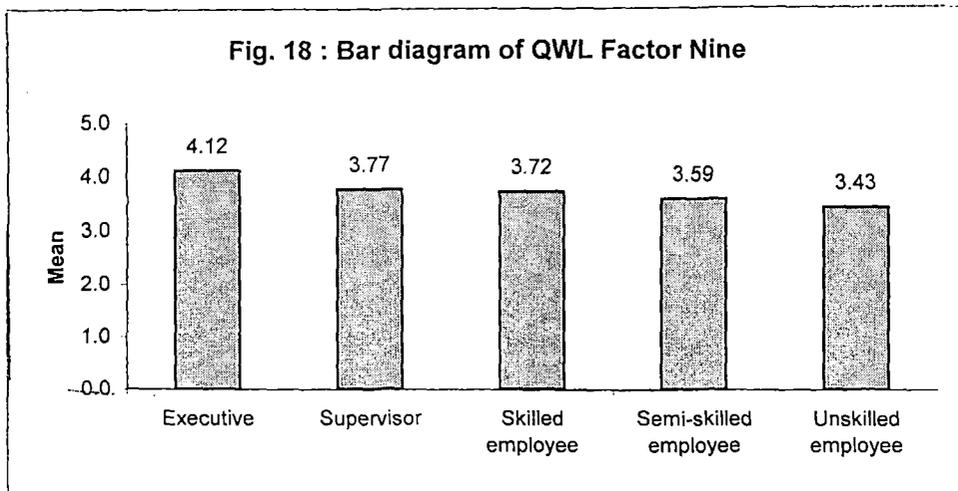
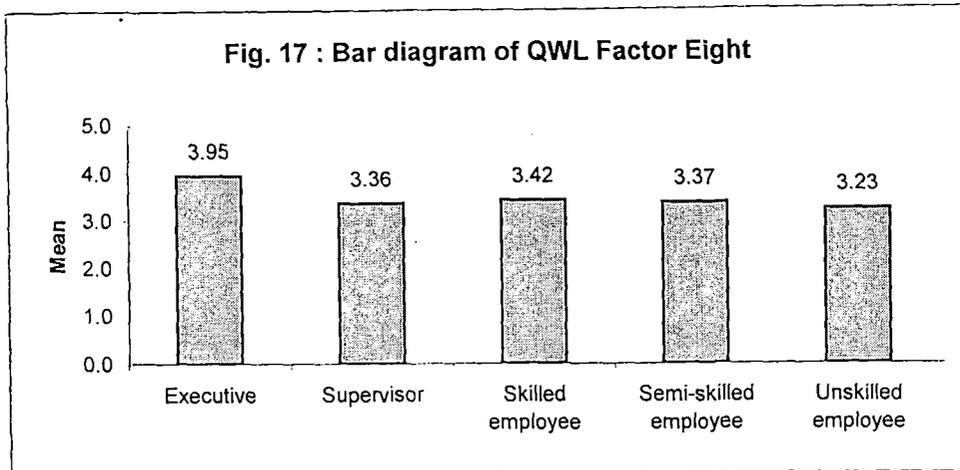


Table 60 : ' t'Values among Hierarchical Levels within Administration Department for Factors of QWL and Total QWL.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Admn. Executive Admn. Supervisor	55	0.5225	1.1050	2.0470*	2.2110*	2.8636**	2.1613*	1.7266	4.2846**	2.7002**	2.2072*
Admn. Executive Admn. Skilled employee	73	1.5207	0.5728	3.7835**	1.1858	1.1708	1.0054	3.0765**	1.4347	1.7896	1.8572
Admn. Executive Admn. Semiskilled empl.	63	3.0805**	2.4800*	2.1391*	2.9834**	1.1259	1.4324	3.3332**	1.3738	1.5258	2.0135*
Admn. Executive Admn. Unskilled empl.	61	2.4245*	2.4854*	2.3966*	3.4224**	2.3954*	0.6027	3.5267**	3.1709**	3.1372**	2.5633*
Admn. Supervisor Admn. Skilled employee	68	0.8287	-0.8081	1.1737	-1.1388	-1.8187	-1.5994	1.0651	-3.1435**	-1.2366	-0.6190
Admn. Supervisor Admn. Semiskilled empl.	58	2.2353*	1.2082	-0.0928	0.6682	-1.8839	-1.1163	1.2976	-3.0612**	-1.5029	-0.3276
Admn. Supervisor Admn. Unskilled empl.	56	1.6596	1.1814	-0.4041	0.9122	-0.5134	-1.5889	1.5174	-1.2097	0.3312	0.2721
Admn. Skilled employee Admn. Semiskilled empl.	76	1.6652	2.4395*	-1.4080	1.9551	-0.0641	0.5349	0.3137	-0.0373	-0.3313	0.2916
Admn. Skilled employee Admn. Unskilled employee	74	1.0345	2.4319*	-0.6555	2.2604*	1.3347	-0.2935	0.6049	1.9325	1.7005	0.9317
Admn. Semiskilled empl. Admn. Unskilled empl.	64	-0.5841	-0.0598	0.5381	0.1977	1.3823	-0.7364	0.2855	1.8888	1.9415	0.6007

* Significant at 0.05 level. ** Significant at 0.01 level.

To test the significance of difference among levels within same department 't' values were calculated for all factors of QWL and total QWL.

Table-60 shows the following significant observations among the levels within administration department.

1. Executive and supervisor group was found to be significantly different at 0.01 level for factors five, eight and nine. It was also found to be significantly different at 0.05 level for factors three, four, six and total QWL.
2. Executive and skilled employee group was found to be significantly different at 0.01 level for factors three and seven only.
3. Executive and semi-skilled employee group was found to be significantly different at 0.01 level for factors one, four and seven. It was also found to be significantly different at 0.05 level for factors two, three, and total QWL.
4. Executive and unskilled employee group was found to be significantly different at 0.01 level for factors four, seven, eight and nine. It was also found to be significantly different at 0.05 level for factors one, two, three, five and total QWL.
5. Supervisor and skilled employee group was found to be significantly different at 0.01 level for factor eight.
6. Supervisor and semiskilled employee group was found to be significantly different at 0.01 level for factor eight and significantly different at 0.05 level for factor one.
7. Skilled employee and semi-skilled employee group was found to be significantly different at 0.05 level for factor two.
8. Skilled employee and unskilled employee group was found to be significantly different at 0.05 level for factors one and four.

