CHAPTER 4

RESULTS

The first research question looks at what factors are related to coping with Basic Military Training in the army by National Service recruits. Coping includes firstly, the subjective feeling of psychological distress; secondly, physical performance on the Individual Physical Proficiency Test; and thirdly, the completion of Basic Military Training. The factors in this study include having personal problems, the perception of social support, and personality factors including neuroticism, extraversion, psychoticism and social desirability. Other factors include the type of coping strategies that recruits used, such as confrontative coping, distancing, self-control, seeking social support, accepting responsibility, escape-avoidance, planful problem solving and positive reappraisal. Mental and physical preparedness, together with physical fitness level, pre-enlistment medical status and deterioration in medical status after enlistment are also studied. Exogenous factors such as type of medical leave that the recruits take; weekend confinements, secondary appointment, family income and type of housing and endogenous factors such as age, race, birth position in family, number of languages spoken and educational level are also examined.

The second research question looks at what factors predict the ability to cope. Firstly, what are the factors that predict the likelihood of having psychological symptoms? Secondly, what are the factors that predict the level of physical performance on the Individual Physical Proficiency Test? Thirdly, what are the factors that predict the likelihood of completing Basic Military Training?

The third research question looks at what are the relationships between personality factors, the use of specific coping strategies, and situational factors and the presence of psychological symptoms. Situational factors include the pre-enlistment period, high stress period during training, that is the first three weeks, and low stress period of training, that is the last three weeks.

This chapter presents the results of factors related to psychological well being, physical performance on the Individual Physical Proficiency Test, as well as the completion of Basic Military Training. It also presents the results of the relationship between personality, coping strategies and situation on psychological well being.

Factors Related to Psychological Distress

Research Question 1a presents the factors related to the subjective sense of psychological distress, measured by reporting of general psychological symptoms, including anxiety, depression, somatic symptoms and social dysfunction.

Personal Problems

Using Pearson product-moment correlation, Table 2 shows that overall there is a very significant positive relationship between the number of personal problems reported before enlistment and the number of psychological symptoms reported during the high stress period, where $r(193) = .41$, $p < .01$. These included anxiety, depression, somatic symptoms and social dysfunction. As such, having more problems was associated with more psychological symptoms.

Table 2. Factors that Correlate with General Symptoms during High Stress Period

Factors		Psychological Symptoms				
		Anxiety	Depression	Somatic Symptoms	Social Dysfunction	Total General Symptoms
1.	Personal Problems Before Enlistment	.40**	.42**	.23*	.30**	.41**
2.	Social Support	-.21*	-.25**	-.13	-.23*	-.24*
3.	Personality Neuroticism	.52**	.50**	.32**	.45**	.53**
	Extraversion	-.23*	-.25**	-.21*	-.29**	-.29**
	Psychoticism	.11	.25**	.06	.07	.15
	Social Desirability	-.27**	-.26**	-.17	-.20*	-.27**
	Impulsiveness	.38**	.33**	.22*	.35**	.38**
4.	Coping Strategies Confrontative Coping	-.01	-.02	-.01	-.12	-.04
	Distancing	-.03	-.05	.01	-.09	-.04
	Self Control	.08	.07	-.02	-.01	.04
	Seeking Social Support	.04	-.09	.01	-.05	-.02
	Accepting Responsibility	-.07	-.03	-.08	-.08	-.08
	Escape-Avoidance	.39**	.36**	.29**	.22*	.38**
	Planful Problem Solving	-.28**	-.26**	-.28**	-.33**	-.34**
	Positive Reappraisal	-.19	-.16	-.20*	-.35**	-.26**
5.	Age	.03	.04	-.03	-.01	.01

Note.
N = 195.
*p < .05. **p < .01.
Critical r (193) = .20, p < .05. Critical r (193) = .25, p < .01.

Increase In Personal Problems during Enlistment

Nine subjects also reported an increase in the number of personal problems they experienced during the training period. Analysis using independent t-test for equal variance showed that those who reported having more problems than usual during enlistment also reported significantly more psychological symptoms, where $t(193) = -5.23$, $p < .01$. These symptoms included anxiety, depression, somatic symptoms and social dysfunction scores. (See Table 3.)

