

CHAPTER-6: CATEGORICAL ANALYSIS AND MODEL SPECIFICATION

6.1 INTRODUCTION:

In order to achieve the objective of the study: To identify prominent areas of dissatisfaction among the employees of hospitals under study. This chapter includes the different aspects of job with satisfaction level of different categories of employees (doctors, nurses, laboratory technicians, administrative staff) working in a hospital, factors extracted by factor analysis, regression analysis and structural equation modeling.

The hypothesis of the study:

1.Null Hypothesis: There is no significant variation in variables related with job satisfaction among different categories of staff working in a hospital.

Alternate Hypothesis: There is significant variation in variables related with job satisfaction among different categories of staff working in a hospital.

6.2 DOCTORS

Table 6.1: Association of demographic characteristics with satisfaction level of study doctors

	Satisfied	Dissatisfied	p value
Gender			
Male	97	4	0.539
Female	48	1	
Age			
20-30yrs	33	0	0.043
30-40yrs	85	4	
40-50yrs	24	0	

50-60yrs	3	1	
Experience			
0-2yrs	32	1	0.972
2-4yrs	45	1	
4-6yrs	41	2	
6-8yrs	5	0	
8-10yrs	3	0	
>10yrs	19	1	
Marital			
Single	42	0	0.156
Married	103	5	
Job status			
Permanent	108	4	0.78
Contract	37	1	
Type of Institution			
Government	70	5	.023
Private	75	0	

Source: Compiled from the questionnaire

Majority of the doctors are males i.e. 101 and females i.e. 49. The association between gender and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the doctors falls in the age group of 30-40 years i.e. 89. The association between age and satisfaction level was found to be statistically significant ($p<0.05$). Physicians in the age group of 30-40 years are found to be more satisfied. Majority of the doctors have 2-4 years of experience i.e. 46. The association between experience and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the doctors are married i.e. 108. The association between marital and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the doctors are permanent

i.e. 112. The association between job status and satisfaction level was not found to be statistically significant ($p>0.05$). The association between type of institution and satisfaction level was found to be statistically significant ($p<0.05$).

Table 6.2: Different aspects of job satisfaction and satisfaction level of doctors:

Sr. No.	Factors	VD	D	N	S	VS	p value
1 Ability utilization	Govt.	0	1	48	15	11	.013
	Private	0	2	28	24	21	
2 Achievement	Govt.	0	4	30	15	26	.325
	Private	0	5	38	16	16	
3. Activity	Govt.	1	15	19	20	20	.390
	Private	2	11	29	19	14	
4. Advancement	Govt.	1	15	33	9	17	.001
	Private	0	2	25	16	32	
5. Authority	Govt.	0	4	26	29	16	.003
	Private	1	5	47	17	5	
6.Organizational policies & practices	Govt.	2	4	38	15	16	.288
	Private	0	10	36	12	17	
7. Compensation	Govt.	0	10	25	20	20	.449
	Private	1	7	33	14	20	
8. Coworkers	Govt.	1	14	15	27	18	.019
	Private	1	13	33	14	14	
9. Creativity	Govt.	2	15	32	18	8	.000
	Private	0	0	30	32	13	
10. Independence	Govt.	1	10	14	31	19	.000
	Private	0	14	40	20	1	
11. Moral values	Govt.	0	22	15	20	18	.000
	Private	0	4	26	43	2	
12. Recognition	Govt.	4	14	37	12	8	.000

	Private	1	1	29	6	38	
13. Responsibility	Govt.	1	12	26	22	14	.360
	Private	0	10	28	15	22	
14. Security	Govt.	2	7	14	25	27	.000
	Private	4	11	41	8	11	
15. Social service	Govt.	5	7	12	22	29	.000
	Private	1	16	34	13	11	
16. Social status	Govt.	1	9	22	17	26	.103
	Private	1	8	32	22	12	
17. Supervision(human relations)	Govt.	2	22	31	12	8	.000
	Private	0	3	23	28	21	
18. Supervision-technical	Govt.	3	12	37	13	10	.000
	Private	2	3	18	22	30	
19. Variety	Govt.	0	10	42	16	7	.000
	Private	0	0	30	39	6	
20. Working conditions	Govt.	3	15	39	7	11	.000
	Private	0	0	28	10	37	
21. General satisfaction	Govt.	0	5	27	35	8	.055
	Private	0	0	35	28	12	

Source: Compiled from the questionnaire

*VD- Very Dissatisfied, D- Dissatisfied, N- Neither Satisfied Nor Dissatisfied Satisfied nor Dissatisfied, S- Satisfied, VS-Very Satisfied

The level of satisfaction among doctors working in government and private sector was significantly varying with ability utilization, advancement, authority, co-workers, creativity, independence, moral value, recognition, security, social service, supervision (human relations), supervision (technical), variety, working conditions ($p < 0.05$). The association between achievement, activity, organizational policies, compensation, responsibility, social status, general satisfaction and type of institution was not found to be statistically significant ($p > 0.05$).

Hypothesis 5: For doctors, $p < .05$ for all aspects of job satisfaction except achievement, activity, organizational policies, compensation, responsibility, social status, general satisfaction and showing significant relationship between various aspects and level of job satisfaction.

