CHAPTER 4

Research Results

4.1 Introduction

This chapter presents the result of the research findings in order to fulfill the objectives of the study which objectively test the proposed linkage between relationships between peers; relationships between superior-subordinate, economy reward and organization environment/climate has any significant relation toward the job satisfaction among the first year soldiers. This chapter will report the result based on Statistical Package for Social Science version 12.

Before the actual survey was conducted, a pilot test of 20 samples size was conducted in form of self administrated among the first year soldiers. The purpose of this pilot test was to make sure the Coefficient of Cronbach's alpha for all determinants achieved the required 0.70, understand the questionnaires and improve the accuracy of the result collected.

A total of 170 questionnaires were survey but the acceptable questionnaire was 120 which constitute 73.5% response rate. According to Descombe (2003), a response rate of 20% to 30% is a common in survey method. There are 8 sections in this chapter. Those chapters are:

4.1 Introduction.

4.2 Data Preparation.

4.3 Test of Assumption and Multicollinearity Analysis.

4.4 Assessment of Measurement Scales.

4.5 Descriptive Analysis.

4.6 Multiple Regressions.

4.7 Hypothesis Analysis.

4.8 Conclusion.

4.2 Data Preparation

According to Malhorta (2004), data checking, editing, coding, transcription, verification and cleaning of data are the process of preparing data for data analysis.

4.2.1 Data Coding and Data Entry

There are a total of 38 questions in this survey and all the answer are using Likert's scale ranging from 1 = strongly disagree to 5 = strongly agree. All questions are coded for the purpose of analysis. A total of 170 questionnaires were survey but nevertheless 50 of those were rejected as they are assumed to be either unwillingly to corporate or not serious with the survey.

4.2.2 Data Cleaning and Screening

Before the main analysis, all variables were examining for accuracy of data entry, missing values, the normality of distributions and multivariate outliers. The accuracy of the data was examine through manually checking, printing of frequency tables and use of

graphic methods ie histogram and box plots to find improbable scores across all variables. The value of skewness and kurtosis fitted into an appropriate range indicating the normal distribution of scores across all variables.

LABEL	CONSTRUCTS/VARIABLES
B1	Sensitive toward my needs.
B2	Unfair work distribution.
B3	Difficulty in communicating.
B4	Just and fair decision making.
B5	Didn't consult others opinion.
B6	Leadership qualities.
C1	Able to communicate with peers.
C2	Difficulty in communicating with peers.
C3	Lack of cooperation.
C4	Friendly and cooperative peers.
C5	Fond of my peers.
C6	Contradicting opinions.
D1	Paid accordingly.
D2	Not satisfied with benefit from MAF.
D3	Good promotion prospect.
D4	Able to fully utilize self development.
D5	Salary is not a factor.
D6	Change profession.
E1	Autocratic organization.
E2	Good work place.
E3	Different expectation from my organization.
E4	Agree with current policies adopted.

E5	Good management.
E6	Good infrastructure.

Table 4.1 Legend for the labeling of all constructs and variables.

4.3 Test of Assumption and Multicollinearity Analysis

4.3.1 Test of Assumptions

The purpose of this test is to indicate the normal distribution of the sample and identify the possible relationship between the variables and outliers and to ensure the distribution of the responses is normally distributed before conducting further analysis.