Table 3. Comparison of Mean General Symptom Scores between Recruits with and without Increase in Personal Problems

Psychological Symptoms	Change in Personal Problems during Enlistment						df	t	p
	No Change			Increase in Problems					
	n	M	SD	n	M	SD			
Anxiety	186	6.10	4.62	9	12.33	6.60	193	-3.87	.01**
Depression	186	3.13	4.00	9	11.56	7.23	193	-5.90	.01 **
Somatic Symptoms	186	9.45	4.76	9	14.44	4.82	193	-3.08	.01**
Social Dysfunction	186	7.41	3.14	9	12.67	5.27	193	-4.73	.01**
Total General Symptoms	186	26.09	13.51	9	51.00	22.03	193	-5.23	.01**

Note.
**$p < .01$.
Critical $t(193) = 1.96$, $p < .05$. Critical $t(193) = 2.58$, $p < .01$.

Social Support

Table 2 shows that overall there was a significant negative relationship between the amount of social support reported before enlistment and psychological symptoms during the high stress period, where r (193) = -.24, $p < .05$. These included anxiety, depression and social dysfunction symptoms. More perceived support was associated with less psychological symptoms.

Personality

Table 2 shows that neuroticism was positively and very significantly correlated with more overall psychological symptoms, where r (193) = .53, $p < .01$. Impulsiveness was also positively and very significantly correlated with more overall psychological symptoms, where r (193) = .38, $p < .01$. These two types of personalities were also significantly and positively associated with more anxiety, depression, somatic symptoms and social dysfunction. Extraversion was negatively but significantly correlated with less overall symptoms, where r (193) = -.29, $p < .01$. It appears that the more extraverted recruits are less likely to develop symptoms of anxiety, depression, somatic symptoms and social dysfunction. Social desirability was also negatively and significantly correlated with more general symptoms, where

r (193) = -.27, $p < .01$. The symptoms that were significantly related to social desirability were anxiety, depression and social dysfunction. Hence, a higher level of neuroticism and impulsiveness were associated with more overall symptoms. On the other hand, higher levels of extraversion and social desirability were associated with fewer overall symptoms.

Coping Strategies

Table 2 shows that the use of escape-avoidance was positively and significantly correlated with more overall symptoms, where r (193) = .38, $p < .01$. These included anxiety, depression, somatic symptoms and social dysfunction. Planful problem solving was negatively and significantly correlated to less overall symptoms, where r (193) = -.34, $p < .01$. These included anxiety, depression, somatic complaints and social dysfunction. Positive reappraisal was also negatively and significantly related to less general symptoms, where r (193) = -.26, $p < .01$. In particular, more social dysfunction symptoms were reported. Hence, more use of escape-avoidance as a coping strategy was associated with more symptoms overall. On the other hand, more use of planful problem solving and positive reappraisal was associated with fewer symptoms.

Mental Preparedness

The one-way analysis of variance test was used to compare the mean psychological symptoms amongst groups of recruits with different levels of mental preparation, ranging from being not prepared, somewhat prepared, prepared and confident. (See Table 4.)

Table 4. Comparison of Mean General Symptom Scores among Recruits with Different Levels of Mental Preparedness

Psychological Symptoms	Mental Preparedness				df	F Ratio	p	Post Hoc	p
	Not Prepared (A)	Somewhat Prepared (B)	Prepared (C)	Confident (D)					
Anxiety	8.50	7.52	5.51	2.25	3	7.01	.01**	A-D B-D	.01* .01*
Depression	6.05	4.36	2.61	.67	3	6.14	.01**	A-C A-D	.02* .01*
Somatic Symptoms	10.40	10.69	9.12	5.75	3	4.45	.01**	B-D	.01*
Social Dysfunction	8.40	8.51	7.36	3.58	3	8.81	.01**	A-D B-D C-D	.01* .01* .01*
General Symptoms	33.35	31.08	24.60	12.25	3	8.70	.01**	A-D B-C B-D C-D	.01* .04* .01* .05*

Note.
(A): n = 20. (B): n =77, (C): n = 85, (D): n = 12.
*p < .05. **p < .01.
Critical F (3,190) = 2.65, p < .05. Critical F (3,190) = 3.88, p < .01.