6.3 NURSES

Table 6.3: Association of demographic characteristics with satisfaction level of nurses

	Satisfied	Dissatisfied	p value
Gender			
Male	17	27	0.358
Female	118	138	
Age			
20-30yrs	63	79	0.548
30-40yrs	55	57	
40-50yrs	9	17	
50-60yrs	8	12	
Education			
Diploma	77	99	.119
Graduate	56	57	
Professional	2	9	
Experience			
0-2yrs	39	33	0.512
2-4yrs	45	60	
4-6yrs	23	26	
6-8yrs	10	16	
8-10yrs	2	3	

>10yrs	16	27	
Marital			
Single	47	53	0.445
Married	86	107	
Divorced	2	2	
Widowed	0	3	
Job status			
Permanent	82	110	0.287
Contract	53	55	
Type of Institution			
Government	62	88	.202
Private	73	77	

Source: Compiled from the questionnaire

Majority of the nurses are females i.e. 256 and males i.e. 44. Majority of the males are dissatisfied i.e. 27 and females are dissatisfied i.e. 138. The association between gender and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the nurses falls in the age group of 20-30 years i.e. 142. The association between age and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the nurses have diploma degree i.e. 176. The association between education and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the nurses have 2-4 years of experience i.e. 105. The association between experience and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the nurses are married i.e. 193. The association between marital and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the nurses are permanent i.e. 192. The association between job status and satisfaction level was not found to be statistically significant ($p>0.05$). The association between type of institution and satisfaction level was not found to be statistically significant ($p>0.05$).

Table 6.4: Different aspects of job satisfaction and satisfaction level of nurses:

Sr. No.	Factors	VD	D	N	S	VS	p value
1. Ability utilization	Govt.	0	6	89	31	24	.000
	Private	0	1	54	71	24	
2. Achievement	Govt.	0	8	61	49	32	.027
	Private	2	78	33	37		
3. Activity	Govt.	0	32	33	46	39	0.035
	Private	4	33	49	32	32	
4. Advancement	Govt.	0	23	79	27	21	.000
	Private	0	7	46	45	52	
5. Authority	Govt.	1	3	34	68	44	.000
	Private	3	30	68	40	9	
6. Organizational policies & practices	Govt.	4	15	34	53	44	.000
	Private	3	25	63	40	19	
7. Compensation	Govt.	2	22	42	46	38	.011
	Private	4	13	69	40	24	
8. Coworkers	Govt.	1	27	32	54	36	.001
	Private	1	27	64	33	25	
9. Creativity	Govt.	2	26	74	29	19	.000
	Private	0	6	45	73	26	
10. Independence	Govt.	2	20	28	69	31	.000
	Private	3	24	75	42	6	
11. Moral values	Govt.	5	25	44	47	29	.000
	Private	0	6	73	63	8	
12. Recognition	Govt.	4	36	71	26	13	.000
	Private	2	8	32	44	64	
13. Responsibility	Govt.	2	23	19	74	32	.000
	Private	2	26	73	26	23	
14. Security	Govt.	0	17	34	64	35	.000

	Private	3	12	92	25	18	
15. Social service	Govt.	2	17	27	65	39	.000
	Private	5	22	78	23	22	
16. Social status	Govt.	5	26	44	50	25	.001
	Private	1	15	75	47	12	
17. Supervision (human relations)	Govt.	4	34	64	26	22	.000
	Private	2	14	38	62	34	
18. Supervision-technical	Govt.	2	18	85	25	20	.000
	Private	1	7	40	59	43	
19. Variety	Govt.	4	24	75	32	15	.000
	Private	0	0	48	82	20	
20. Working conditions	Govt.	2	21	86	31	10	.000
	Private	0	12	29	63	46	
21. General satisfaction	Govt.	0	6	57	67	20	.133
	Private	0	1	68	67	14	

Source: Compiled from the questionnaire

*VD- Very Dissatisfied, D- Dissatisfied, N- Neither Satisfied Nor Dissatisfied Satisfied nor Dissatisfied, S- Satisfied, VS-Very Satisfied

The level of satisfaction among nurses working in government and private sector was significantly varying with advancement, authority, achievement, activity, organizational policies, compensation, responsibility, social status, co-workers, creativity, independence, moral value, recognition, security, social service, supervision (human relations), supervision (technical), variety, working conditions ($p < 0.05$). The association between ability utilization, general satisfaction and type of institution was not found to be statistically significant ($p > 0.05$).

Hypothesis 5: For nurses, $p < .05$ for all aspects of job satisfaction except ability utilization, general satisfaction and showing significant relationship between various aspects and level of job satisfaction.

6.4 LABORATORY TECHNICIANS

Table 6.5: Association of demographic characteristics with satisfaction level of study laboratory technicians

	Satisfied	Dissatisfied	p value
Gender			
Male	41	4	.099
Female	29	0	
Age			
20-30yrs	25	3	.266
30-40yrs	32	1	
40-50yrs	13	0	
50-60yrs	0	0	
Education			
Diploma	28	4	.062
Graduate	32	0	
Professional	10	0	
Experience			
0-2yrs	17	3	0.219
2-4yrs	10	0	
4-6yrs	20	0	
6-8yrs	7	1	
8-10yrs	6	0	
>10yrs	10	0	
Marital			

Single	26	2	.934
Married	40	2	
Divorced	3	0	
Widowed	1	0	
Job status			
Permanent	40	1	.208
Contract	30	3	
Type of Institution			
Government	34	3	.304
Private	36	1	

Source: Compiled from the questionnaire

Majority of the laboratory technicians are males i.e. 45 and females i.e. 29. The association between gender and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the laboratory technicians falls in the age group of 30-40 years i.e. 33. The association between age and satisfaction level was found to be statistically significant ($p<0.05$). Majority of the laboratory technicians have graduate degree i.e. 32. The association between education and satisfaction level was not found to be statistically significant ($p>0.05$). Laboratory technicians in the age group of 30-40 years are found to be more satisfied. The association between experience and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the laboratory technicians are married i.e. 42. The association between marital and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the laboratory technicians are permanent i.e. 41. The association between job status and satisfaction level was not found to be statistically significant ($P>0.05$). The association between type of institution and satisfaction level was not found to be statistically significant ($p>0.05$).