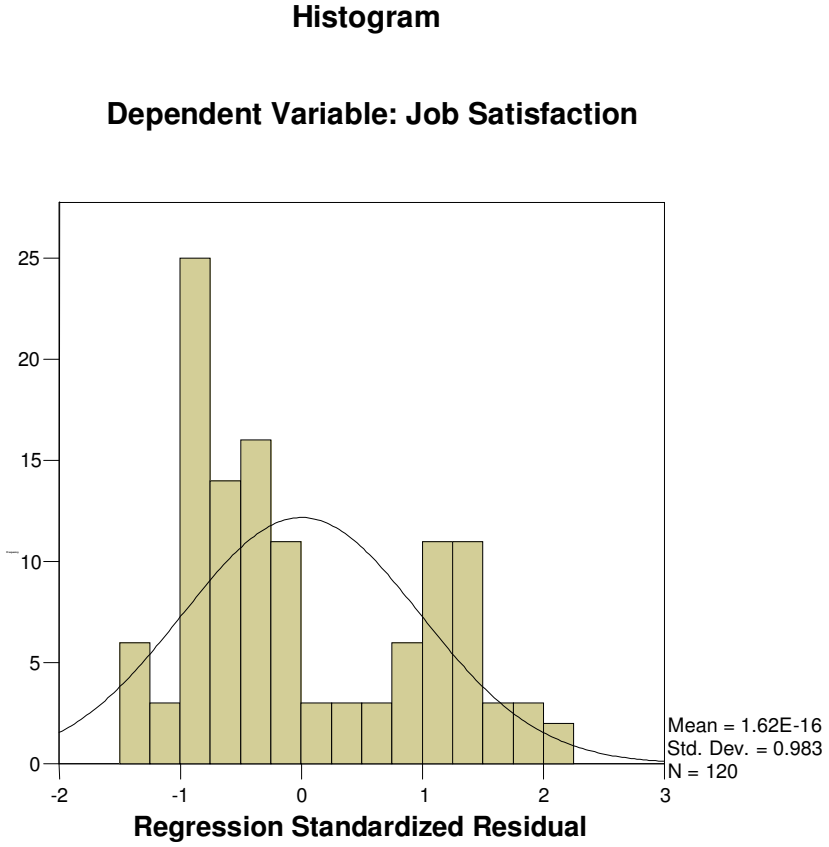

Figure 4.1 Histogram of Regression Standardized Residual.

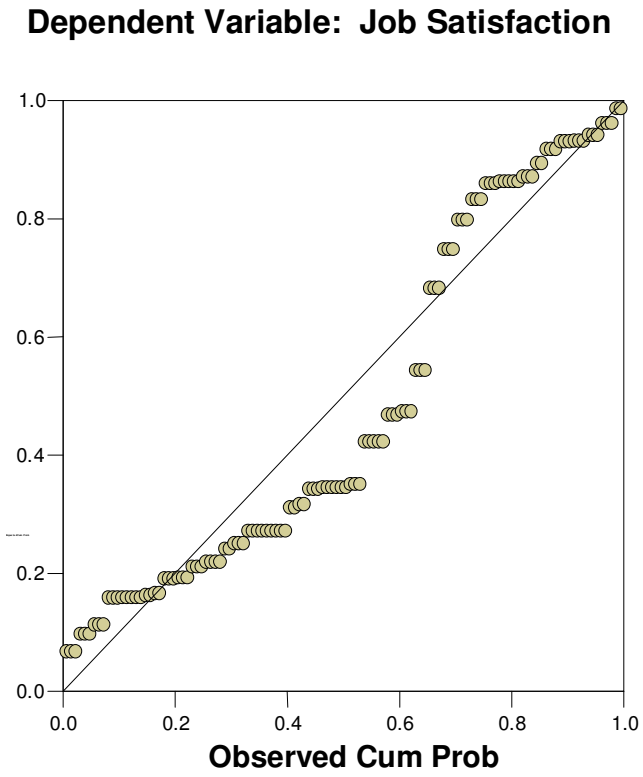

Figure 4.2 Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Job Satisfaction

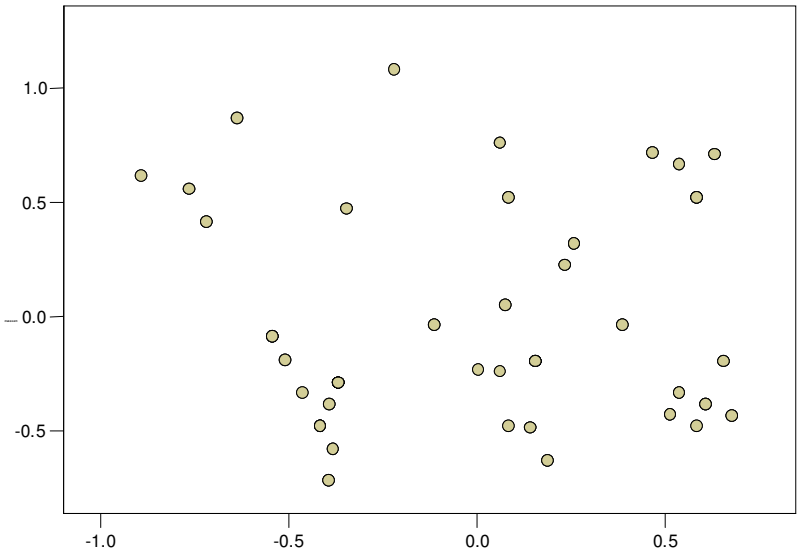

Figure 4.3 Partial Regression Plot

Based on the Figure 4.1, 4.2 and 4.3, the expected patterns for non-violation of assumption were found. The histogram of the distribution of the residual looks reasonably bell-shaped and symmetric which indicate that the data was normally distributed. This was followed by the probability plot which shown that the spread was close to the imaginary straight line from the lower left to upper right. It indicates that both normality and equal variance assumption were met. As for the scatter plot shown in Figure 4.3, indicates that both linearity and independence assumptions were met due to the residuals randomly scattered and shown no patterns against the predicted values. In conclusion, further action on analysis could proceed due to the

normality of the distribution as all the test of assumptions were passed and fulfilled.