All other factors were found to be insignificant among levels within administration department and for the total QWL.

Table 61 : ' t'Values among Hierarchical Levels within Cane Department for Factors of QWL and Total QWL.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Cane Executive Cane Supervisor	54	1.5578	2.3748*	-0.0308	1.7998	1.1769	0.2986	0.9167	0.6211	0.5366	0.9063
Cane Executive Cane Skilled empl.	83	2.7694**	1.3949	0.9163	1.7339	1.7828	1.4546	2.8073**	0.9918	1.7992	1.6458
Cane Executive Cane Semiskilled empl.	40	3.2610**	0.5064	1.2392	1.5735	3.0546**	2.0689*	0.2750	2.3157*	1.1147	1.9009
Cane Executive Cane Unskilled empl.	42	3.9654**	2.4608*	1.6953	3.5867**	1.7958	1.0281	2.9683**	2.8903**	1.9319	2.3997*
Cane Supervisor Cane Skilled empl.	85	1.3850	-1.2243	1.0146	-0.0284	0.4417	1.0806	1.9727*	0.3125	1.2664	0.7012
Cane Supervisor Cane Semiskilled empl.	42	2.2684*	-1.4422	1.4130	0.1791	1.6866	1.7819	-0.5180	1.4892	0.6424	1.1127
Cane Supervisor Cane Unskilled empl.	44	2.9556**	0.2129	1.9235	1.9889*	0.5761	0.6887	2.1841*	1.9090	1.3505	1.5350
Cane Skilled empl. Cane Semiskilled empl.	71	1.0036	-0.5161	0.5827	0.1903	1.5374	1.3471	-1.9786*	1.3614	-0.3596	0.6040
Cane Skilled empl. Cane Unskilled empl.	73	1.5635	1.2740	1.0232	1.8019	0.2726	-0.1874	0.5523	1.7783	0.2271	0.9931
Cane Semiskilled empl. Cane Unskilled empl.	30	0.4317	1.3875	0.3379	1.4289	-1.0762	-1.3227	2.3244*	0.2533	0.6179	0.2808

* Significant at 0.05 level. ** Significant at 0.01 level.

Table-61 shows the following observations among levels within cane department.

1. Executive and supervisor group was found to be significantly different at 0.05 level for factor two.
2. Executive and skilled employee group was found to be significantly different at 0.01 level for factors one and seven.
3. Executive and semiskilled employee group was found to be significantly different at 0.01 level for factors one and five.
4. Executive and unskilled employee group was found to be significantly different at 0.01 level for factors one, four, seven, eight and at 0.05 level for factor two, and total QWL.
5. Supervisor and skilled employee group was found to be significantly different at 0.05 level for factor seven.
6. Supervisor and semi-skilled employee group was found to be significantly different at 0.05 level for factor one.
7. Supervisor and unskilled employee group was found to be significantly different at 0.01 level for factor one and at 0.05 level for factors four and seven.
8. Skilled employee and semi-skilled employee group was found to be significantly different at 0.05 level for factor seven only.
9. Semi-skilled employee and unskilled employees group was found to be significantly different at 0.05 level for factor seven.

All other factors were found to be insignificant and total QWL also were found insignificant.

Table 62 : ' t'Values among Hierarchical Levels within Factory Department for Factors of QWL and Total QWL.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Factory Executive Factory Supervisor	66	0.0589	-0.9522	0.9747	000	1.6259	-0.9357	3.3193**	0.5668	000	0.7370
Factory Executive Factory Skilled employee	120	2.9576**	1.3718	4.7804**	0.0699	2.3950*	1.5781	3.3547**	3.6289**	0.9710	2.7662**
Factory Executive Factory Semiskilled employee.	67	4.2423**	-1.5476	3.7068**	1.5601	0.5363	2.2252*	1.7562	2.5414*	2.8099**	2.1750*
Factory Executive Factory Unskilled employee	97	5.4173**	0.0890	2.5949**	2.4235*	3.4830**	1.6977	3.5435**	2.5220*	2.3052*	2.8455**
Factory Supervisor Factory Skilled employee	112	2.7460**	2.2427*	3.1865**	0.0644	0.3760	2.6839**	-1.0530	2.6763**	0.8630	1.6672
Factory Supervisor Factory Semiskilled employee.	59	4.1120**	-0.5310	2.3213*	1.4812	-1.0604	3.0893**	-1.4771	1.7871	2.4948*	1.2875
Factory Supervisor Factory Unskilled employee	89	5.1236**	1.3452	1.2844	2.2960*	1.3898	2.6829**	-0.7880	1.6724	2.0488*	1.7592
Factory Skilled employee Factory Semiskilled employee	113	2.2008*	-2.8774**	-0.4467	1.7337	-1.6609	1.3647	-0.9938	-0.7108	2.4735*	-0.1007
Factory Skilled employee Factory Unskilled employee.	143	2.8491**	-1.6780	-2.3950*	2.7215**	1.3885	0.3907	0.3121	-1.3757	1.5656	0.1712
Factory Semiskilled employee. Factory Unskilled employee.	90	0.1817	2.1405*	-1.4173	0.2631	2.6920**	-0.9389	1.1890	-0.3886	-1.3249	0.2288

* Significant at 0.05 level, ** Significant at 0.01 level.

Table-62 shows the following observations among levels within factory department.