Table 4 shows that the mean psychological symptom scores of recruits were significantly different between groups with various levels of mental preparedness, where $F(3,190) = 8.70$, $p < .01$. Post-hoc analysis using the Scheffe test showed that those who were confident in mental preparedness reported significantly fewer overall symptoms than the other groups. Furthermore, recruits who were only somewhat prepared in mental preparedness reported significantly more symptoms than the prepared group, $p < .05$. Recruits who were unprepared or only somewhat prepared in mental preparedness reported more anxiety than the confident recruits, $p < .01$. Recruits who felt unprepared also reported significantly more symptoms of depression than prepared or confident groups. The confident group reported significantly less somatic symptoms than those who felt somewhat prepared did, $p < .01$. They also reported significantly less social dysfunction than all other groups, $p < .01$.

Physical Preparedness

The one-way analysis of variance test was used to compare the mean psychological symptom scores of groups of recruits with different levels of physical preparation, ranging from being not prepared, somewhat prepared, prepared and confident. (See Table 5.) The results indicate that there was a significant difference in mean scores between groups, where $F(3,190) = 8.43$, $p < .01$.

Post-hoc analysis using the Scheffe test showed that recruits who felt physically confident reported significantly less symptoms than the somewhat or unprepared group, $p < .01$. The prepared group also reported significantly fewer symptoms than the unprepared group, $p < .05$. Recruits who felt physically unprepared reported significantly more anxiety and depression than the prepared and confident group. Recruits who felt only somewhat prepared or unprepared also reported significantly somatic symptoms and social dysfunction than the confident group, $p < .01$.

Table 5. Comparison of Mean General Symptom Scores among Recruits with Different Levels of Physical Preparedness

Psychological Symptoms	Physical Preparedness				df	F Ratio	p	Post Hoc	p
	Not Prepared (A)	Somewhat Prepared (B)	Prepared (C)	Confident (D)					
Anxiety	8.79	6.68	5.48	2.83	3	5.46	.01**	A-C A-D	.03* .01**
Depression	5.57	3.99	2.22	1.00	3	5.31	.01**	A-C A-D	.02* .03*
Somatic Symptoms	11.75	10.06	8.81	5.33	3	6.09	.01**	A-D B-D	.01** .014*
Social Dysfunction	9.14	8.04	7.04	4.33	3	7.26	.01**	A-D B-D	.01** .01**
General Symptoms	35.25	28.77	23.56	13.50	3	8.43	.01**	A-C A-D B-D	.01** .01** .01**

Note.
(A): $n = 12$, (B): $n = 54$, (C): $n = 100$, (D): $n = 28$.
*$p < .05$. **$p < .01$.
Critical F (3,190) = 2.65, $p < .05$. Critical F (3,190) = 3.88, $p < .01$.

Physical Fitness Level

Analysis using the independent t-test for equal variance was done to compare the difference in mean psychological symptoms scores between those who were more and less physically fit before enlistment, as measured by whether they had received a silver or gold award in the pre-enlistment fitness screening test. There was no significant difference in mean general symptom scores between groups, where $t(192) = 1.92$, $p = .06$. (See Table 28 in Appendix J.)

Pre-Enlistment Medical Status

Further analysis using the independent t-test showed that there was no significant difference in the mean symptom scores between those who did not have medical problems and those who had minor medical problems before enlistment, where $t(190) = -1.00$, $p = .32$. (See Table 29 in Appendix J.)

Deterioration in Medical Status During Enlistment

Twenty recruits reported a new medical condition or deterioration in existing medical condition during the first three weeks of training. Analysis using the independent t-test for equal variance was done to compare the difference in mean symptom scores

between those who had deterioration in their medical status and those who did not have a change. The results in Table 6 showed that there was a significant difference between groups in their overall symptoms, where t (189) = -3.02, $p < .01$. These included symptoms of anxiety, depression, somatic symptoms and social dysfunction. Recruits whose health deteriorated as a result of medical problems arising during training reported significantly more of these psychological symptoms.