Table 6.6: Different aspects of job satisfaction and satisfaction level of laboratory technicians:

Sr. No.	Factors	VD	D	N	S	VS	p value
1. Ability utilization	Govt.	1	1	19	8	8	.003
	Private	0	0	13	23	1	
2. Achievement	Govt.	0	2	17	11	7	.713
	Private	0	3	18	7	9	
3. Activity	Govt.	1	9	5	10	12	.601
	Private	1	13	8	7	8	
4. Advancement	Govt.	1	9	15	8	4	.015
	Private	0	1	12	19	5	
5. Authority	Govt.	0	3	12	7	15	.000
	Private	0	9	21	7	0	
6. Organizational policies & practices	Govt.	0	5	9	12	11	.288
	Private	1	11	10	8	7	
7. Compensation	Govt.	0	8	8	6	15	.001
	Private	0	6	16	13	2	
8. Coworkers	Govt.	1	5	9	7	15	.029
	Private	0	11	14	8	4	
9. Creativity	Govt.	0	6	11	14	6	.670
	Private	0	10	11	12	4	
10. Independence	Govt.	1	7	5	14	10	.001
	Private	0	4	20	12	1	
11. Moral values	Govt.	1	8	9	10	9	.098
	Private	0	4	15	15	3	
12. Recognition	Govt.	1	13	13	7	3	.002
	Private	0	5	6	9	17	
13. Responsibility	Govt.	1	4	7	14	11	.000
	Private	1	12	17	7	0	

14. Security	Govt.	0	0	11	14	12	.003
	Private	1	4	22	7	3	
15. Social service	Govt.	1	6	6	11	13	.034
	Private	2	9	15	7	4	
16. Social status	Govt.	1	2	17	8	9	.082
	Private	1	4	18	13	1	
17. Supervision (human relations)	Govt.	1	8	20	6	2	.011
	Private	2	3	10	13	9	
18. Supervision- technical	Govt.	1	4	21	6	5	.000
	Private	0	2	2	19	14	
19. Variety	Govt.	1	5	13	13	5	.000
	Private	0	0	2	33	2	
20. Working conditions	Govt.	2	8	17	7	3	.001
	Private	1	0	10	13	13	
21. General satisfaction	Govt.	0	3	12	18	4	.455
	Private	0	1	18	15	3	

Source: Compiled from the questionnaire

*VD- Very Dissatisfied, D- Dissatisfied, N- Neither Satisfied Nor Dissatisfied Satisfied nor Dissatisfied, S- Satisfied, VS-Very Satisfied

The level of satisfaction among laboratory technicians working in government and private sector was significantly varying with ability utilization, advancement, authority, compensation, co-workers, independence, recognition, responsibility, security, social service, supervision (human relations), supervision (technical), variety, working conditions ($p < 0.05$). The association between achievement, activity, organizational policies, creativity, moral value, social status, general satisfaction and type of institution was not found to be statistically significant ($p > 0.05$).

Hypothesis 5: For laboratory technicians, $p < .05$ for all aspects of job satisfaction except achievement, activity, organizational policies, creativity, moral value, social status, general satisfaction and showing significant relationship between various aspects and level of job satisfaction.

6.5 ADMINISTRATIVE STAFF

Table 6.7: Association of demographic characteristics with satisfaction level of study administrative staff

	Satisfied	Dissatisfied	p value
Gender			
Male	27	2	.475
Female	7	0	
Age			
20-30yrs	0	0	.753
30-40yrs	5	0	
40-50yrs	19	1	
50-60yrs	10	1	
Experience			
0-2yrs	0	0	0.904
2-4yrs	0	0	
4-6yrs	2	0	
6-8yrs	3	0	
8-10yrs	10	1	
>10yrs	19	1	
Marital			
Single	0	0	0

Married	34	2	
Job status			
Permanent	34	2	0
Contract	0	0	
Type of Institution			
Government	16	2	.146
Private	18	0	

Source: Compiled from the questionnaire

Majority of the administrative staff are males i.e. 29 and females i.e. 7. The association between gender and satisfaction level was not found to be statistically significant ($p>0.05$). Majority of the administrative staff falls in the age group of 40-50 years i.e. 20. The association between age and satisfaction level was not found to be statistically significant ($p>0.05$). The association between experience and satisfaction level was not found to be statistically significant ($p>0.05$). All administrative staff are married and permanent. The association between type of institution and satisfaction level was not found to be statistically significant ($p>0.05$).