4.3.2 Multicollinearity Analysis

According to Hair et al. (2003), high level of collinearity will increase the probability of a good predictor. Collinearity statistics will show the problem of multicollinearity in the forms of Variance Inflation Factor (VIF) and Tolerance Value. VIF is to measure how much the variance of the regression coefficients is inflated by multicollinearity problems and a maximum acceptable VIF would be 5.0 and anything higher would indicate a problem with multicollinearity (Hair et al. 2003). Tolerance value is to measure the amount of variance in an independence variable that is not explained by other independent variables. If the tolerance value is smaller than 0.10 it indicate a problem of multicollinearity (Hair et al. 2003).

Construct	**Collinearity Statistics**	
	Tolerance Value	**VIF**
(Constant)		
Relationship with superior-subordinate	.956	1.047
Relationship with peers	.906	1.104
Economic rewards	.946	1.057
Organization climate/environment	.932	1.073

Dependent Variable: Job Satisfaction

Table 4.2 Multicollinearity Analysis

Based on the table above, the VIF for all construct were less than 5.0 and the range of Tolerance Value is around 0.9. This indicates that the problem of multicollinearity was not significant in this research.

4.4 Assessment of Measurement Scales

4.4.1 Reliability Test

The scale used were subjected to reliability test using Cronbach's Alpha coefficient (Nunally, 1967) in order to ensure that they measured consistently what they are supposed to measure. In general, alpha coefficients should be above 0.7 at a minimum to be considered as having good strength of association (Heppner and Heppner, 2004). The alpha coefficients for the scale/factors are in table 4.3 below.

Job factor	Coefficient alpha
Relationship with superior-subordinate	0.724
Relationship with peers	0.733
Economic rewards	0.785
Organizational climate/environment	0.762

Above table shown that "Relationship with superior-subordinate" coefficient alpha was 0.724. The value of coefficient alpha on "economic rewards' and "organizational environment" are high, which are 0.785 and 0.762 respectively while 0.733 for "relationship with peers".

For overall value of coefficient alpha as per table 4.4 below.

Reliability Statistics

Cronbach's Alpha	N of Items
.772	32

It can conclude that the value of the overall reliability was 0.772. All items are related in the questionnaire on this research and the measurement scales of construct were stable and consistent in measuring the construct.

4.4.2 Validity Test

Factor analysis is a statistical method used to describe variability among observed variables in terms of fewer unobserved variables called factors. The observed variables are modeled as linear combinations of the factors plus error terms. The information gained about the interdependencies can be used later to reduce the set of variables in a dataset.

Validity pertains to accuracy assessing the construct that the inventory purpose to measure (Heppner and Heppner, 2004). Construct validity was adopted as validity measurement because it reflect the degree to which the scores that being measure. In addition convergent validity and discriminate validity were used to establish construct validity. To correlate two instruments that are intended to measure similar things; if there is a high correlation, that is convergent

validity (Heppner and Heppner, 2004). The details for the factor analysis were as per shown:

Numbers of factors	Factor's name	Variables	Factor loading	Eigen value	% of variance explained
B	Superior-subordinate relationship	B1 B2 B3 B4 B5 B6	0.677 0.416 0.722 0.578 0.391 0.633	2.121	35
C	Relationship with Peers	C1 C2 C3 C4 C5 C6	0.751 0.723 0.549 0.741 0.779 0.711	1.826	30.4
D	Reward	D1 D2 D3 D4 D5 D6	0.748 0.657 0.838 0.542 0.757 0.665	1.832	30.5
E	Organization climate/environment	E1 E2 E3 E4 E5 E6	0.525 0.463 0.752 0.835 0.678 0.793	1.716	28.5

Table 4.5 Factor Analysis Result

Based on the result of the factor analysis shown above, the value of Kaiser-Mayer-Olkin (KMO) is 0.741 which is between 0.5 and 1.0 and for the statistical test for Barlett test of sphericity was significant 0.01 for all correlation within the correlation matrix. Both results indicate that the factor analysis was appropriate.