Table 6. Comparison of Mean General Symptom Scores between Recruits with and without Deterioration in Medical Status

Psychological Symptoms	Deterioration in Medical Status						df	t	p
	No Change in Medical Status			Deterioration in Medical Status					
	n	M	SD	n	M	SD			
Anxiety	171	6.11	4.68	20	9.05	6.10	189	-2.58	.01**
Depression	171	3.28	4.27	20	5.35	5.74	189	-1.97	.05*
Somatic Symptoms	171	9.42	4.82	20	12.15	4.96	189	-2.39	.02*
Social Dysfunction	171	7.39	3.15	20	10.05	4.84	189	-3.36	.01**
General Symptoms	171	26.19	14.01	20	36.60	19.00	189	-3.02	.01**

Note.
*$p < .05$. **$p < .01$.
Critical t (189) = 1.96, $p < .05$. Critical t (189) = 2.58, $p < .01$.

Exogenous Factors

The following paragraphs present results on the exogenous factors related to psychological symptoms.

Type of Medical Leave

Table 7 looks at the coping outcomes of recruits who were given different types of medical leave by their medical officer or civilian doctor. Analysis using one-way analysis of variance showed that there was a significant difference in the somatic symptoms between those who were given different types of medical leave, $F(2,191) = 3.13$, $p < .05$. Post-hoc analysis using Scheffe test showed that recruits who did not take any leave reported significantly less symptoms than those who were given light duties, $p < .05$. There was no significant difference between mean symptom scores of those who were given light duties or those who rested at home or in their bunks.

Table 7. Comparison of Mean General Symptom Scores among Recruits Who Took Different Types of Medical Leave

Psychological Symptoms	Type of Medical Leave			df	F Ratio	p	Post -Hoc	p
	No Medical Leave (A)	Light Duties (B)	Rest in Bunk/Home (C)					
Anxiety	6.09	6.77	7.44	2	.62	.54	-	-
Depression	3.24	4.08	2.89	2	.80	.45	-	-
Somatic Symptoms	8.97	11.05	9.44	2	3.13	.02*	A-B	.02*
Social Dysfunction	7.52	8.00	7.11	2	.53	.59	-	-
General Symptoms	25.82	29.89	26.89	2	1.57	.21	-	-

Note.
(A): n = 121, (B): n = 9, (C): n = 64.
Post hoc analysis was done only for groups that had significantly different mean scores.
*p< .05.
Critical F (2,191) = 3.04, p < .05. Critical F (2,191) = 4.71, p < .01.

Secondary Appointment

Further analysis using the independent t-test of equal variance showed that there was no significant difference in the mean scores for general symptoms, where t (193) = .43, p = .67. (See Table 30 in Appendix J.)

Confinement

Analysis using the independent t-test for equal variance showed that there was no significant difference in the overall symptoms, where t (191) = .31, p = .67. (See Table 31 in Appendix J.)

Family Income

Analysis using one-way analysis of variance showed that there was a significant difference in the mean symptom scores between groups with different family income, F (4,190) = 4.52, $p < .01$. Post-hoc analysis using Scheffe test showed that recruits who came from a family- income group of $1 001 to $2 000 reported significantly more overall symptoms, including depression and social dysfunction than those whose family income was more than $4 000. (See Table 8.)