Table 6.8: Different aspects of job satisfaction and satisfaction level of administrative staff:

Sr. No.	Factors	VD	D	N	S	VS	p value
1. Ability utilization	Govt.	0	0	6	2	10	.016
	Private	0	0	6	9	3	
2. Achievement	Govt.	0	0	8	1	9	.019
	Private	0	4	6	5	3	
3. Activity	Govt.	0	6	2	1	9	.333
	Private	0	8	3	3	4	
4. Advancement	Govt.	0	6	3	1	8	.033

	Private	0	6	1	8	3	
5. Authority	Govt.	0	0	6	1	11	.003
	Private	0	0	9	7	2	
6. Organizational policies & practices	Govt.	0	0	5	1	12	.016
	Private	0	0	8	6	4	
7. Compensation	Govt.	0	2	6	2	8	.147
	Private	0	3	8	5	2	
8. Coworkers	Govt.	0	1	6	1	10	.026
	Private	0	3	8	5	2	
9. Creativity	Govt.	0	1	8	1	8	.009
	Private	0	1	2	10	5	
10. Independence	Govt.	0	1	5	1	11	.016
	Private	0	5	9	2	2	
11. Moral values	Govt.	0	2	2	1	13	.020
	Private	0	5	3	6	4	
12. Recognition	Govt.	0	1	6	1	10	.025
	Private	0	3	5	7	3	
13. Responsibility	Govt.	1	4	5	1	7	.040
	Private	0	5	1	8	4	
14. Security	Govt.	0	2	3	1	12	.000
	Private	0	3	10	5	0	
15. Social service	Govt.	0	2	8	1	7	.362
	Private	0	2	4	4	8	
16. Social status	Govt.	0	3	8	1	6	.292
	Private	0	3	7	5	3	
17. Supervision (human relations)	Govt.	1	5	4	1	7	.057
	Private	1	2	2	9	4	
18. Supervision-technical	Govt.	1	3	9	0	5	.016
	Private	1	0	5	8	4	

19.Variety	Govt.	0	2	11	0	5	.001
	Private	0	0	3	10	5	
20.Working conditions	Govt.	0	5	7	1	5	.012
	Private	1	1	2	9	5	
21.General satisfaction	Govt.	0	2	5	4	7	.059
	Private	0	0	6	10	2	

Source: Compiled from the questionnaire

*VD- Very Dissatisfied, D- Dissatisfied, N- Neither Satisfied Nor Dissatisfied Satisfied nor Dissatisfied, S- Satisfied, VS-Very Satisfied

The level of satisfaction among administrative staff working in government and private sector was significantly varying with ability utilization, achievement, advancement, authority, organizational policies, co-workers, creativity, independence, moral value, recognition, responsibility, security, supervision (technical), variety, working conditions ($p < 0.05$). The association between activity, compensation, social service, social status, supervision (human relations), general satisfaction and type of institution was not found to be statistically significant ($p > 0.05$).

Hypothesis 5: For administrative staff, $p < .05$ for all aspects of job satisfaction except activity, compensation, social service, social status, supervision (human relations), general satisfaction and showing significant relationship between various aspects and level of job satisfaction.

To identify smaller number of factors underlying a large number of observed variables. Variables that have high correlation between them, and are largely independent of other subsets of variables, are combined into factors, so we have applied factor analysis followed by regression analysis and structural equation modeling.

Table 6.9: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.945
Bartlett's Test of Sphericity Square	Approx. Chi-	7736.489
		190
	df	.000
	Sig.	

The KMO value is 0.948, it shows the sample size which has taken for research purpose is adequate.

The Bartlett's test of Sphericity has been applied to see the significance at inter- item correlation. The calculation has shown a significant correlation among the items that have taken for the study purpose.

Table 6.10 shows, Examinations of the values for each variable identifies that all variables exceed the minimum acceptable value measure sampling adequacy level and thus all the concerned variables are statistically significant and collectively meet the necessary threshold of sampling adequacy with a measure sampling adequacy value of .945. Each of the variables meet the fundamental requirement for factor analysis. The correlation matrix is then transformed through estimation of a factor model to obtain a factor matrix. The loading of each variable on the factors are then interpreted to identify the underlying structure of the variables (Hair et al, 1998).

Table6.10: Measure of sampling adequacy and anti-image correlations between factors.

MSQ scales																				
MSQ Scales	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ability Utilization	.95																			
Achievement	-.08	.96																		
Activity	.06	-.22	.96																	
Advancement	.09	-.03	.05	.94																
Authority	-.15	-.06	-.02	-.09	.93															
Organizational policies and practices	.08	-.13	.01	.03	-.07	.96														
Compensation	-.02	-.09	-.07	-.24	.09	-.15	.95													
Co-workers	-.07	-.09	-.22	-.08	.01	-.18	-.19	.96												
Creativity	-.04	.09	-.11	-.11	-.02	.01	-.09	-.02	.93											
Independence	-.02	.07	-.14	.06	-.20	-.15	-.14	-.08	.06	.95										
Moral values	-.01	-.03	-.001	-.10	.05	.00	-.06	-.06	-.06	-.14	.95									
Recognition	-.18	-.09	-.03	-.15	.05	-.08	.13	.07	-.23	.01	-.05	.91								
Responsibility	-.08	.03	-.15	-.05	-.09	-.22	-.05	-.07	-.05	-.02	-.04	.09	.95							
Security	.08	-.13	-.01	.12	-.20	-.09	-.12	-.05	.03	-.21	-.004	-.08	.05	.94						
Social service	.07	-.07	.004	.04	-.06	.09	.08	-.19	-.12	-.13	.08	.10	-.32	-.28	.93					
Social status	-.19	-.31	-.13	-.04	.03	-.04	.05	-.002	.06	-.04	-.16	.08	.02	-.01	-.15	.96				
Supervision-human relations	-.16	-.01	-.14	.05	.01	-.07	-.12	.06	-.17	.12	-.02	-.17	.04	-.01	-.04	-.04	.95			
Supervision-technical	-.18	.04	.07	-.19	.05	.06	-.03	-.06	.17	-.03	.09	-.32	-.14	.00	.00	-.05	-.25	.92		
Variety	-.11	-.02	.03	-.03	.11	.02	.07	.02	-.27	-.05	-.28	.07	.00	.04	.02	-.02	-.05	-.21	.92	
Working conditions	.04	-.09	-.01	-.22	.09	.03	.02	.02	-.03	-.01	.11	-.19	.04	-.002	-.01	-.08	-.12	-.10	-.12	.95