1. Executive and supervisor group was found to be significantly different at 0.01 level for factor seven only.
2. Executive and skilled employee group was found to be significantly different at 0.01 level for factors one, three, seven, eight and total QWL, and at 0.05 level for factor five.
3. Executive and semiskilled employee group was found to be significantly different at 0.01 level for factors one, three, nine and at 0.05 level for factors six, eight and total QWL.
4. Executive and unskilled employee group was found to be significantly different at 0.01 level for factors one, three, five, and seven and at 0.05 level for factors four, eight and nine.
5. Supervisor and skilled employee group was found to be significantly different at 0.01 level for factors one, three, six, eight and at 0.05 level for factor two only.
6. Supervisor and semi-skilled employee group was found to be significantly different at 0.01 level for factors one, six and at 0.05 level for factors three and nine.
7. Supervisor and unskilled employee group was found to be significantly different at 0.01 level for factors one, six and at 0.05 level for factors four and nine.
8. Skilled employee and semi-skilled employee group was found to be significantly different at 0.01 level for factor two and at 0.05 level for factors one and nine.

9. Semi-skilled employee and unskilled employee group was found to be significantly different at 0.01 level for factors one, four and at 0.05 level for factor three only.
10. Semi-skilled employee and unskilled employee group was found to be significantly different at 0.01 level for factor five and at 0.05 level for factor two.

All other factors were found to be insignificant and total QWL also were found insignificant.

Table 63 : ' t'Values among Hierarchical Levels within Finance Department for Factors of QWL and Total QWL.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Finance Executive Finance Supervisor	31	0.3776	-0.4939	1.7259	-1.2746	0.4706	1.9467	1.9353	2.0017*	1.7436	1.0431
Finance Executive Finance Skilled employee	68	2.9954**	0.7688	1.1713	2.2510*	0.4710	3.2800**	0.6921	0.7324	1.6975	1.4187
Finance Executive Finance Semiskilled employee .	31	1.7616	-0.2900	2.0693*	1.4378	1.3465	1.6898	0.6803	1.4210	0.7338	1.3994
Finance Executive Finance Unskilled employee	30	2.4489*	1.7305	1.7223	1.6044	1.2269	0.8939	1.6347	0.3414	1.9469	1.4954
Finance Supervisor Finance Skilled employee	51	1.5337	0.9581	-0.8293	2.6150**	-0.1369	0.4432	-1.4385	-1.6579	-0.6369	-0.0707
Finance Supervisor Finance Semiskilled employee	14	1.0662	0.1521	0.1978	2.2958*	0.6630	000	-1.0186	-0.4338	-0.8082	0.2584
Finance Supervisor Finance Unskilled employee	13	1.7033	1.8436	0.0523	2.3342*	0.5951	-0.7797	-0.0727	-1.2179	0.2187	0.3588
Finance Skilled employee Finance Semiskilled employee	51	-0.1195	-0.7622	1.1034	-0.0346	0.9633	-0.4220	0.2301	1.0028	-0.3842	0.4043
Finance Skilled employee Finance Unskilled employee.	50	0.5449	1.2264	0.8522	0.2256	0.8671	-1.2369	1.2228	-0.1172	0.8956	0.5159
Finance Semiskilled employee Finance Unskilled employee	13	0.5142	1.5071	-0.1350	0.1974	-0.0275	-0.6087	0.7862	-0.8370	0.9994	0.1040

* Significant at 0.05 level. ** Significant at 0.01 level.

Table-63 shows the following observations among levels within finance department.

1. Executive and supervisor group was found to be significantly different at 0.05 level for factor eight only.
2. Executive and skilled employee group was found to be significantly different at 0.01 level for factors two, six and at 0.05 level for factor four.
3. Executive and semiskilled employee group was found to be significantly different at 0.05 level for factor three.
4. Executive and unskilled employee group was found to be significantly different at 0.05 level for factor one only.
5. Supervisor and skilled employee group was found to be significantly different at 0.01 level for factor four.
6. Supervisor and semi-skilled employee group was found to be significantly different at 0.05 level for factor four only.
7. Supervisor and unskilled employee group was found to be significantly different at 0.05 level for factor four only.

All other factors were found to be insignificant and total QWL were found to be insignificant.

Table 64 : t Values between Departments for Factors of QWL and Total QWL within Executive Level.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Executive Administration Executive Cane	56	-0.6566	0.4024	1.0243	-0.0576	-0.3584	-0.2687	0.3879	0.7206	0.3190	0.1926
Executive Administration Executive Factory	67	0.1189	1.8550	0.6459	2.1304*	0.4423	0.6679	0.4279	0.6142	0.4911	0.6763
Executive Administration Executive Finance	54	-0.1930	0.5939	0.6584	0.0856	0.000	-1.2208	0.6957	0.7331	0.4673	0.2219
Executive Cane Executive Factory	63	0.7741	1.3117	-0.5118	2.0736*	0.8179	0.8844	0.000	-0.1192	0.1469	0.4466
Executive Cane Executive Finance	50	0.4304	0.1490	-0.3928	0.1359	0.3556	-0.8527	0.2980	0.0660	0.1602	0.0300
Executive Factory Executive Finance	61	-0.3045	-1.0969	0.0740	-1.9014	-0.4281	-1.8116	0.3315	0.1685	0.0338	-0.4168

* Significant at 0.05 level.

Table 65 : t⁴ Values between Departments for Factors of QWL and Total QWL within Supervisor Level.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Supervisor Administration Supervisor Cane	53	0.2167	1.6513	-0.9889	-0.4854	-1.7565	-1.9161	-0.4299	-2.6204**	-1.7574	-1.0403
Supervisor Administration Supervisor Factory	54	-0.3626	-0.3449	-0.5161	-0.2065	-0.8694	-2.3722*	1.6080	-3.0344**	-1.9563*	-0.8387
Supervisor Administration Supervisor Finance	32	-0.0978	-0.8079	0.6925	-2.6060**	-1.3944	-0.4424	1.0681	-0.0999	0.4138	-0.2748
Supervisor Cane Supervisor Factory	57	-0.6684	-2.0448*	0.4906	0.2757	0.9064	-0.3161	2.1490*	-0.2018	-0.3654	0.1953
Supervisor Cane Supervisor Finance	35	0.2857	1.8820	1.4449	-2.4576*	-0.1538	0.8500	1.5385	1.5685	1.7514	0.4233
Supervisor Factory Supervisor Finance	36	0.1487	-0.6093	1.0251	-2.4320*	-0.7803	1.1598	-0.1501	1.8669	1.7680	0.2840

* Significant at 0.05 level.