4.4.2.1 Factor analysis for Relationship with Superior-subordinate.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.684
Bartlett's Test of Sphericity	Approx. Chi-Square	109.019
	Df	15
	Sig.	.001

Table 4.6 Factor analysis for Relationship with Superior-subordinate.

From the above table, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.684. It has a value of more than (>0.5) and this variable has positive impact on job satisfaction among first year soldiers. The significant value is 0.001 which indicates that the variable is relevant.

4.4.2.2 Factor analysis for Relationship with Peers.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.650
Bartlett's Test of Sphericity	Approx. Chi-Square	101.123
	Df	15
	Sig.	.002

Table 4.7 Factor analysis for Relationship with Peers.

From the above table, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.650. It has a value of more than (>0.5) and this variable has positive impact on job satisfaction among first year soldiers. The significant value is 0.002 which indicates that the variable is relevant.

4.4.2.3 Factor analysis for Economy Reward.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.578
Bartlett's Test of Sphericity	Approx. Chi-Square	87.754
	df	15
	Sig.	.000

Table 4.8 Factor analysis for Economy Reward.

From the above table, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.578. It has a value of more than (>0.5) and this variable has positive impact on job satisfaction among first year soldiers. The significant value is 0.000 which indicates that the variable is relevant.

4.4.2.4 Factor analysis for Organization Climate/environment.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.519
Bartlett's Test of Sphericity	Approx. Chi-Square	69.937
	df	15
	Sig.	.000

Table 4.9 Factor analysis for Organization Climate/Environment.

From the above table, the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.519. It has a value of more than (>0.5) and this variable has positive impact on job satisfaction among first year soldiers. The significant value is 0.000 which indicates that the variable is relevant.

4.5 Descriptive Analysis

Descriptive analysis is used to describe the sample characteristics of the typical respondents and disclose the general pattern of response (Sakaran, 2003).

4.5.1 Respondents Demographic Profile

		Frequency	Percentage
Valid	SRP	77	64.2
	SPM	43	35.8
	Total	120	100.0

Table 4.10: Academic Qualification

Based on the table above, the respondents for this survey consists of those who had acquired the minimum level of tertiary education as per required by the Malaysian Army. As the survey conducted among the first year soldiers, out of total 120 respondents, 64.2% had the education level as at Sijil Rendah Pelajaran (SRP) while 35.8% had studied until Sijil Pelajaran Malaysia (SPM).

		Frequency	Percentage
Valid	MALAY	68	56.7
	INDIAN	19	15.8
	IBAN	28	23.3
	LAIN-LAIN	5	4.2
	Total	120	100.0

Table 4.11: Race

The above table show that among the first year soldiers that participated in this survey consist of Malay which total number of 68 (56.7%), followed by Iban 28 which constitute 23.3%, Indian 19 which

constitute 15.8% and others which is 4.2%. This again shows that the majority or dominant races among the soldiers in Malaysian Army are from the race above.

4.5.2 Respondent's Satisfaction with Job Factors

In this section, the result should be able to predict the behavior of the sample about their job satisfaction. The job factors used as determinants of job satisfaction in this study were:

4.5.2.1 Superior-subordinate relationship.

4.5.2.2 Relationship with peers.

4.5.2.3 Economic rewards.

4.5.2.4 Organization climate/environment.

The aim of the analysis was to determine the respondent's satisfaction level on each of these four jobs factors. Six statements were listed for each factor and respondents were required to indicate their agreement/disagreement on a five-point Likert type scale. Value 1 is given to "strongly disagree" and increased incrementally to 5 for "Strongly Agree". Reverse scoring was awarded for the "split ballot" statements.

The mean of the scores of each statement was obtained first and then the overall mean of the six statements under each job factor was obtained to determine the respondents' job satisfaction with each job factor. A summary of the scale used in this analysis is listed below:

4.5.2.5 1 to 1.49 = very dissatisfied.

4.5.2.6 1.5 to 2.49 = dissatisfied.

4.5.2.7 2.5 to 3.49 = indifferent.

4.5.2.8 3.5 to 4.49 = satisfied.

4.5.2.9 4.5 to 5 = very satisfied.

4.5.3 Relationship between Superior-subordinate

A total of six items used to measure the construct of relationship between superior-subordinate by using five point Likert's scale.

Statements	Mean	Min	Max	Standard Deviation	Variance	Skewness	Kurtosis
Sensitive toward my need	3.38	2	4	0.611	0.373	-0.442	0.438
Unfair work distribution	2.41	2	4	0.558	0.311	0.962	-0.079
Difficulty in communicating	3.43	2	4	0.774	0.599	-0.905	-0.732
Just and fair decision making	3.22	3	4	0.414	0.171	1.393	-0.061
Didn't consult others opinion.	3.77	1	5	0.786	0.617	-2.626	6.396
Leadership qualities	3.43	3	4	0.498	0.248	0.272	-1.959

Table 4.12: Relationship between Superior-subordinate.