Table 6.11: Initial eigenvalues, Percentages of variance, Extraction sums of squared loadings, and Rotation sums of squared loadings for MSQ scales

Initial eigen values			
Components	Total	% of Variance	Cumulative percent
1	9.385	46.925	46.925
2	3.123	15.615	62.540
3	.833	4.163	66.703
4	.694	3.472	70.175
5	.651	3.254	73.428
6	.578	2.892	76.321
7	.531	2.654	78.975
8	.505	2.524	81.499
9	.465	2.325	83.824
10	.405	2.027	85.851
11	.396	1.978	87.828
12	.347	1.736	89.565
13	.338	1.691	91.256
14	.328	1.638	92.893
15	.294	1.470	94.363
16	.267	1.335	95.698
17	.238	1.191	96.890
18	.231	1.154	98.044
19	.204	1.018	99.062
20	.188	.938	100.000

Extraction sum of squared loadings

Components	Total	% of variance	Cumulative percent
1	9.385	46.925	46.925
2	3.123	15.615	62.540

Rotation sum of squared loadings

Components	Total	% of variance	Cumulative percent
1	6.780	33.898	33.898
2	5.728	28.642	62.540

Table 6.12: Rotated component matrix, Communalities, Contribution of components, and Proportion of common variance of each component

	Component		
	1	2	Communality
Ability Utilization	.299	.699	.578
Achievement	.707	.435	.689
Activity	.757	.344	.692
Advancement	.212	.724	.569
Authority	.706	-.079	.505
Organizational policies and practices	.771	.215	.640
Compensation	.690	.370	.613
co-workers	.815	.290	.748
Creativity	.254	.671	.515
Independence	.834	.094	.704
moral values	.418	.469	.395

Recognition	.053	.839	.707
Responsibility	.757	.252	.637
Security	.820	.062	.676
social service	.815	.112	.676
social status	.627	.468	.611
supervision-human relations	.254	.795	.696
supervision-technical	.165	.828	.713
Variety	.077	.744	.559
working conditions	.057	.764	.586

Source: Compiled from the questionnaire

Two factors are extracted initially. They each have eigen values greater than one as shown in Table 6.11. Looking at the column labeled “percent of Variance” the first factor accounted for 46.925percent of the total variance explained, the second for 15.615percent. Together, the two factors accounted for 62.540percent of the variability of the 20 items. After rotation, converged in 3 iterations, the percentage of total variance accounted for by the two factors did not change. However, the percentages accounted for by each factor did change. The percentages for factors one and two, now are 33.898percent and 28.642percent, respectively.

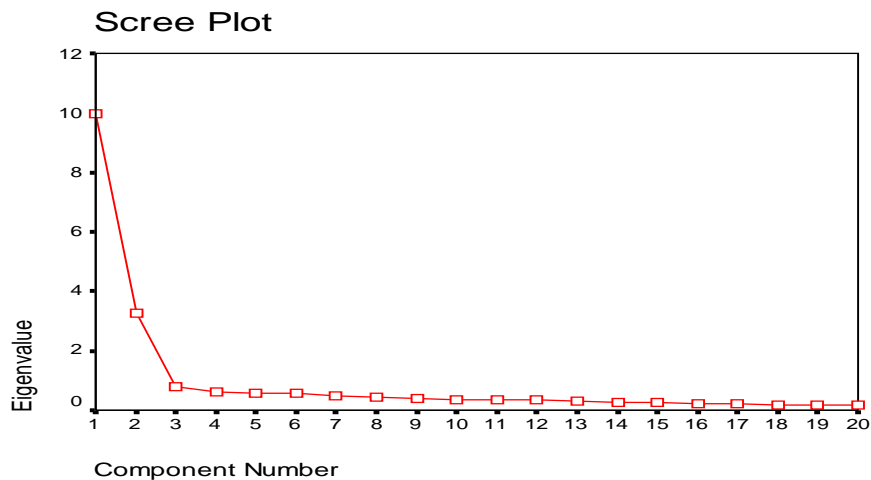
Communalities and the rotated factor matrix are shown in Table 6.12. Initial communalities in a principal component analysis are always one (Gable & Wolf, 1993). The communalities after extraction show the proportion of variance explained by the factor solution. For example, .748 or 74.8percent of the variance in co-workers was accounted for by the solution of this factor analysis. In comparison, only 39.5percent of the variance in moral values was reflected by the solution of the factor analysis.

The rotated factor matrix displays correlations, also referred to as loadings, sorted by sizes that relate the items to the two extracted factors. The strongest factor loading for each item is bolded in Table 6.12. The items that load most heavily on a factor define the factor. By referring to the content of those items, one can discern the nature of the latent variable that each factor represents.