Table 8. Comparison of Mean General Symptom Scores among Recruits Who Come from Different Levels of Family Income

Psychological Symptoms	Levels of Family Income					df	F Ratio	p	Post Hoc	p
	Less than $1000 (A)	$1001 to $2000 (B)	$2001 to $3000 (C)	$3001 to $4000 (D)	More than $4000 (E)					
Anxiety	9.50	7.33	5.20	7.06	5.28	4	3.15	.02*	-	-
Depression	5.70	4.93	2.67	3.68	2.00	4	3.78	.01**	B-E	.04*
Somatic Symptoms	11.80	10.60	9.13	10.06	8.25	4	2.12	.08	-	-
Social Dysfunction	8.30	8.96	7.22	7.94	5.98	4	5.28	.01**	B-E	.01**
General Symptoms	35.30	31.82	24.22	28.74	21.50	4	4.52	.01**	B-E	.02*

Note.
(A): n = 40, (B): n = 54, (C): n = 34, (D): n = 57, (E): n = 10.
Only post-hoc analysis of groups that had significantly different mean scores are presented.
*p < .05. **p < .01.
Critical F (4,190) = 2.41, p < .05. Critical F (4,190) = 3.41, p < .01.

Type of Housing

Analysis using the one-way analysis of variance showed that there was no significant difference in mean scores on general symptoms between groups, where F (4,190) = 1.46, p = .22. (See Table 32 in Appendix J.)

Endogenous Factors

The following paragraphs present results on the endogenous factors related to psychological symptoms.

Age

Table 2 shows that that there is no significant correlation between age and general symptom scores, where r (193) = .01, p = .88.

Race

Analysis using the one-way analysis of variance showed that there was no significant difference in the mean scores on general symptoms between groups, where F (3,191) = 1.65, p = .18. (See Table 33 in Appendix J.)

Position in Family

Analysis using the one-way analysis of variance showed that there was no significant difference in the mean scores on general symptoms between groups, where F (3,191) = 1.39, p = .25. (See Table 34 in Appendix J.)

Number of Languages Spoken

Analysis using the t-test showed that there was also no significant difference in the mean scores for general symptoms between groups, where t (192) = .67, p = .50. (See Table 35 in Appendix J.)

Educational Level

Analysis using the one-way analysis of variance showed that there was no significant difference in the mean scores on general symptoms between groups, where F (3,190) = .82, p = .49. (See Table 36 in Appendix J.)

Factors Predicting Psychological Symptoms

Research Question 2a addresses the second research question. It assesses the factors that predict the subjective experience of psychological symptoms. Appendix K shows the inter-correlations between factors that were found to be significant in the previous section. Using the principle of adopting the most parsimonious model, factors that were added into the regression equation included only variables that were not significantly associated with other factors. As such, neuroticism, planful problem solving, and deterioration in medical status were included into the equation.

Stepwise multiple regression analysis resulted in three factors that predicted subjective feelings of psychological distress. These were neuroticism, planful problem solving and deterioration in medical status during enlistment. Overall these factors accounted for 39% of the explained variance (Cumulative $\underline{R}^2 = .39$, $\underline{p} < .01$.)

Of these factors, neuroticism contributed 29% of the explained variance of psychological symptom, planful problem solving accounted for 7% and decrease in medical status during enlistment accounted for 3%. (See Table 9.) Hence, the higher the neuroticism and the more medical problems one has, as well as lesser use of planful problem solving, the more one is likely to feel psychological distress.

Table 9. Factors Predicting Psychological Symptoms

Predictors	R Square	Cumulative R	Standardized Beta Coefficient	F Change	p
Neuroticism	.29	.29	.48	$\underline{F}$ (1, 188) = 75.82	.01 **
Planful Problem Solving	.07	.36	-.27	$\underline{F}$ (1, 187) = 20.86	.01 **
Deterioration in Medical Status	.03	.39	.17	$\underline{F}$ (1, 186) = 8.96	.01 **

Note.
**p < .01
Critical $\underline{r}$ (190) = .20, $\underline{p} < .05$. Critical $\underline{r}$ (190) = .25, $\underline{p} < .01$.
Critical $\underline{F}$ (1,186) = 3.89, $\underline{p} < .05$. Critical $\underline{F}$ (1,186) = 6.76, $\underline{p} < .01$.
Critical $\underline{F}$ (1,187) = 3.89, $\underline{p} < .05$. Critical $\underline{F}$ (1,187) = 6.76, $\underline{p} < .01$.
Critical $\underline{F}$ (1,188) = 3.89, $\underline{p} < .05$. Critical $\underline{F}$ (1,188) = 6.76, $\underline{p} < .01$.