From the table above, the statement of 'Didn't consult others opinion' scored the highest mean with 3.77 among the other five meanwhile the statement of 'Unfair work distribution' has the lowest mean at 2.41. The second highest mean achieved is 'Leadership qualities' and ''Difficulty in communicating' with 3.43 each and followed by 'Just and fair decision making'

which had a mean of 3.22. And, the overall mean is 3.40 which this indicate that the respondents was indifferent to the construct of 'Relationship between superior-subordinate' due to the organization culture of military that are rigid and structured. Although the mean is 3.40 nevertheless, the respondents mostly agreed on the statement describe that 'Relationship between superior-subordinate will influence job satisfaction.

The lowest standard deviation for this construct is 'Just and fair decision making' which is 0.414 while the highest is 'didn't consult others opinion' with 0.786. This shows that all the items have moderate spread of response because the values of the standard deviation for all items are moderate.

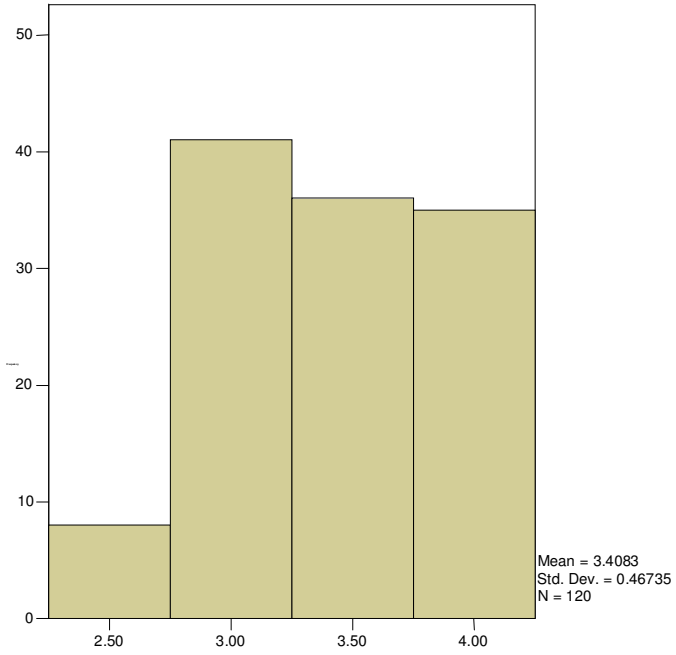

Figure 4.4: Histogram on Relationship between superior-subordinate

Figure shows that the number of frequency of respondents answer is between the highest 3.0 and lowest 2.5.

4.5.3 Relationship with peers

Statements	Mean	Min	Max	Standard Deviation	Variance	Skewness	Kurtosis
Able to communicate with peers	3.85	3	5	0.423	0.179	-0.904	1.408
Difficulty in communicating with peers	2.20	1	4	0.512	0.262	1.421	2.897
Lack of cooperation	2.53	2	4	0.593	0.352	0.606	-0.560
Friendly and cooperative peers	3.68	3	4	0.467	0.218	-0.798	-1.386
Fond of my peers	3.88	3	4	0.322	0.104	-2.419	3.914
Contradicting opinions	2.83	2	4	0.682	0.465	0.234	-0.836

Table 4.13: Relationship with peers.

From the table above, the statement of 'Fond of my peers' scored the highest mean with 3.88 among the other five meanwhile the statement of 'Difficulty in communicating with peers' has the lowest mean at 2.20. The second highest mean achieved is 'Able to communicate with peers' has 3.85 of mean followed by 'Friendly and corporative peers' with 3.68. Items of 'Contradicting opinion' and 'Lack of corporation' score 2.83 and 2.53 respectively. The overall mean is 3.05 which this indicates that the respondents were indifferent to the construct of 'Relationship with peers' due to the esprit de corps in the military organization. Although the average mean is 3.05 nevertheless, the respondents mostly agreed on the statement describe that 'Relationship with peers' will influence job satisfaction least.

The lowest standard deviation for this construct is 'Fond of my peers' which is 0.322 while the highest is 'Contradicting opinions' with 0.682. This

shows that all the items have moderate spread of response because the values of the standard deviation for all items are moderate.