The following items are strongly associated with factor one: achievement, activity, authority, organizational policies and practices, compensation, co-workers, independence, moral values, responsibility, security, social service, social status. Items strongly associated with factor two included ability utilization, advancement, recognition, creativity, supervision-human relations, supervision-technical, variety, and working conditions.

The total common variance attributed to factors one and two are 33.898 percent and 28.642 percent, respectively. Factor one appeared to represent intrinsic satisfaction. Factor two reflected extrinsic satisfaction.

Graph 6.1: Scree Plot



The scree plot (Graph 6.1) basically suggests the optimal number of components for the study. The initial eigen values of all the components are plotted on the graph; and flatness was observed after two factors only. Two factors were considered for the study.

Regression Model:

Theoretical model to be tested can be represented by the following equation:

$$y = a + b_1x_1 + b_2x_2 + e$$

where y is Job Satisfaction and x_1, x_2 are variables derived from an Exploratory Factor Analysis, x_1 – Intrinsic Satisfaction, x_2 – Extrinsic Satisfaction, b – Regression Coefficients representing the independent contributions of each independent variable to the prediction of the dependent variable, e - error

Table 6.13: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.900	.810	.809	.32142

R shows the coefficient of correlation between the independent variables and dependent variables which are intrinsic and extrinsic as independent variables and satisfaction level is dependent variable. Further, the analysis at model shows that the R value i.e. .90 shows a high degree of correlation between dependent variable and independent variables, R-Square i.e. .81 is the coefficient of determination which reflects that 81% of variance in dependent variable is explained by these two factor remaining 19% are not covered in thus study.

The linear combination of the two independent variables was significantly related to the dependent variable (job satisfaction), R Squared = .81, Adjusted R Square = .80, F =1186.942, P=.000.

Table 6.14: ANOVA

Model		Sum of squares	df	Mean Square	F	Sig
1	Regression	245.249	2	112.624	1186.942	.000
	Residual	57.544	557	.103		
	Total	302.793	559			

Significance at (2,559) - The F value has significant impact at independent variables on dependent variables.

Table 6.15: Job satisfaction factors statistics

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	A	3.654	.014		268.991	.000		
	X ₁	.501	.014	.681	36.875	.000	1.000	1.000
	X ₂	.433	.014	.588	31.845	.000	1.000	1.000

$$y = 3.65 + .50x_1 + .43x_2 + e$$

where y is the estimated overall satisfaction score.

The regression coefficients of the independent variables namely intrinsic satisfaction (.50) and extrinsic satisfaction (.43) were increasing the job satisfaction of employees.