Factors Related to Individual Physical Proficiency

Research Question 1b discusses the factors related to physical performance. The number of point-scores obtained on the Individual Physical Proficiency Test measures the level of physical performance.

Personal Problems

Table 10 shows that having personal problems was significantly and negatively correlated with the number of points obtained on the Individual Physical Proficiency Test, where r (168) = -.21, $p < .05$. Hence recruits who had more personal problems performed poorer on the Individual Physical Proficiency Test..

There is no significant relationship between increase in personal problems during enlistment and physical performance, where t (168) = 1.30, $p = .20$. (See Table 37 in Appendix J.)

Social Support

Table 10 shows that there was no significant relationship between having social support and the number of points obtained on the Individual Physical Proficiency Test, r (168) = .18, $p = .18$.

Table 10. Factors that Correlate with Individual Physical Proficiency Test during High Stress Period

Factors		IPPT Points
1.	Personal Problems	-.21*
2.	Social Support	.18
3.	Personality	
	Neuroticism	-.22*
	Extraversion	.19
	Psychoticism	.04
	Social Desirability	-.02
	Impulsiveness	-.25**
4.	Coping Strategies	
	Confrontative Coping	.16
	Distancing	-.02
	Self Control	.04
	Seeking Social Support	.06
	Accepting Responsibility	.08
	Escape-Avoidance	-.04
	Planful Problem Solving	.26**
	Positive Reappraisal	.14
5.	Age	-.12

Note.
N = 170.
*p < .05. **p < .01.
Critical r (168) = .20, p < .05. Critical r (168) = .25, p < .01.

Personality

In Table 10, Individual Physical Proficiency Test point-scores were significantly and negatively correlated with neuroticism, where r (168) = -.22, $p < .05$ and impulsiveness, where r (168) = -.25, $p < .01$. Hence the higher the level of neuroticism and impulsiveness, the poorer is the level of physical performance on the Individual Physical Proficiency Test.

Coping Strategies

Table 10 shows that point-scores on the Individual Physical Proficiency Test were very significantly and positively correlated with planful problem-solving, where r (168) = .26, $p < .01$. Hence more use of planful problem solving was related to better physical performance.

Mental Preparedness

There were no significant group differences in mean point-scores on the Individual Physical Proficiency Test between recruits who felt unprepared, somewhat prepared, prepared or confident, F (3,165) = 1.58, $p = .20$. (See Table 38 in Appendix J.)

Physical Preparedness

Results using one-way analysis of variance indicate that the mean point-scores on the Individual Physical Proficiency Test of recruits were significantly different between groups, F (3, 165) = 3.66, p <.05. Post-hoc analysis using the Scheffe test showed that the unprepared group did significantly poorer than the confident group. (See Table 11.)

Table 11. Comparison of Mean Point Scores on the Individual Physical Proficiency Test Results among Recruits with Different Levels of Physical Preparedness

IPPT Results	Physical Preparedness				df	F Ratio	p	Post-Hoc	p
	Not Prepared (A)	Somewhat Prepared (B)	Prepared (C)	Confident (D)					
IPPT Points	19.72	20.67	21.25	23.00	3	3.66	.02*	A-D	.02*

Note.
(A): n = 25, (B): n = 85, (C): n = 48, (D): n = 11.
*p < .05. **p < .01.
Critical F (3,165) = 2.67, p < .05. Critical F (3,165) = 3.91, p < .01.

Physical Fitness Level

Table 12 shows that there was a significant difference in the point-scores on the Individual Physical Proficiency Test between those who were less and more fit,

t (167) = -3.71, $p < .01$. Recruits who were more fit did significantly better than the less fit recruits.

Table 12. Comparison of Mean Point Scores on the Individual Physical Proficiency Test Results between Recruits Who Were More and Less Physically Fit before Enlistment

IPPT Results	Pre-Enlistment Physical Fitness						df	t	p
	Less Fit			More Fit					
	n	M	SD	n	M	SD			
IPPT Points	146	20.52	2.98	23	22.91	2.04	167	-3.71	01**

Note.
**$p < .01$.
Critical t (167) = 1.96, $p < .05$. Critical t (167) = 2.58, $p < .01$.