** Significant at 0.01 level.

To test the significance of difference between departments having same levels 't' values were calculated for all factors of QWL and total QWL.

Table-64 shows the following observations between departments of factors of QWL and total QWL within executive level.

1. Administration and factory department was found to be significantly different at 0.05 level for factor four only.
2. Cane and factory department was found to be significantly different at 0.05 level for factor four only.

All other factors were found to be insignificant and all total QWL were found to be insignificant.

Table-65 shows the following observations between departments of factors of QWL and total QWL within supervisor level.

1. Administration and cane department was found to be significantly different at 0.01 level for factor eight.
2. Administration and factory department was found to be significantly different at 0.01 level for factor eight and at 0.05 level for factors six and nine.
3. Administration and finance department was found to be significantly different at 0.01 level for factor four.
4. Cane and factory department was found to be significantly different at 0.05 level for factors two and seven.
5. Cane and finance department was found to be significantly different at 0.05 level for factor four.
6. Factory and finance department was found to be significantly different at 0.05 level for factor four only.

All other factors were found to be insignificant and total QWL were found to be insignificant.

Table 66 : ' t'Values between Departments for Factors of QWL and Total QWL within Skilled Employee Level.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Skilled employee Administration Skilled employee Cane	100	0.7461	1.7657	-1.4347	0.6986	0.3086	0.2973	0.4055	0.4137	0.5604	0.1757
Skilled employee Administration Skilled employee Factory	126	1.3259	3.226**	1.6333	1.2852	1.5355	1.5040	-0.0758	2.8270**	-0.4170	1.5151
Skilled employee Administration Skilled employee Finance	87	1.6035	1.2136	-1.5592	1.4242	-0.7465	1.7216	-1.7163	0.2271	0.9747	0.0335
Skilled employee Cane Skilled employee Factory	140	0.4704	1.4101	3.2543**	0.4944	1.3008	1.2213	-0.5900	2.4193*	-1.0883	1.3800
Skilled employee Cane Skilled employee Finance	101	0.9094	-0.4604	-0.1830	0.7279	-1.0952	1.5280	-2.1654*	-0.1844	0.5128	-0.1355
Skilled employee Factory Skilled employee Finance	127	0.6072	-1.7926	-3.2093**	0.3664	-2.4008*	0.7003	-2.0345*	-2.5340*	1.5122	-1.4338

* Significant at 0.05 level.

** Significant at 0.01 level.

Table-66 shows the following observations between departments of factors of QWL and total QWL within skilled employee level.

1. Administration and factory department was found to be significantly different at 0.01 level for factors two and eight.
2. Cane and factory department was found to be significantly different at 0.01 level for factor three and at 0.05 level for factor eight.
3. Cane and finance department was found to be significantly different at 0.05 level for factor seven only.
4. Factory and finance department was found to be significantly different at 0.01 level for factor three and at 0.05 level for factors five, seven and eight.

All other factors were found to be insignificant and all total QWL were found to be insignificant.

Table-67 shows the following observations between departments of factors of QWL and total QWL within semi-skilled employee level.

1. Administration and cane department was found to be significantly different at 0.05 level for factor seven.
2. Administration and factory department was found to be significantly different at 0.05 level for factors two, three and nine.
3. Cane and factory department was found to be significantly different at 0.05 level for factor five only.

All other factors were found to be insignificant and all total QWL were found to be insignificant.

Table 67 : ' t' Values between Departments for Factors of QWL and Total QWL within Semi-skilled Employee Level.

Groups Compared	Degree of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Semi-skilled employee Administration Semi-skilled employee Cane	47	0.2836	-0.9423	0.6894	-0.7512	1.8456	1.2013	-2.3593*	1.7834	0.3030	-0.5043
Semi-skilled employee Administration Semi-skilled employee Factory	63	1.1084	-2.1776*	2.0311*	0.5663	-0.1902	1.8225	-1.1192	1.7164	2.1024*	0.7717
Semi-skilled employee Administration Semi-skilled employee Finance	40	-0.2059	-1.3718	1.1087	-0.3988	0.5890	0.2064	-0.8877	1.2125	0.3514	0.2723
Semi-skilled employee Cane Semi-skilled employee Factory	44	0.6188	-0.6556	0.9691	1.2251	-1.9731*	0.2020	1.0404	-0.4838	1.3312	0.1097
Semi-skilled employee Cane Semi-skilled employee Finance	21	-0.3687	-0.4739	0.5202	0.1783	-0.7398	-0.4752	0.6964	-0.1567	0.1111	-0.1080
Semi-skilled employee Factory Semi-skilled employee Finance	37	-0.9218	-0.0815	-0.2101	-0.7828	0.7084	-0.7523	-0.1734	0.1832	-1.0719	-0.2085

* Significant at 0.05 level.

Table 68 : ' t ' Values between Departments For Factors of QWL and Total QWL within Unskilled Employee Level.

Groups Compared	Degree Of freedom	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	Total
1	2	3	4	5	6	7	8	9	10	11	12
Unskilled employee Administration Unskilled employee Cane	47	1.2608	0.7730	0.5683	0.6635	-0.5732	0.2620	0.3325	0.5926	-0.7896	0.3511
Unskilled employee Administration Unskilled employee Factory	93	2.2618*	-0.8574	0.1666	-0.8376	0.9881	1.7368	-0.5562	-0.6836	-1.0855	0.4316
Unskilled employee Administration Unskilled employee Finance	37	0.8100	0.6933	0.4154	-0.4345	-0.3087	-0.3493	-0.0901	-1.5482	0.4660	0.0328
Unskilled employee Cane Unskilled employee Factory	76	0.2926	-1.7948	-0.4462	-0.1350	1.3972	1.1871	-0.8729	-1.2568	0.0354	-0.0537
Unskilled employee Cane Unskilled employee Finance	22	-0.0830	0.1497	0.0855	-0.6924	0.0945	-0.6963	-0.3089	-1.4696	1.1927	-0.2092
Unskilled employee Factory Unskilled employee Finance	66	-0.3052	1.4667	0.3909	-0.7948	-0.8494	-1.3178	0.2072	-0.8235	1.2410	-0.2011

* Significant at 0.05 level.

