

Analyzing Factors Influencing the Job Satisfaction of Building Construction Workers in Bangladesh: A Study on Private Construction Firms

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Abstract

Workers of all organizations need to be satisfied to facilitate their input towards the attainment of organizational goals. Construction workers like all other workers need this sort of satisfaction enables them give off their best. The purpose of this study was to analyze and find out the factors influencing the job satisfaction of construction workers who were working in private construction firms in Bangladesh. Data were collected from building construction workers of different private construction firms in Dhaka city. A total of 144 construction workers were interviewed randomly with a structured questionnaire. To meet the objective of this study individual bi-variate analysis and factor analysis of job satisfaction of building construction workers are considered here. The Cronbach's "Alpha" reliability estimate for the 30 items was 0.897. This study worked with six main factors with twenty one dimensions related to job satisfaction. Out of which four factors such as motivation, working environment, human relations, and supervision by supervisor are moderately correlated to job satisfaction scoring 0.679, 0.555, 0.650 & 0.615 respectively. The findings indicate that 95% of the respondents are male and confirms the fact that the construction workers of this sector are male dominated. The age distribution of respondents that majority of respondents 71 (49.3%) out of a total 144 are aged between 21-30 years. It is evident from the study that regression model is able to express 63% of total variation. Human relations, motivation, working environment, and supervision by supervisor are the most influencing factors in framing job satisfaction of building construction workers since coefficient beta scores 0.323, 0.284, 0.276, & 0.235 respectively. So the management should focus on the above mentioned issues for making the workers happier with their job.

Keywords: Influential factors, Building construction workers, Job satisfaction, Bangladesh.

1. Introduction

Job satisfaction is widely studied issue associated directly with any kind of job. In a brief, job satisfaction is the displayed mental state of employee includes balancing and summing total of many likes and dislikes shown to a particular job. The reflection of mental state or attitude towards a particular job consists of some personal factors such as individual needs and aspiration along with group and organizational factors such as working condition, compensation and benefits, attitude towards supervisor, and relation with co-workers. According to Mahmuda & Rahman (2000), job satisfaction refers to affective orientation on the part of individual toward work role, which they are presently occupying. Three key-factors affect job satisfaction, such as individual characteristics, intrinsic to the job and extrinsic to the job (Vroom, 1964). Again extrinsic factors as nature of the work itself, working environment, job security, supervision, autonomy, performance-based reward, work hour, family and social life of the workers influence job satisfaction greatly (Khaleque & Rahman, 1987). Job satisfaction and dissatisfaction are a function of the perceived relationship between what one expects and obtains from one's job and how much importance or value one attributes to it (Mobey & Locke, 1970).

Bangladesh is a developing country where population has been growing very fast. Capital city Dhaka is not exception of it. People from different parts of the country are being concentrated here demanding for more residential facilities. To fulfill need for additional house in Dhaka city, a numbers of real estate developers in private sector are engaged in constructing residential building. And there are a remarkable number of construction workers working at several sites under these various construction firms (Asraf & Mofidul, 2002). This study concentrates on analyzing and finding out the factors influencing the job satisfaction of workers working in private construction firms for making sound managerial decision, both in preventing and solving employee and organizational problems. (Mosharraf, 2002).

1.1 Review of Literature

Theories and approaches of motivation

Motivational theories can be divided into two categories, termed content and process. Content theories assume

that all individuals possess the same set of needs. That's why such theories also called need theories. Process theories, on the other hand, stress the differences in needs and focus on the cognitive process that creates these differences (Fineham and Rhodes, 1999).

Content/Need theories

Maslow (1954), who developed need theories indicate the concept of a hierarchy of needs which he believed were fundamental to the personality; Alderfer (1972), who produced a simpler and more flexible model of three basic needs (ERG theory); McClelland (1975), who identified three needs that motivate the managers, and who, while agreeing with Maslow that needs motives are part of the personality, believed they are triggered off by the environmental factors.

In addition, Herzberg (1957) formed a two factor model of needs in order to identify those aspects of the work environment that motivate people.

Maslow's Need Hierarchy:

The most famous classification of needs is formulated by Abraham Maslow in 1954.