Pre-Enlistment Medical Status

There was no significant difference in mean point-scores on the Individual Physical Proficiency Test between recruits who did not have any medical problems before enlistment and those who had minor medical problems, where t (166) = 1.17, $p = .24$. (See Table 29 in Appendix J.)

There was no significant difference in the mean point-scores on the Individual Physical Proficiency Test between groups whose health deteriorated and those whose

medical status remained the same, where t (167) = -0.18, p = .86. (See Table 39 in Appendix J.)

Exogenous Factors

The following paragraphs present the results on the exogenous factors related to physical performance on the Individual Physical Proficiency Test.

Type of Medical Leave

There was no significant difference in the mean point-scores on the Individual Physical Proficiency between recruits who took different types of medical leave, F (2,166) = 1.37, p = .26. (See Table 40 in Appendix J.)

Secondary Appointment

There was no significant difference in mean point-scores on the Individual Physical Proficiency Test between recruits who were given secondary appointments and those who were not, where t (167) = -1.05, p = .30. (See Table 30 in Appendix J.)

Confinement

There was no significant difference in the mean point-scores on the Individual Physical Proficiency Test between recruits who were given weekend confinements and those who were not given confinement, where t (167) = .75, p = .76 (See Table 31 in Appendix J.)

Family Income

Table 13 shows that there was a significant difference in point-scores on the Individual Physical Proficiency Test between those who came from different family-income groups, F (4,165) = 2.65, $p < .05$. Post-hoc analysis using Scheffe test indicates that recruits who came from family incomes of $1 000 to $2 000 did poorer than recruits who came from family incomes of $3 000 to $4 000, where p = .05

Table 13. Comparison of Mean Point Scores on the Individual Physical Proficiency Test Results among Recruits Who Come from Different Levels of Family Income

IPPT Results	Levels of Family Income					df	F Ratio	p	Post-Hoc	p
	Less than $1000 (A)	$1001 to $2000 (B)	$2001 to $3000 (C)	$3001 to $4000 (D)	More than $4000 (E)					
IPPT Points	20.89	19.88	20.88	22.00	21.26	4	2.65	.04*	B-D	05*

Note.
(A): n = 49, (B): n = 48, (C): n = 9, (D): n = 35, (E): n = 29.
*p < .05.
Critical F (4,165) = 2.43, p < .05. Critical F (4,165) = 3.44, p < .01

Type of Housing

Table 14 shows that there was a significant difference in mean point-scores on the Individual Physical Proficiency Test between recruits who lived in different types of housing. F (4,165) = 2.49, p < .05. Post-hoc analysis using the Scheffe test indicates that recruits who lived in three to four room apartments had less points on the Individual Physical Proficiency Test than recruits who lived in private houses, p = .05.

Table 14. Comparison of Mean Point Scores on the Individual Physical Proficiency Test Results between Recruits from Different Types of Housing

IPPT Results	Type of Housing					df	F Ratio	p	Post -Hoc	p
	1 to 2 - Room (A)	3 to 4 - Room (B)	5-Room to Executive (C)	Condo-minium (D)	Private House (E)					
IPPT Points	20.50	20.49	21.00	20.36	22.94	4	2.49	.05*	B-E	.05*

Note.
*p < .05.
(A): n = 2, (B): n = 93, (C): n = 48, (D): n = 11, (E): n = 16.
Critical F (4,165) = 2.43, p < .05.

Endogenous Factors

The following paragraphs present the results on the endogenous factors related to physical performance on the Individual Physical Proficiency Test.

Age

Table 10 shows that there was no significant correlation between age and Individual Physical Proficiency Test scores, where r (168) = -.12, p = .13.

Race

There was no significant difference in the mean point-scores on the Individual Physical Proficiency Test between different races, $F(3,166) = .87$, $p = .49$ (See Table 33 in Appendix J.)