Table-68 shows that within unskilled employees' level, administration and factory department was found significantly different at 0.05 level for factor one only. All other factors were found to be insignificant and all total QWL also were found insignificant.

Table 69 : Two-Way Analysis of Scores of QWL

Source of Variation	SS	DF	MS	F	Level of Significance
Between Factors	3.946	8	0.493	14.5	0.01
Within Subjects	3.516	4	0.879	25.8529	0.01
Residual	1.099	32	0.034		
Total	8.561	44			

Table-69 presents that between factors for total QWL variance is significant at 0.01 level and within subjects variance is also significant at 0.01 level.

Table 70 : Analysis of Variance of Scores of QWL for Administration Department

Source of Variation	SS	DF	MS	F	Level of Significance
Between Factors	2.701	8	0.338	4.4474	0.01
Within Subjects	3.927	4	0.982	12.9211	0.01
Residual	2.447	32	0.076		
Total	9.075	44			

Table-70 shows that between factor variance is significant at 0.01 level and within subjects variance is also significant at 0.01 level for administration department.

Table 71 : Analysis of Variance of Scores of QWL for Cane Department.

Source of Variation	SS	DF	MS	F	Level of Significance
Between Factors	4.355	8	0.544	6.5542	0.01
Within Subjects	4.612	4	1.153	13.8916	0.01
Residual	2.669	32	0.083		
Total	11.636	44			

The above table shows that between factor variance is significant at 0.01 level and within subjects variance is also significant at 0.10 level for cane department.

Table 72 : Analysis of Variance of Scores of QWL for Factory Department

Source of Variation	SS	DF	MS	F	Level of Significance
Between Factors	5.088	8	0.636	5.5304	0.01
Within Subjects	3.476	4	0.869	7.5565	0.01
Residual	3.689	32	0.115		
Total	12.2535	44			

Table-72 shows that between factor variance and within subject variance is found to be significant at 0.01 level for factory department.

Table 73 : Analysis of Variance of Scores of QWL for Finance Department

Source of Variation	SS	DF	MS	F	Level of Significance
Between Factors	3.495	8	0.437	2.9133	0.05
Within Subjects	3.421	4	0.855	5.7	0.01
Residual	4.804	32	0.150		
Total	11.720	44			

The above table shows that between factor variance is found to be significant at 0.05 level and subject variance is also found to be significant at 0.01 level for finance department

7.2 Discussion of Results

The general discussion of results of the present study is concerned with the hypothesis that there are differences among five hierarchical levels across and between the department in perceiving employee's quality of work life.

The study was conducted on five hierarchical levels of four departments of the sugar industry engaged in manufacturing sugar. All the five levels—executive supervisor, skilled employee, semiskilled employee and unskilled employee across four departments (administration, cane, factory and finance) were compared on nine sub-scales of QWL which is now under discussion.

The standard deviation for all the factors of all five levels of four departments are not found to be large indicating the homogeneity of responses within the organization from a hierarchical view. Let us now analyze the results based on factors:

Factor 1 : Adequate Income and Fair Compensation

Table-49 shows that executives of cane, finance and administration department have high scores on this factor relating to QWL. Unskilled employees of factory department and semi-skilled employees of factory department have obtained the low score on this factor from their mean scores. This indicates that higher personnel are more comfortable with the economic factor of working life than lower (unskilled and semi-skilled) levels. Higher levels (executive and supervisor) employees are not easily replaceable and to train the employees in those levels is obviously expensive. These experienced and trained persons look forward for better avenues if they are not satisfied with their basic requirements i.e., pay etc. Higher salary according to ability, competency, experience and education which enhances employees value and demand in the market can not ignore any organization in the competitive era. According to the above reasons organization continues to pay a handsome salary to these classes to retain them in their organizations, as these classes cannot be easily replaced. The present organizations pay a moderate salary to its executives and supervisors. This may be the cause that executive and supervisors have shown good attitude regarding their income and salary, which ultimately keep them satisfied with work and life.

On the other hand, supply is always higher than demand for semi-skilled and unskilled employees in developing countries like Bangladesh. This indicates that unskilled and semiskilled classes of employees cannot bargain for their salary effectively. As a result, they get lowest salary in the organization and it was

found that the employees of semiskilled and unskilled classes were not satisfied with their salary, as it becomes troublesome and difficult for them to survive their social life in a good manner. So the economic factor plays a major role in their perception of QWL. It is true that industrial workers have not paid in accordance with the rise in productivity and due to rate of inflation and they may not even have received a decent wage for existence. There is no doubt that workers and large section of other employees are largely agitated by economic factors, particularly now in view of rising cost of living.

It is not surprising to find economic factors fundamental in creating conditions for a sense of satisfaction in life and at work. Inflationary economy creates increasing hardship for salaried employees and wage earners. Persons with fixed incomes find their income dwindling in real value (Mehta, 1977). In the present study the causes of better attitude of executives toward income and salary in their working life might be highlighted to the fact that executives of the sugar industry receive larger income as compared to other counter parts.

The mean differences on this factor for all levels of various departments further confirmed by t-values (Table-60, Table-61, Table-62 and Table-63). The significant differences are observed between hierarchical levels (executive, supervisor, skilled employee, semi-skilled employee and unskilled employee) within departments for economic factor of QWL. In other words, there are significant differences in perceiving economic factor (component of QWL) between employees placed at high hierarchical level and lower levels. There are significant differences between employee's level of the most of the department also. These results support the hypothesis that there are differences between hierarchical levels of the sugar industry in perceiving the economic factor related to QWL.

The level of the fair wage and salary depends upon cost of living. As the cost of living increases the employees demand for more pay for their work. Organizations

may fix wage and salary comparing with other organizations in the same region or similar organization. They may also fix pay levels based upon their capacity to pay etc. Johnson (1975) concluded that pay becomes important factor in job satisfaction only when it is seen as compensation for dissatisfaction in job situation. Economic aspects are one of the most important motivational factors for most of the employees. Walton in his eight point criteria to measure QWL placed the economic aspects like salary and other benefits at the first place.