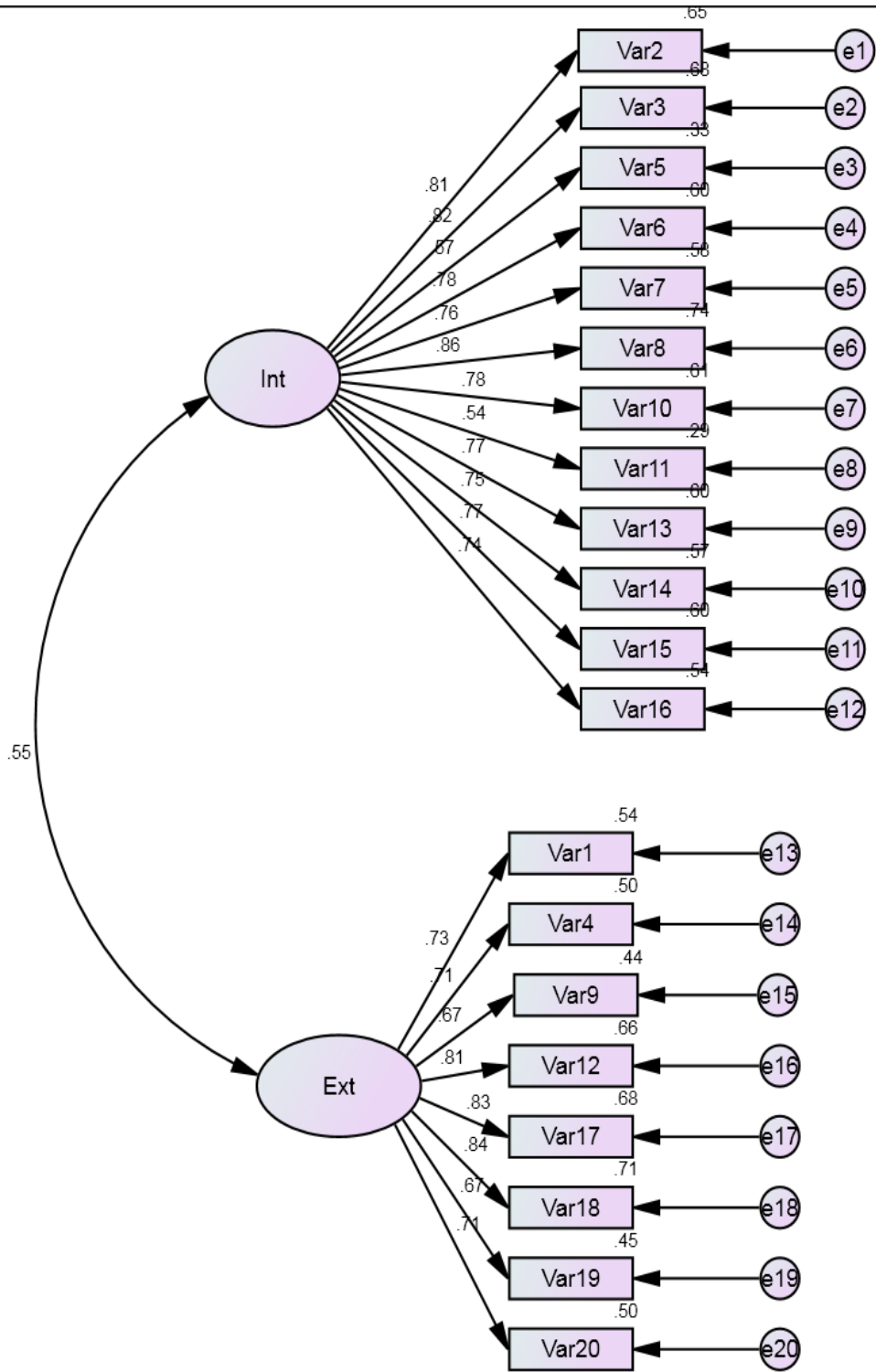


Figure 6.1: Path diagram

*Int- Intrinsic satisfaction variables, Ext- Extrinsic satisfaction variables

In the above path diagram, the regression coefficients of intrinsic and extrinsic variables is .55 i.e. the intrinsic and extrinsic variables are 50 percent inter-related. Variable 8 i.e. co-workers, plays the most significant role whereas variable 11 i.e. moral values plays the least significant role in the intrinsic satisfaction. Variable 18 i.e. supervision-technical plays the most significant role whereas variable 9 and variable 19 i.e. creativity and variety plays the least significant role in the extrinsic satisfaction.

Using the structural equation modeling approach, a factor structure would normally be hypothesized based on a variety of considerations, the necessary model defined, and its adequacy tested statistically.

One measure of the goodness-of-fit of the exploratory factor analysis solution is given by the chi-square value of 1050.504, which is highly significant ($p=.000$). Note, however, that this does not mean our model is 'good'. In fact it is the opposite, from the point of view of statistical significance. In fact, one may say that what we are actually testing is "badness-of-fit".

The reason why a low p-value implies 'bad' model is that the null hypothesis for this test is that the model is a good model. So a low p value (that is one close to zero) means that we reject the null hypothesis with a low probability of being wrong in reaching that conclusion. Conversely a high p value (that is a value larger than zero) would mean that if we did reject the null hypothesis (that is conclude that model is bad) then there would be a high probability that we would be wrong in doing so.

However, whilst the chi square value is too large (that is the p value is so small) to be able to accept our model on strict statistical grounds, the other goodness-of-fit measures quoted are not too bad. There is a huge literature on testing the 'goodness-of-fit' of structural equation modelling solutions. The principal consensus seems to be that there is

no consensus on which is the best approach. Bollen and Long (1993) provide probably the best discussion of the many issues involved. The so called Goodness-of-Fit Index is .828 and adjusted Goodness-of-Fit Index is .786. The best you can get is unity with these two measures, so on the basis of the results obtained, we would probably say that the model is ‘good enough’.

The overall fit of our structural model is good chi-square = 1050.504, chi-square/df = 6.216 , GFI = .828 , AGFI = .786 , NFI= .866 , and RMSEA = .097.

Table 6.16: Model fit summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	41	1050.504	169	.000	6.216
Saturated model	210	.000	0		
Independence model	20	7841.700	190	.000	41.272

RMR,GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.080	.828	.786	.666
Saturated model	.000	1.000		
Independence model	.439	.197	.112	.178

RMR-Root Mean Square Residual, GFI-Goodness of Fit Index, AGFI-Adjusted Goodness of Fit Index, PGFI-Parsimony Goodness of Fit Index

Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
Default model	.866	.849	.885	.870	.885
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

NFI-Normed Fit Index, RFI-Relative Fit Index, IFI-Incremental Fit Index, TLI-Tucker-Lewis Coefficient, CFI-Comparative Fit Index

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.889	.770	.787
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

PRATIO-Parsimony ratio, PNFI-Parsimonious Normed Fit Index, PCFI-Parsimonious Comparative Fit Index

NCP (Noncentrality parameter)

Model	NCP	LO90	HI90
Default model	881.504	782.960	987.528
Saturated model	.000	.000	.000
Independence model	7651.700	7365.330	7944.399

FMIN

Model	FMIN	F0	LO90	HI90
Default model	1.879	1.577	1.401	1.767
Saturated model	.000	.000	.000	.000
Independence model	14.028	13.688	13.176	14.212

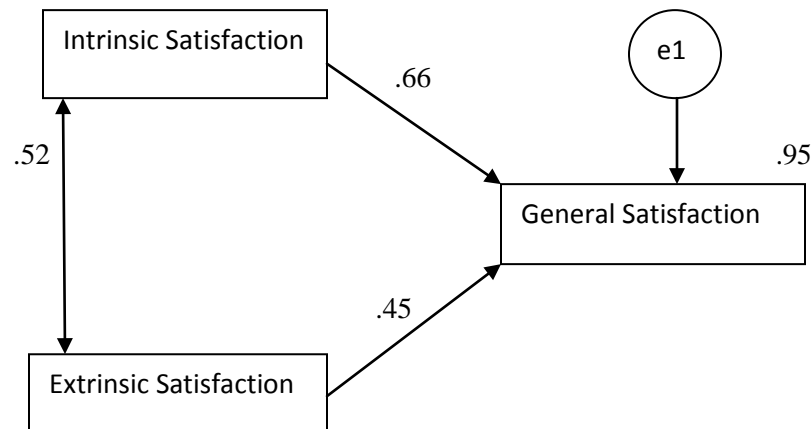
RMSEA (Root Mean Squared Error of Approximation)