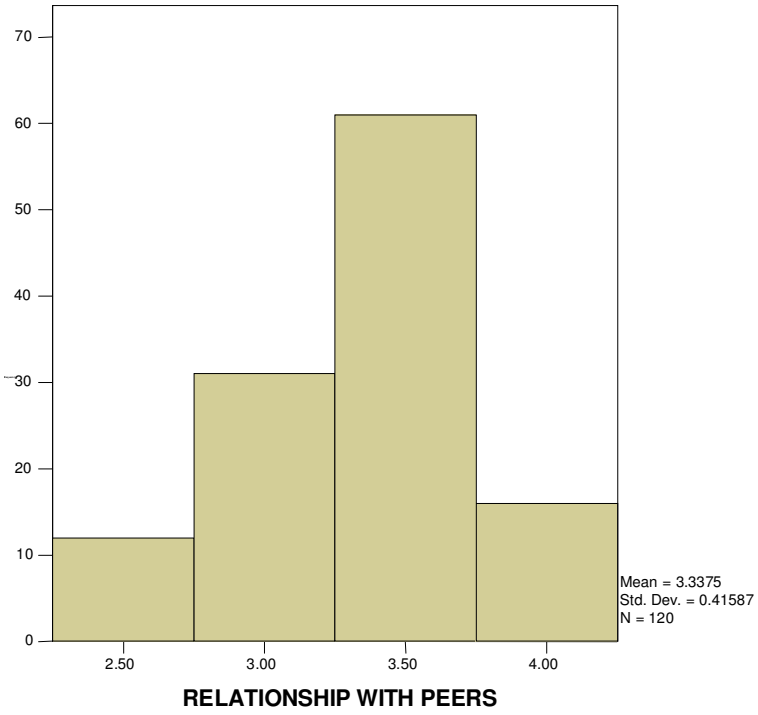

Figure 4.5: Histogram on Relationship with peers.

From the above figure it shows that the number of frequency of respondents answer is between the highest 3.5 and lowest 2.5.

4.5.4 Economy Rewards

Statements	Mean	Min	Max	Standard Deviation	Variance	Skewness	Kurtosis
Paid accordingly	3.73	2	5	0.683	0.466	0.071	-3.70
Not satisfied with benefit from MAF	2.21	1	4	0.578	0.334	4.88	0.812
Good promotion prospect	3.17	2	4	0.443	0.196	7.99	0.816
Able to fully utilize self development	3.15	3	4	0.359	0.129	1985	1.974

Salary is not a factor	1.33	1	3	0.610	0.372	1.717	1.777
Change profession	3.37	1	5	0.879	0.772	0.431	0.542

Table 4.14: Economic Rewards.

From the table above, the statement of 'Paid accordingly' scored the highest mean with 3.73 among the other five meanwhile the statement of 'Salary is not a factor' has the lowest mean at 1.33. The second highest mean achieved is 'Change profession' has 3.37 of mean followed by 'Good promotion prospect' with 3.17. Items of 'Able to fully utilized self development' and 'Not satisfied with benefit from MAF' score 3.15 and 2.21 respectively. The overall mean is 2.82 which this indicates that the respondents were indifferent to the construct of 'Economic Rewards' due to the current salary scheme which deemed to be not attractive enough for the soldiers. Although the average mean is 2.82 nevertheless, the respondents mostly agreed on the statement describe that 'Economic rewards' will influence job satisfaction.

The lowest standard deviation for this construct is 'Able to fully utilized self development' which is 0.359 while the highest is 'Change profession' with 0.879. This shows that all the items have moderate spread of response because the values of the standard deviation for all items are moderate.

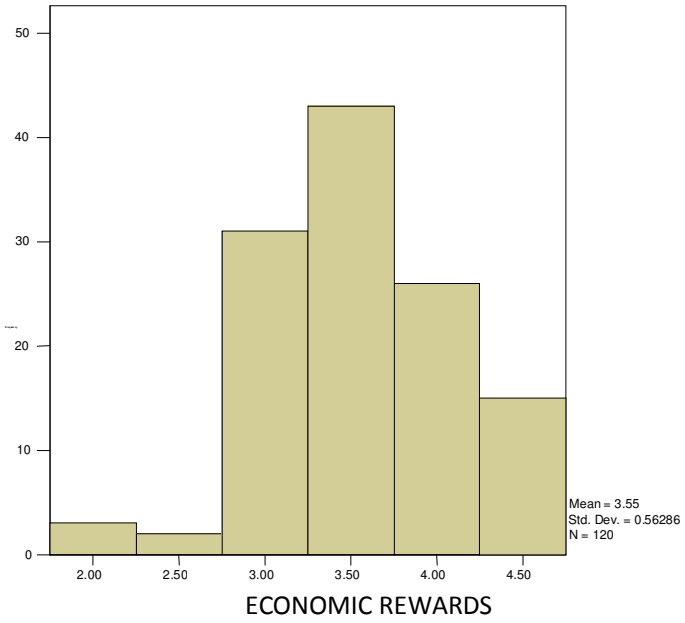

Figure 4.6: Histogram on Economic Rewards.