In an intensive case study of coal mine workers and junior level supervisors, salary/income - constituting objective economic factors emerged as the most important variable in explaining perceived life satisfaction (Mehta, 1978). In a review of Indian workers, Kapoor (1967) found that Indian workers ranked wages first in importance. He also found that good and sympathetic supervisors and comfortable working conditions were not considered to be important.

Factor 2 : Safe and Healthy Working Conditions

Table-50 shows that unskilled employees of finance and cane department and supervisors of cane department and skilled employees of factory department have obtained low perception on this factor relating to QWL in comparison to other groups in the sugar industry as is evident from their mean scores.

It has been observed that the space provided to unskilled employees of finance department and cane department was very little for performing their duty. The place provided to them was not only inadequate but hardly fit for comfortable. The supervisors of cane department showed low perception for safe and healthy working conditions in the sugar industry. The nature of job of this group is related to frequent outside travel. The supervisors of cane department perform their duties with cane growers and for this they visit different places, where the cane

cultivate. It was found that their response about physical working conditions was not satisfactory. Noisy factory atmosphere during crushing period impairs hearing of factory employees and as a result they fall in fatigue. It was also observed that skilled employees of factory department were little satisfied with this factor.

It is widely expected in our society that workers should not be exposed to physical or hourly arrangements that are unduly hazardous or detrimental to their health. Legislation, union action and employer concern have resulted in continually rising standards of satisfactory working conditions (Walton, 1973:p.13). Safety and healthy working conditions, including reasonable hours of work and rest pauses, physical working conditions that ensure safety, minimize risk of illness and occupational diseases and special measures for protection of women and children (Aswathappa, 1997: p.307). 't' values for this factor indicate that there are significant differences between hierarchical levels within department for the groups compared (Table-60, 61, 62 and 63). This supports our hypothesis that employees at different hierarchical levels in the sugar mills have differences in perceiving the safe and healthy working conditions.

An employee is the key person of his family for earnings. The happiness of the family depends upon the good health and well being of the employee. Safe and healthy working conditions of an organization ensure good health of employee, labour- management relations, loyalty to services, higher productivity etc. So importance of environmental factors in the working life cannot be avoided.

Factor 3 : Immediate Opportunity to Develop Human Capacity

Table-51 shows that executives of administration department and factory department have high scores on this factor, while low scores are obtained by skilled employees and semiskilled employees of factory department.

From the above observation, it is clear that higher levels of the organizations are more positive than the lower levels. The reason being skilled employees of factory department felt that their job as mechanics or technicians are important to the organization but limited to certain work content. They did not get opportunities to develop their skills as supervisors. Supervisor's post in the factory department is very limited. As a result, very few skilled employees of factory department get opportunity to work as a supervisor. This creates a sense of frustration among them, which affected the perception of this factor in contribution to overall QWL for them as compared to other groups.

It was observed that in factory department semiskilled employees were not satisfied with the scope of learning and training in their department. Semi-skilled employees of factory department stated their job in the sugar industry as unskilled employees. They do not have good educational background. Most of them were not any technical degree. Further learning and training scope in this department was limited. They did not get opportunities to develop their skills properly in the industry, which made low perception of this factor related to QWL.

Let us now discuss the other hierarchical levels. Executives of administration department have obtained highest score on this factor. They were provided with better job facilities for implementation their ideas. Executives and supervisors of other departments have also obtained high scores on this factor. They were well informed with the latest technology and advancement in their area of management. They had freedom to express their new ideas, autonomy to take work from their subordinates and thus may have felt sense of pride in their jobs. This may be assumed as one of the key factors determining the trend of their scoring.

Table-60, 61, 62 and 63 show that mean difference of QWL is significant for 11 times out of 40 times between levels within department. Table-64, 65, 66 and 67 show that mean difference of QWL is significant for 3 times only out of 24 times

between the group compared. This partially supports the hypothesis that there are differences among various hierarchical levels in perceiving QWL factors.

Saiyadain (1997: p. 218) pointed out that the basic objective of training, however, is to establish a match between man and his job. This training is designed to improve knowledge, skills and attitude and thus, equip the individual to be more effective in his present job or prepare him for a future assignment. However, individual's growth should not be taken as an end. From the point of view of an organization, individual growth is a means to organizational effectiveness.

Kalra (1972) collected data on participant's objectives in attending training programmes. His results showed that participants want the training programmes to help them to develop technical skills, managerial skills and communication skills. In a similar attempt, Srinivasan (1977) collected data on trainees. Focusing on the individual's motivation for attending training programmes, the study focused two areas – career development and continuing education. Sirota (1973) observed that under utilization of worker's skill and abilities cause low QWL and suggested that job enrichment programme is helpful to correct the problems of worker's skill and abilities.

Factor 4 : Opportunity for Continued Growth and Security

Table-52 shows that supervisors of finance department have obtained highest score for this factor and unskilled employees of cane department have obtained lowest score for this factor. From this Table-52 also it is observed that executives of administration department and cane department have obtained high score and unskilled and semiskilled employees of factory department have obtained low score for this factor.

From the above observations, it is evident that trend is similar like factor one of QWL, where higher levels of the organizations were more positive than the lower levels employees.

The reason for such findings might be that supervisors occupy strategic positions in an organization. They are in continuous connection with lower level employees as well as higher level employees. They give instructions and get the work done by the lower level employees. The management looks upon them as up-coming leaders who would meet their needs in future and lower level employees perceive them as media to management.

In the selected sugar mills supervisors as mid-level management representatives had undergone several training programmes on communication, leadership styles, human relation approach, career development etc. As a result they had obtained highest score on QWL regarding factor four. Similarly, executives were also close to the management and they got the opportunity to implement their new suggested ideas in the concerned departments. In this way their continued growth is maintained. In the case of factory executives this factor are not very much up the mark, it might be the fact that these subjects do not find such opportunities to grow and develop as other executives are getting in this industry, due to the routinized nature of their duties.

Unskilled and semiskilled employees of all departments show low scores for factor four on QWL. It might be the reasons that scope of promotion for them are limited. The fact is that government is trying to denationalize these sugar industries and for this lower level employee's face insecure regarding their job. Training facilities for advancement in career for continued growth are not available to lower levels as a result low scores are observed.