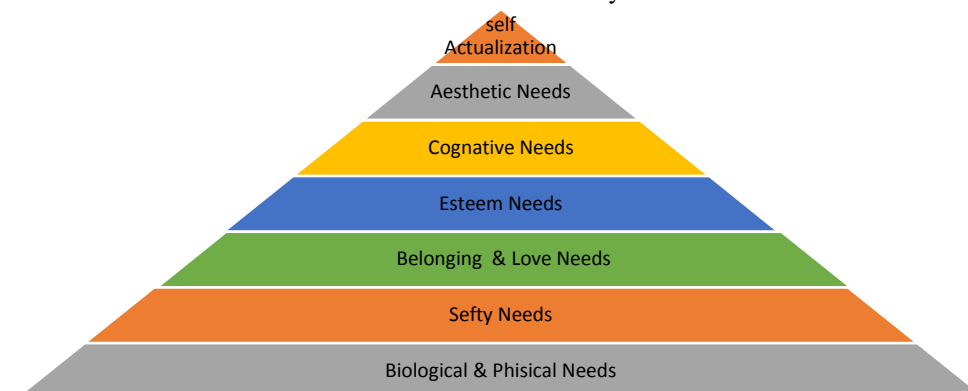


Figure-1: Maslow's hierarchy of needs (Reproduced from Abraham Maslow, *Motivational and Personality*, 1954)

One of the implications of Maslow's need theory is that the higher order needs like esteem and self-fulfillment provides the greatest impetus to motivation- they grow in strength when they are satisfied, while the lower needs decline in strength on satisfaction (Armstrong, 1999). But it is evident that the jobs people do will not often necessarily satisfy their needs, especially when they are routine, structured or deskilled since they do not find anything interesting or challenging out of the work.

Maslow's needs hierarchy had an initiative appeal among the behavioral scientists and still very influential as it gives us a basic idea about human needs. But his theory is not much by empirical research and has been criticized for its rigidity. Different people may have different needs and it is not likely that needs follow a steady line up the hierarchy. In fact, Maslow himself did not intend his ideas to be used as a motivational theory. Consequently, he provided no operational definitions of the variables he described, which has made measurement of their relative strength very difficult (Fincham and Rhodes. 1999).

However, the theory explains why people must act. The theory still has practical significance in the developing and undeveloped countries where the primary needs are considered as the key motivators rather than the higher order needs. The vast majority of the lower and middle class wage earners in these countries are generally motivated by the money, job security and social recognition.

Maslows Need Hierarchy Theory (1943, 1954)

Most contemporary theories recognized that motivation begins with individual needs. Needs are deficiencies that energize or trigger behaviours to satisfy those needs.

Maslow cited in Mcshane and Glinow (2000) identifies five basic categories of human needs and placed them in a hierarchy. At the bottom of this hierarchy is a physiological need, which includes the need to satisfy biological requirements for food, air and shelter. Next is safety needs, the need for a secure and stable environment and the absence of pain, threat, or illness. Belongingness which includes the need for love, affection and interaction with other people follow. The fourth category is the need for esteem which includes self-esteem, through personal achievement as well as social esteem through recognition and respect from others. At the top of the hierarchy is self-actualization which represents the need for self-fulfillment or a sense that the person's potentials has been realized. An employee behavior according to this theory is motivated simultaneously by several need levels but Maslow agrees that behavior is primarily motivated by the lowest unsatisfied need at a time. As the person satisfies a lower level need, the next higher need in the hierarchy becomes the primary motivator. This is called

the satisfaction-progression process. Even if the person does not satisfy a higher need, he or she will be motivated by it until it is eventually satisfied.

Usually, information gathered relative to attitudes involves the use of Likert type scales. Rensis Likert (1931) described this technique for assessment of attitudes. When using Likert-type scales, it is imperative to calculate and report Cronbach's alpha (α) coefficient (L.J. Cronbach, 1951) for internal consistency or reliability for any scales or sub scales (J.A. Gliem and R.R. Gliem, 2003). George and Mallery (2003) provide the following rules of thumb for Cronbach's α :