From the above figure it shows that the number of frequency of respondents answer is between the highest 3.5 and lowest 2.5.

4.5.5 Organization Climate/Environment

Statements	Mean	Min	Max	Standard Deviation	Variance	Skewness	Kurtosis
Autocratic organization	2.25	1	3	0.538	0.290	0.123	-0.307
Good work place	3.39	2	4	0.539	0.291	-0.047	-1.019
Different expectation from my organization	3.00	2	4	0.225	0.0.782	0.000	17.782
Agree with current policies adopted	2.24	3	4	0.430	0.185	1.222	-0.515
Good management	3.42	2	4	0.588	0.346	-0.426	-0.684

Good infrastructure	3.78	3	4	0.414	0.171	-1.393	-0.061

Table 4.15: Organization Climate/Environment.

From the table above, the statement of 'Good infrastructure' scored the highest mean with 3.78 among the other five meanwhile the statement of 'Agree with current policies adopted' has the lowest mean at 2.24. The second highest mean achieved is 'Good management' have 3.42 of mean followed by 'Good work place' with 3.39. Items of 'Different expectation from my organization' and 'Autocratic organization' score 3.00 and 2.25 respectively. The overall mean is 3.18 which this indicates that the respondents were indifferent to the construct of 'Organization Climate/Environment' due to the current state of leadership style and policies adopted by the various chain of command which deemed to be difficult for the first year soldiers. Although the average mean is 3.18 nevertheless, the respondents mostly agreed on the statement describe that 'Organization climate/environment' will influence job satisfaction.

The lowest standard deviation for this construct is 'Different expectation from my organization' which is 0.225 while the highest is 'Good management' with 0.588. This shows that all the items have moderate spread of response because the values of the standard deviation for all items are moderate.

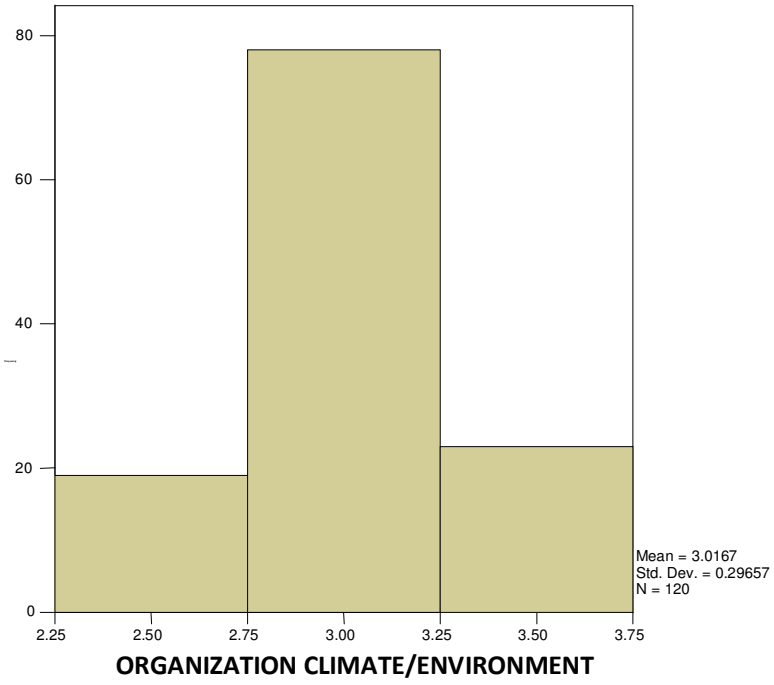

Figure 4.7: Histogram on Organization Climate/Environment.

From the above figure it shows that the number of frequency of respondents answer is between the highest 3.0 and lowest 2.5.

4.6 Multiple Regressions

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Peers, Superior-subordinate, environment, rewards	.	Enter

a All requested variables entered.
b Dependent Variable: Job satisfaction

Table 4.16: Multiple Regressions.