From Table 60, 61, 62 and 63 results show that mean differences of QWL are significant between levels and within department for most of the causes. Table

64, 65, 66, 67 and 68 show that mean differences of QWL are significant in few cases for group compared. This supports the hypothesis that there are differences among various hierarchical levels in perceiving QWL factors.

To improve QWL it is required that some restructuring of work place and organization of the changing expectations of employees takes place for maintaining and sustaining the individual growth in the organization for productivity. We may also consider that the studies relevant for this factor. Wilson (1973) found that QWL depends on the output and satisfaction of the workers. The factors related to this are: (1) The experiences of employees, (2) Feeling of responsibility and their enthusiasm to their work. Kumar and Hari Gopal (1978) found in their study that security needs (which is component of factor four) were more important to higher levels than to lower level managers. Even, Pandey et.al. (1975), showed that level of job satisfaction was low for supervisors as compared to workers.

Factor 5 : Social Integration in the Work Organization

From Table-53, results show that executives of cane department have scored the highest on this factor and the low scores are obtained by unskilled employees of factory department, semiskilled employees of cane department and supervisors of administration department. Generally, in the sugar mills individual relations were satisfactory for all levels. Employees of all levels and departments had the sense of one community. They seemed to work as team and honored friendship among their colleagues and co-operated with each other and there by encouraged reciprocal help. But this was lacking among unskilled employees of factory department and semiskilled employees of cane department. They felt that higher level employees did not pay attention to the grievances of their junior level

employees and their suggestions and ideas were not given consideration in resolving working problems.

The nature of personal relations is an important dimension within the organization, where work and career are typically pursued. The sense of one community in work organization has an important place in the perception of QWL. Interpersonal relationships keep the employees in their fold and get the maximum output with least difficulty. 't' values for this factor (Table-60, 61, 62, 63, 64, 65, 66, 67 and 68) indicate that significant differences are in perceiving social climate between higher and lower levels employees of administration, factory and cane department. This partially supports the hypothesis that there are differences among various hierarchical levels in perceiving QWL.

Miller (1972) described teamwork as the successful union of people. The feeling of belongingness in the organization or group identity led to improve performance and personal satisfaction (Berkowitz and lay, 1956; Berkowitz et. al., 1957).

Factor 6 : Constitutionalism in the Work Organization

Table-54 shows that executives of finance department, executives of cane department and supervisors of factory department have high scores on this factor while low scores are obtained by semiskilled employees of factory and cane departments, skilled employees of finance department and supervisors of administration department.

The QWL depends on certain perceptions of organizational climate as democratic or as autocratic (Jain, 1991). From the observations it is clear that higher levels have obtained high scores. Higher levels were close to top management and they perceived organizational climate democratic because they did not feel that the top

management was autocratic to them. The top management honoured them and evaluated their ideas and suggestions put by them as compared to lower levels.

Executives of any department feel themselves as superior class as compared to other levels. The nature of their job allows them to boss over other and utilize their authority over decision-making. Executives of every department have freedom to work in their own style and get the work done from subordinates. All these factors may have made executives feel that constitution of the organization was in their favour. For the above reasons executive's attitude was positive towards constitutionalism. It is interesting that except unskilled employees of factory department, all other unskilled employees of different departments show positive attitude towards constitutionalism. The education status of unskilled employees was in low level. Their skill level was not satisfactory and they did not feel that their ideas might be considered in decision-making or other important policy-making process. To earn more money from the organization as an employee for their better life and economic solvency was the main motto. As a lower level employees their economic needs were much pressing than there higher order needs such as social status, prestige. As a result this section was not more conscious about this factor constitutionalism in the work organization.

Semiskilled employees of factory department and cane department face sometimes-inhuman behaviour of the executive's class regarding performance of their duties. Our society is becoming democratic gradually but when these citizens enter industrial climate as workers, they notice a big difference. In the rapid changing cultural context, participative management practice has become an imperative in Bangladeshi industry.

't' values for this factor (60, 61, 62, 63, 64, 65, 66, 67, and 68) indicate that significant differences in perceiving constitutionalism in the work organization between higher and lower level employees within department for all the groups compared are in very few areas. This supports the hypothesis partially that

employees at different levels in the sugar mills have different perceptions on QWL factors.

Rosow (1979) showed the significant importance of democracy and when lower levels employees are given more opportunity to participate in decision making process and more freedom in carrying out tasks result in greater humanistic values. Thorsrud (1977) found that individual participation in the work improved industrial culture. Contrary to it, Kleiner (1983) suggested that bureaucratic-mechanistic type of organization is more humanistic for more people in America today.

Factor 7 : Work and Total Life Space

From Table-55, it is observed that executives of all departments and semiskilled employees of cane department have scored higher on this factor, while unskilled employees of cane department have obtained lowest score on it. This factor indicates that an employee's work experience can have positive or negative effect on total life space.

Employees higher levels of administration department, cane department, factory department and finance department are high status class due to nature of their job in the industry. They feel comfortable with their work life in comparison to the other working categories. As a result, upper classes of different departments showed positive attitude toward this factor. Semiskilled employees of cane department showed positive attitude towards this factor, because most of them have involved in different type of job in the sugar industry. They perform their jobs only for crushing period every year from October to February. Every year they get enough time to maintain a good relation with family and they have the scope to supervise their own cultivation. Thus, they are independent and keep

positive attitude towards their life. This leads us to believe that it is not only the hierarchical level but the nature of jobs is also a determinant of QWL.

In case of unskilled employees of cane department, they had rather negative attitude towards their life. These people in general are lacking in QWL. Uncertainty in their jobs may have resulted in this pattern of scoring. Supervisors of factory department also showed low score towards this factor. The cumulative effect of lengthy hours in their working conditions may have resulted for this type of scoring.

An individual's work experience can have positive or negative effect on his life. Prolonged period of working conditions can have serious affect of family life. Good encouragement and initiative from management will go a long way to give employees happy look despite there monotonous lives.