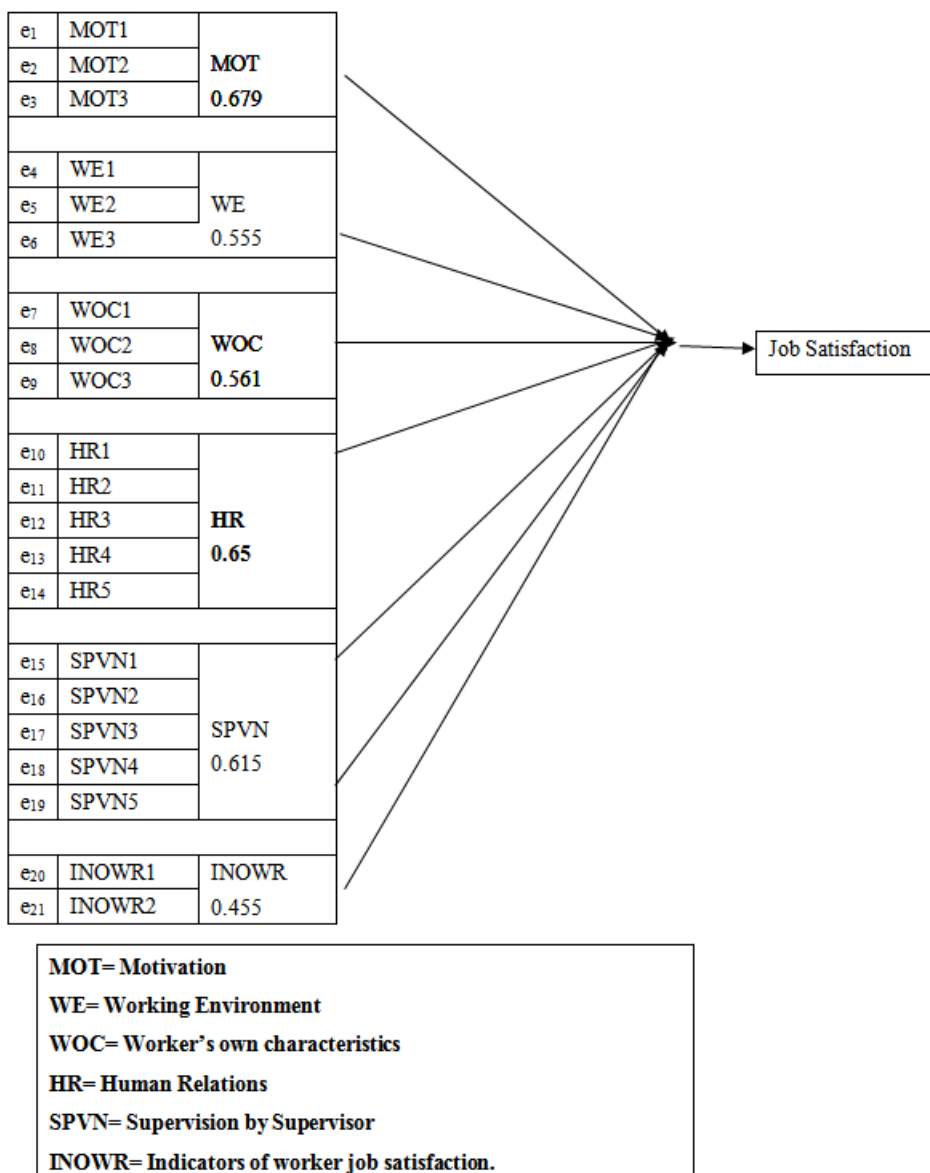
Value of Cronbach's α	Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

1.1.1 Purpose of the Study

The problem in this study was to determine the opinion of the selected workers engaged in private construction works in Dhaka city regarding their level of job satisfaction. The investigation particularly included determining the workers perception about job characteristics, their opinion regarding the present level of job satisfaction, preference any additional job satisfaction elements and their desire for higher order needs. The mentioned problems urged the researcher to set-up the following research purpose:

- (i) To analyze and identify the factors influencing the job satisfaction of building construction worker.

1.1.2 Conceptual Framework:



1.1.3 Research Hypothesis

To help in the study of the relationship between job satisfaction of building construction workers and others influential factors, the following null-hypotheses have been formulated.

Hypothesis Testing:

For the purpose of testing the stated research hypothesis, Pearson's Product Moment Correlation Coefficient is calculated and multiple regression analysis, T-test and ANOVA test are performed. With the aid of these statistical techniques, conclusions are drawn with regard to sample and decisions are made with respect to the research hypothesis.

H₀₁: There exists a no positive relationship between job satisfaction and motivation factors.

H₁₁: There exists a positive relationship between job satisfaction and motivation factors.

H₀₂: There exists a no positive relationship between job satisfaction and working environment factors.