Model	RMSEA	LO90	HI90	PCLOSE
Default model	.097	.091	.102	.000
Independence model	.268	.263	.273	.000

Model of satisfaction:

This is a simple regression model where one observed variable general satisfaction is predicted as a linear combination of the other two observed variables, intrinsic and extrinsic satisfaction. Intrinsic variables consists of the following factors of job satisfaction: achievement, activity, authority, organizational policies and practices, compensation, co-workers, independence, moral values, responsibility, security, social service, social status and extrinsic variables consists of the following factors of job satisfaction: ability utilization, advancement, recognition, creativity, supervision-human relations, supervision-technical, variety, and working conditions.

Figure 6.2: Job satisfaction model



The value .52 is the correlation between intrinsic and extrinsic satisfaction. The values .66 and .45 are standardized regression weights. The value .95 is the squared multiple correlation of general satisfaction with intrinsic and extrinsic satisfaction. The intrinsic variables are more related with job satisfaction as compared to extrinsic variables.

Analysis of Table 6.17 shows, ability utilization highly correlated in positive direction with supervision- human relations and technical whereas it is least correlated with the

authority and security. Achievement highly correlated in positive direction with activity, coworker and social status whereas it is least correlated with the variety and working conditions. Activity highly correlated coworkers whereas least correlated with the variety and working conditions. Authority negatively correlated with the variety and working conditions and positively correlated with the independence and security. Compensation is highly correlated with the coworker and least correlated with the variety. Independence highly correlated security and least correlated with the working conditions. Recognition is highly correlated with the supervision-technical and least correlated with the responsibility, security, social service, social status. general satisfaction highly correlated in positive direction with ability utilization, achievement, activity, advancement, organizational policies and practices, compensation, co-workers, creativity, independence, moral values, recognition, responsibility, security, social service, social status, supervision-human relations, supervision-technical and moderately correlated with the authority, variety and working conditions.

Table 6.17: MSQ scales intercorrelations

MSQ scales																					
MSQ Scales	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Ability utilization	1.0	.52	.44	.47	.22	.35	.41	.43	.49	.31	.39	.61	.41	.27	.31	.55	.66	.68	.52	.47	.66
Achievement		1.0	.73	.44	.43	.64	.64	.70	.41	.59	.47	.42	.59	.62	.62	.76	.52	.46	.35	.39	.81
Activity			1.0	.38	.45	.64	.65	.74	.45	.64	.46	.33	.66	.61	.63	.66	.49	.38	.29	.31	.78
Advancement				1.0	.12	.33	.49	.40	.51	.23	.41	.59	.35	.20	.24	.44	.54	.63	.48	.57	.63
Authority					1.0	.49	.37	.48	.14	.57	.19	.03	.50	.58	.55	.37	.14	.07	-.02	-.01	.45
Organizational policies and practices						1.0	.65	.69	.34	.66	.39	.26	.66	.63	.59	.57	.38	.29	.21	.21	.70
Compensation							1.0	.70	.45	.60	.47	.33	.60	.58	.55	.56	.47	.40	.29	.31	.74
Co-workers								1.0	.40	.69	.47	.27	.69	.65	.69	.64	.41	.37	.27	.26	.79
Creativity									1.0	.26	.42	.56	.39	.25	.33	.39	.59	.50	.54	.47	.62
Independence										1.0	.44	.14	.63	.72	.68	.56	.26	.22	.18	.12	.67
Moral values											1.0	.36	.43	.35	.35	.50	.41	.37	.48	.26	.59
Recognition												1.0	.24	.17	.14	.38	.69	.73	.53	.63	.59
Responsibility													1.0	.59	.69	.56	.39	.37	.26	.21	.72
Security														1.0	.71	.54	.28	.21	.12	.13	.64
Social service															1.0	.59	.31	.25	.17	.16	.68
Social status																1.0	.52	.47	.38	.39	.75
Supervision-human relations																	1.0	.72	.57	.59	.68
Supervision-technical																		1.0	.62	.62	.65
Variety																			1.0	.53	.51
Working conditions																				1.0	.53
General satisfaction																					1.0

Note. The row labels in the first column of the table show the numbers and names of the MSQ scales. The column labels across the table correspond to the same MSQ scales.

Source: Compiled from the questionnaire

CONCLUSION:

We can conclude that doctors have significant impact with type of institution of all factors of job satisfaction except achievement, activity, organizational policies, compensation, responsibility, social status, general satisfaction. Nurses have significant impact with type of institution of all factors of job satisfaction except ability utilization, general satisfaction. Laboratory technicians have significant impact with type of institution of all factors of job satisfaction except achievement, activity, organizational policies, creativity, moral value, social status, general satisfaction. Administrative staff have significant impact with type of institution of all factors of job satisfaction except activity, compensation, social service, social status, supervision (human relations), general satisfaction. Two factors extracted by factor analysis that are intrinsic satisfaction and extrinsic satisfaction. The intrinsic variables are more related with job satisfaction as compared to extrinsic variables.