Table 60, 61, 62, 63, and 64 show that there are significant differences between executives and other levels of administration, cane and factory department and supervisors and other levels of cane department in perceiving quality of life. These differences may have occurred because of different types of experiences achieved from same organizational factor by different hierarchical levels of the sugar industry.

Rice, et. al., (1985) showed that work experience and outcomes can effect person's general quality of life directly or indirectly, through their effects of on family interaction, business activities and levels of health and energy.

Factor 8 : The Social Relevance of Working Life

It is indicated in Table-56, executives of administration, factory, cane and finance departments have scored higher on this factor, while supervisors of administration department and supervisors of finance department have obtained low scores on it.

Social relevance of work is a part of social integration. The social image and respect of employees work command influences his quality of work life. Now, it is an important matter to understand that social relevance in the working life is a factor, which may affect the QWL of all five levels across the department.

The employees of sugar industry believe that their organization holds a good image in the public as a government undertaking. This is a very morale-boasting phenomenon. Skilled, semiskilled and unskilled employees were generally satisfied with the existence of social integration in the industry and so they put positive attitude towards this factor. From the study it is found that supervisors levels do not possess positive attitude for this factor as compared to other levels. Employees of supervisor level do not get a chance to promote as executives in the organization. This might be the reason for such low scores, though wage and salary administration were adequate to keep them satisfied (information provided by the personal department and other records).

't' values for this factor (Table 60, 61, 62, 63 and 64) indicate that there are significant differences between executive and other levels of administration department, cane department and factory department in perceiving social relevance of their job.

Anitha and Rao (1998), in their study of bank employees, indicated that none of the sample employees have given a negative opinion to any of the queries regarding social relevance of work.

Factor 9 : Job Stress

From Table-57, the results show that executives of all four departments and supervisors of factory department have higher scores on this factor, while unskilled employees and supervisors of finance department, semiskilled

employees of factory department and unskilled employees of administration department have lower scores.

In general, the responses of employees of different hierarchical levels are positive towards this factor. In order to perform jobs well in an organization, employees need a certain amount of information regarding what they are expected to do and what not to do. They need to know their rights, obligations, privileges and areas of freedom. The role ambiguity is generally stressful for employees in the organization because it reflects a situation where there is a lack of information. In the present study it was observed that employees of each level had the idea about their job role in the industry. The management maintained a good chain of command to perform employee's duties. As a result, role conflict was the minimum with in employees in the sugar industry and the perception for this factor was positive.

't' values for this factor (Table 60, 61, 62, and 63) indicate that there are significant differences between executive and other level of administration department, and different levels of factory department. This supports the hypothesis partially that employees at different levels in the sugar industry have different perceptions on job stress relating to QWL.

From the above results of the present study we have also noted that the factors show more or less consistent pattern of scoring for the different levels. For example, the executive level especially from the administration department shows as the top scorers, where as the unskilled employees of cane and factory department stands at the bottom. Let us now consider the effect of all the QWL factors to observe what kind of pattern reveals for perception of QWL.

From Table-58, the results show that executive of administration department has obtained the highest score on overall QWL and the low scores are obtained by unskilled employees of cane department and factory department, which is in the line with the findings on many sub scales of QWL. Overall QWL includes all the

sub factors of QWL, therefore, scoring on all those sub factors has affected total scores on QWL. This results show that trend of the results for total QWL are similar to scoring on other sub factors of QWL.

From Table-59, the results of five hierarchical levels show that executive level has found the highest scorer while unskilled employee level has the lowest scorer for the total QWL. The differences between levels across and between departments are found to be significant for many groups (Table 60 to 68). Standard deviations for the different factors of all five levels do not show much variability in the responses with in-group level.

Table-69 shows the results of analysis of variance of QWL for all hierarchical levels in the sugar industry. These results show significant differences among five hierarchical levels and also with in subjects of the sugar industry, which is supporting hypothesis-Three (H_3).

Analysis of variance was also carried out to find the overall variance of QWL for all hierarchical levels of each department (administration, cane, factory and finance). The obtained results (Table 70, 71, 72, and 73) have shown significant hierarchical level differences for all the four departments. These results indicate that responses of five hierarchical levels of sugar industry are heterogeneous on all factors of QWL for all the four departments. This supports that there are differences among hierarchical levels in perceiving QWL. With in subject's variance it is also found to be significant for all departments.

From the overall results, it is revealed that lower levels employees have low quality of work life in comparison to executives and supervisors of the sugar industry. From the present study it is evident that employees of lower levels (white collar and blue collar employees) have little autonomy to execute functions which contain decision making and their salary is comparatively very low as compared to executives and supervisors. It is very difficult to maintain their family with the salary and to match their lives with growing demands. This

finding indicates the class differences in the sugar industry. Sondhi and Bhardwaj (1986) found significant differences in the perception of working life by different hierarchical levels of the industry, as the higher status group perceiving it more favourable in comparison to lower level staff. The present findings are in similar with the conclusion of Porter and Lowler (1965), Payne and Mansfield (1978) and Newman (1975), whose reported: significant differences in perception of working life by different organizational levels. Jain (1991) also has shown departmental differences and hierarchical differences.

Rao and Ganguli (1971) emphasized the relation of job level to overall job satisfaction. They found that job attitudes were positively associated with occupational level. Rao and Chattopadhyay (1974) found the differences in the perception of the working atmosphere were dependent on the units of the organization. Higher the status in the organization, higher the QWL factors score and vice-versa. This indicates that the individual who enjoyed greater benefits in terms of pay, fringe benefits and promotional opportunities considered then QWL as favourable. Chatterjee (1960) found that job security, good supervisor, and opportunity for promotions and satisfactory solutions of grievances were as equally important as amount of pay to achieve satisfaction.

From the observation of whole matters it may be concluded that relationship between 'QWL' factors and hierarchical levels is found to be skewed. From humanistic point of view government and management efforts are desirable to establish an effective and well-enriched work environment for the basic unit of any organization, i.e., employees-skilled, semiskilled and unskilled. Kochan and Barocci (1985) stated that the government of any democratic society must balance several roles in the industrial relation system. The role of government entices balancing the conflicting interests of workers and employees by establishing procedures that govern collective bargaining, and by adopting minimum standards for safety, health, working hours and so on.