H₁₂: There exists a positive relationship between job satisfaction and working environment factors.

H₀₃: There exists a no positive relationship between job satisfaction and workers' own characteristics factors.

H₁₃: There exists a positive relationship between job satisfaction and workers' own characteristics factors.

H₀₄: There exists a no positive relationship between job satisfaction and human relations factors.

H₁₄: There exists a positive relationship between job satisfaction and human relations factors.

H₀₅: There exists a no positive relationship between job satisfaction and supervision by the boss of the worker factors.

H₁₅: There exists a positive relationship between job satisfaction and supervision by the boss of the worker factors.

1.1.4 Methodology

To investigate the factors those have influenced the job satisfaction of building construction worker. The following research methodology is adopted.

a. Sample

The data used for the study consisted of 144 construction workers randomly selected from the different area of Dhaka city. A questionnaire was used to conduct as other view with the respondents.

b. Selection of instruments

Based on literature review, the questionnaire was divided in two parts: the first part included general information about the construction worker (Gender, age, level of education, experience, influence to career choice etc.) and the second part was designed to assess worker perceptions about (worker job satisfaction, motivation, working environment, worker's own characteristics, human relations, supervision by supervisor, and indicators of worker job satisfaction) that have an effect on job satisfaction. Here, five points likert scale is used for this study ranging from 1 "strongly disagree" to 5 "strongly agree". SPSS software is used for data analysis.

c. Reliability of the instrument

Based on Cronbach's alpha, the reliability coefficient score obtained from the overall measures is 0.874 in this study.

1.1.5 Discussion

Table 1.1.5.1 shows that near about 95% of the respondents are males and confirms the fact that the construction worker of that sector is male dominated. The age distribution of respondents as shown in table 4.1 indicates that majority of respondents 71 (49.3 %) out of a total of 144 are aged between 21-30, On the other hand 15.3% and 27.8% of the workers whose age below 20 and 31-40 years of the respondent respectively. Again very small number of the workers whose age over 40 years. Table 4.1 again shows that 72 respondents representing 50% of respondents who are completing their primary level, 57 (36.9%) who are illiterate and only 15 (10.4%) who are completing their secondary and higher level.

Table 1.1.5.2 shows that quite a number of respondents that is 48 (33.3%) have (1-2) years' experience in the construction area while 41 (28.5%) have construction firm's experience of 3-4 years. It again shows that 35 (24.3%) of respondents have served the construction firm's for 4 years and above and only 20 (13.9%) have served the construction firm's for below 1 years. This confirms the Construction Industry Today declaration that experienced construction workers leave their job each year and a further many potential workers also prefer to work in environments that are less demanding and has more comfortable working conditions leading to shortage of workforce in the industry. Tucker et. al. (1999) also sees this as a challenge to the construction industry and attributes it to the poor image of the industry, the relatively failing wages the industry offers and the lack of clear career path. Table 4.2 also shown that nearly two-thirds number of construction workers 89 (61.8) who continuing this job only salary purpose and only 55 (38.2%) of the workers who survive this job traditionally.

In order to determine whether there exists significant relationships between level job satisfaction and all other influential factors, Pearson's Product Moment Correlation is computed.

Table 1.1.5.3: Correlation analysis among different types of factors which affect for job satisfaction of the building construction worker.

Variables	JS	MOT	WE	WOC	HR	SPVN	INOWR
JS	1						
MOT	.679**	1					
WE	.555**	.486**	1				
WOC	.561**	.704**	.512**	1			
HR	.650**	.652**	.460**	.729**	1		
SPVN	.615**	.660**	.368**	.578**	.650**	1	
INOWR	.455**	.498**	.444**	.638**	.731**	.476**	1

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

The above result of Pearson’s correlation coefficient is obtained for the sample and represented in table 4.5. All the influential factors have a highly significant positive relationship with job satisfaction at 99% level of significance. Hence, the null hypothesis is rejected. This implies that there exists a positive relationship between job satisfaction and all other influential factors like as “Motivation”, “Working Environment”, “Worker’s own characteristics”, “Human relations”, Supervision”, and “Indicators of workers”.

Regression: Multiple linear regression models among different type of independent variable and job satisfaction of building construction workers as follows:

A multiple linear regression equation was used to find out the effect of motivation, working environment, Working Environment, Worker’s own characteristics, Human Relations, Supervision by Supervisor, Indicators of worker job satisfaction.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_6X_6 + e \dots \dots \dots (1)$$

Where,

Y= Job satisfaction of construction workers

a= Constant

b=Coefficient

e=error

X₁, X₂, X₃,..... X₆ are parameters.