The table above show that all the variable was entered in this regression test. The variables are identified by Superior-subordinate, peers, rewards and

environment. Method that being used is 'Enter'. The zero variables removed and dependent variable is job satisfaction among the first year soldiers.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783(a)	.615	.125	.434

a. Predictors: (Constant), Peers, Superior-subordinate, environment, reward

Table 4.17: Multiple regression for job satisfaction.

From the above table, the value of R is 0.783. This value is high which more than 0.5. It indicates that there are high correlations between the variables. The entire variables have the significant correlation and these variables are ideal to evaluate the satisfaction among the first year soldiers. The value or R square is 0.615 or 61.5% were affected by this variables.

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.984	4	1.216	5.240	.001(a)
	Residual	25.922	115	.234		
	Total	30.906	119			

a Predictors: (Constant), Peers, Superior-subordinate, environment, reward
b. Dependent Variable: job satisfaction

Table 4.18: Anova for job satisfaction.

From this Anova(b) table, the value of significant is 0.001, which is below the value 0.05. The value of regression is 4.984 and the value of residual is 30.906.

Coefficients (a)

Model		Un standardize Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.983	.868		1.121	.264
	Peers	.094	.142	.076	.870	.015
	Superior-subordinate	-.014	.094	-.021	-.140	.004
	Rewards	-.189	.081	-.206	-2.335	.021
	Environment	.588	.155	.337	3.799	.000

a Dependent Variable: Job satisfaction

Table 4.19: Coefficient Table.

The entire variable is significant with dependent variable. The value of standard error is 0.868, 0.142, 0.094, 0.081 and 0.155 for all independent variables. While the value of Beta coefficients are 0.076, -0.021, -0.206 and 0.337 respectively. The regression formula is;

4.6.1 Y= 0.983 + 0.094X

4.6.2 Y= 0.983 - 0.014X

4.6.3 Y= 0.983 - 0.198X

4.6.4 Y= 0.983+ 0.588X

4.7 Hypothesis Analysis

4.7.1 *The greater the relationship with peers will positively influence on job satisfaction on first year soldier.*

Correlations

		Job satisfaction
Peer	Pearson Correlation	.666
	Sig. (2-tailed)	.012
	N	120

Table 4.20: Correlation for Relationship with peers.

From the above table, the value of the significant is 0.012 which is smaller than alpha value (0.05). This indicates that null hypothesis was rejected and hypothesis alternative H1 was accepted. The value of the Pearson correlation is 0.666. The result shows that the greater the relationship with peers among the first year soldiers will positively influence on their job satisfaction.

4.7.2 *The greater the superior-subordinate relationship will positively influence on job satisfaction on first year soldier.*

Correlations

		Job satisfaction
Superior-subordinate	Pearson Correlation	.732
	Sig. (2-tailed)	.015
	N	120

Table 4.21: Correlation for Relationship between superior- subordinate.

From the above table, the significant value for this variable is 0.015 which is smaller than alpha value (0.05) that is ($p<0.05$). It can conclude that null hypothesis was rejected and hypothesis alternative H2 was accepted. The value of the Pearson correlation is 0.732. The result shows that the greater the superior-subordinate relationship will positively influence on job satisfaction of first year soldier.

4.7.3 *The organization climate/environment will positively influence on job satisfaction on first year soldier.*

Correlations

		Job satisfaction
Organization climate/environment	Pearson Correlation	.713
	Sig. (2-tailed)	.008
	N	120

Table 4.22: Correlation for Organization climate/environment.

From the above table, the significant value is 0.008 which is smaller than alpha value (0.05) that is ($p<0.05$). It can conclude that null hypothesis was rejected and hypothesis alternative H3 was accepted. The value of the

Pearson correlation is 0.713. The result shows that organization climate/environment will positively influence on job satisfaction on first year soldier.

4.7.4 *The economic reward will positively influence on job satisfaction on first year soldier*

		Job satisfaction
Economic Reward	Pearson Correlation	.689
	Sig. (2-tailed)	.023
	N	120

Table 4.23: Correlation for Economic rewards.

From the above table, the significant value is 0.023 which is smaller than alpha value (0.05) that is ($p<0.05$). It can conclude that null hypothesis was rejected and hypothesis alternative H4 was accepted. The value of the Pearson correlation is 0.689. The result shows that economic rewards will positively influence on job satisfaction on first year soldier.

4.18 Conclusion

The research result had clearly shown that all the variables that been discussed have positively significant value in predicting the job satisfaction among the first year soldier. The next chapter will provide recommendations in addressing the short coming with the current practices and procedures adopted by Malaysian Army.