The expected job satisfaction was estimated using the following least square method formula.

Where, $Y = a + bX$ ------(2)

Table 1.1.5.4

a.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776 ^a	.603	.585	.43534

dictors: (Constant), INOWR, WE, SPVN, MOT, WOC, HR

ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	39.390	6	6.565	34.640	.000 ^a
Residual	25.964	137	.190		
Total	65.354	143			

a. Predictors: (Constant), INOWR, WE, SPVN, MOT, WOC, HR

b. Dependent Variable: JS

Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significant
	B	Std. Error	Beta		
(Constant)	-.008	.225		-.034	.973
MOT	.284	.077	.319	3.688	.000
WE	.276	.067	.267	4.106	.000
WOC	-.066	.068	-.089	-.973	.332
HR	.323	.095	.337	3.391	.001
SPVN	.235	.098	.187	2.404	.018
INOWR	-.055	.045	-.101	-1.233	.220

a. Dependent Variable: JS

The combined effects of motivation (X_1), working environment (X_2), Worker's own characteristics (X_3), Human Relations (X_4), Supervision by Supervisor (X_5), Indicators of worker job satisfaction (X_6) on job satisfaction of building construction workers was measured by using multiple linear regression method. The estimated multiple linear regression equation relating motivation (X_1), working environment (X_2), Worker's own characteristics (X_3), Human Relations (X_4), Supervision by Supervisor (X_5), Indicators of worker job satisfaction (X_6) on job satisfaction of building construction workers (Y) was estimated as:

$$Y = -0.008 + 0.284X_1 + 0.276X_2 + 0.323X_4 + 0.235X_5$$

Where, $a = -0.008$, $b_1 = 0.284$, $b_2 = 0.276$, $b_3 = 0.323$, $b_4 = 0.235$, and $R^2 = 0.603$.

Further, it lists the independent variables that are into the regression model. R (0.776) is the correlation of the independent variables with the dependent variable after all the inter correlations are taken into account. In the "Model summary" table, R square (0.603) is the explained variance in job satisfaction by the independent variables. The ANOVA table shows that F value of 34.64 is significant at 0.01% level except "worker's own characteristics". Hence, the null hypothesis is rejected except only H_{03} , and H_{06} . That's means maximum number of factor are influential factor except only workers own character and Indicators of worker job satisfaction. The next table titled "Coefficient" help to see which among the independent variable influences most the variance of job satisfaction of building construction workers. By looking at the beta under standardized coefficient, it is concluded that motivation, worker environment, human relation, supervision of the worker by boss are significant at 1% level.

1.1.6 Results:

Factor Analysis:

Component Matrix

	Factor Loading						
	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇
Job satisfaction							
The praise I get for doing a good job	.735						
The way my coworkers get along with each other	.671						
The chance for advancement on my job	.521						
The freedom to use my own judgment		.739					
Competence of my supervisor in making decisions	.616						
Motivation							
I like construction work	.753						
Working in this organization gives me a great deal of personal satisfaction	.532						
Working environment							
I feel appreciated by members in my gang for my work	.700						
Many of our rules and procedures make doing a good job difficult			.693				
Worker's own characteristics							

I am effective worker	.747						
I am assigned appropriate amount of work activities	.659						
All in all I am satisfied with my job as a construction worker	.606						
Human relation							
I appreciated by my boss for work	.728						
I feel appreciated by coworkers form my work	.687						
My community appreciates my work as a construction worker	.609						
I am satisfied with the criticisms of my supervisor because they are constructive.	.583						
I rarely feel that other workers are more satisfied than I am					.538		
Supervision							
My supervisor is quite competent in doing his job.	.727						
I feel encouraged by me supervisor	.703						
I am provided adequate support from supervisor	.529						
I am involved in decision making at my workplace		.649					
My supervisor shows too little interest in the feeling of subordinates							.634
Indicators of workers job satisfaction							
My satisfaction with my work helps me to perform well	.765						
Seeing the final outcome of my work standing out well makes me feel satisfied.	.714						
Eigen Value	9.294	2.896	1.695	1.534	1.34	1.23	1.17
% of Variance	30.981	9.649	5.651	5.114	4.47	4.11	3.91
Cumulative %	30.981	40.630	46.28	51.395	55.8	59.9	63.8
Extraction method: Principal Component Analysis Rotation method: Varimax with Kaiser Normalization							

The leftmost section of this table shows the variance explained by the initial solution. Only seven factors in the initial solution have eigen values greater than 1. Together, they account for almost 64% of the variability in the original variables. This suggests that seven latent influences are associated with variable of the construction worker, but there remains variable for a lot of unexplained variation.

The second section of this table shows the variance explained by the extracted factors before rotation. The cumulative variability explained by these seven factors in the extracted solution is about 64%. So there is no difference between initial solution and extracted solution. Thus, there no variation between initial solution and extracted solution and that's means all the variable can be explained by the factor model.

The rightmost section of this table shows the variance explained by the extracted factors after rotation. The rotated factor model makes some small adjustments to factors 1 to 6, but factor 7 is left virtually unchanged. Look for changes between the unrotated and rotated factor matrices to see how the rotation affects the interpretation of the first and second factors.

We further explored the factor structure in the variable through principal components analysis with varimax rotation. We retained factor loadings of 0.5 and above. The results are in table ...thirty variable loaded on 13 factors that together accounted for 64% of the variance.

The third to seventh factor are largely unaffected by the rotation, but the first two are now easier to interpret. The first rotated factor is most highly correlated with My satisfaction with my work helps me to perform well, I like

construction work, I am effective worker The praise I get for doing a good job, I appreciated by my boss for work, My supervisor is quite competent in doing his job, Seeing the final outcome of my work standing out well makes me feel satisfied, I feel encouraged by me supervisor, and I feel appreciated by members in my gang for my work. These variables are not particularly correlated with the other six factors. The second factor is most highly correlated with the freedom to use my own judgment.

1.1.7 Conclusion

Bangladesh is a developing country where population has been growing very fast. Capital city Dhaka is not exception of it and people from different parts of the country are being concentrated here demanding more residential facilities. A number of real estate developers where a remarkable number of construction workers are engaged in constructing residential buildings for meeting the huge demand of tenants. Without satisfying the private construction workers company could not succeed in their position. This study concentrates on analyzing and finding out the factors influencing the job satisfaction of workers working in private construction firms for making sound managerial decision, both in preventing and solving employee and organizational problems. This research has indicated that the motivation, working environment, human relations, and supervision by supervisor significantly affect the job satisfaction of Bangladeshi building construction workers. Although job satisfaction may not have “workers own characteristics”, and “indicators of worker job satisfaction” direct impact on performance, the management of Construction Company can use it as a feedback in motivating its employees to achieve good work results.

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Appendix: Table 1.1.5.1: Distribution of Respondents by Gender, Age and Level of Education Frequency

	Gender		Age (in year)		Level of Education	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Male	136	94.4				
Female	8	5.6				
Total	144	100				
Less than 20			22	15.3		
21-30			71	49.3		
31-40			40	27.8		
41-50 years			8	5.6		
51-60 years			3	2.1		
Total			144	100		
Illiterate					57	39.6
Primary					72	50.0
Secondary and Higher					15	10.4
Total					144	100

Table 1.1.5.2 Distribution of Respondents according to their experience and career choice

	Experience		Influenced to career choice	
	Frequency	Percentage	Frequency	Percentage
Below 1 years	20	13.9		
1-2 years	48	33.3		
3-4 years	41	28.5		
4 years and above	35	24.3		
Total	144	100.0		
Family/ Tradition			55	38.2
Salary			89	61.8
Total			144	100.0

Table-1.1.6.1: The extraction communalities for this solution are acceptable because any one of the factors did not have very low value.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.294	30.981	30.981	9.294	30.981	30.981	6.881	22.937	22.937
2	2.895	9.649	40.630	2.895	9.649	40.630	3.477	11.589	34.526
3	1.695	5.651	46.281	1.695	5.651	46.281	2.529	8.430	42.956
4	1.534	5.114	51.395	1.534	5.114	51.395	1.898	6.327	49.283
5	1.342	4.474	55.868	1.342	4.474	55.868	1.647	5.489	54.772
6	1.232	4.106	59.974	1.232	4.106	59.974	1.391	4.637	59.408
7	1.172	3.907	63.881	1.172	3.907	63.881	1.342	4.473	63.881

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