Position in Family

There was no significant difference in the mean point-scores on the Individual Physical Proficiency Test between recruits who hold different birth positions in their families, $F(3,166) = .74$, $p = .53$. (See Table 34 in Appendix J.)

Number of Languages Spoken

There was also no significant difference in the mean point-scores on the Individual Physical Proficiency Test between bilingual and multilingual recruits, where $t(167) = -1.55$, $p = .12$. (See Table 35 in Appendix J.)

Educational Level

There was no significant difference in the mean point-scores on the Individual Physical Proficiency Test between recruits who have different levels of education, $F(3,165) = 1.02$, $p = .39$. (See Table 36 in Appendix J.)

Factors Predicting Physical Performance

Research Question 2b addresses the second research question. It assesses the factors that predict physical performance. Appendix L presents the inter-correlations between factors that were found to be significantly related to physical performance in the previous sections. The principle of parsimony was applied. Stepwise multiple regression analysis resulted in three factors that predicted physical performance on the Individual Physical Proficiency Test. These were pre-enlistment fitness level, impulsiveness and planful problem solving. Overall these factors accounted for 17 % of Individual Physical Proficiency Test scores, where $R^2 = .17$, $p < .01$. (See Table 15.)

Of these factors, pre-enlistment fitness level contributed to 8% of the explained variance of physical performance, impulsiveness accounted for 5% and planful problem solving accounted for 4%. Hence, the more physically fit the recruit is, the

greater use of planful problem solving and the less impulsive he is, the better his physical performance will be on the Individual Physical Proficiency Test.

Table 15. Factors Predicting Physical Performance on the Individual Physical Proficiency Test

Factors	R Square	Cumulative R	Standardized Beta Coefficient	F Change	p
Pre-Enlistment Fitness Level	.08	.08	.22	F (1, 166) = 13.81	.01**
Impulsiveness	.05	.13	- .22	F (1, 165) = 9.81	.01**
Planful Problem Solving	.04	.17	.21	F (1, 164) = 8.33	.01**

Note.
**p < .01.
Critical r (168) = .20, p < .05
Critical F (1,164) = 3.91, p < .05.
Critical F (1,165) = 3.91, p < .05.
Critical F (1,166) = 3.91, p < .05.
Critical r (168) = .25, p < .01.
Critical F (1,164) = 6.81, p < .01.
Critical F (1,165) = 6.81, p < .01.
Critical F (1,166) = 6.81, p < .01.

Factors Related to Completion of Basic Military Training

Research Question 1c looks at the factors related to whether recruits completed Basic Military Training or were taken out of course due to missing out on significant portions of training or due to failure in too many tests.

Personality

Table 16 shows that there was a very significant difference in mean neuroticism scores between recruits who passed Basic Military Training and those who were taken out of course, where t (198) = -2.62, $p < .01$. Recruits who passed had significantly lower neuroticism scores those who were taken out of course

Table 16. Comparison of Mean Scores for Factors Related to Coping between Recruits Who Completed and Did Not Complete Basic Military Training

Factors		Completion of Basic Military Training						df	t	p
		Pass BMT			Out of Course					
		n	M	SD	n	M	SD			
1.	Personal Problems	185	6.75	6.06	15	9.33	7.34	198	-1.57	.20
2.	Social Support	185	47.51	6.55	14	48.93	6.37	198	-.78	.44
3.	Personality									
	Neuroticism	185	10.69	4.86	15	14.20	6.32	198	-2.62	.01**
	Extraversion	185	14.25	4.53	15	15.13	2.80	198	-.74	.46
	Psychoticism	185	6.41	3.26	15	7.60	4.91	198	-1.31	.19
	Social Desirability	185	9.26	3.76	15	8.00	3.95	198	1.24	.22
	Impulsiveness	185	10.68	2.28	15	11.60	2.20	198	-1.50	.13
4.	Coping Strategies									
	Confrontative Coping	184	6.13	2.57	11	5.09	2.12	193	1.31	.19
	Distancing	184	7.46	2.88	11	7.27	2.53	193	.21	.83
	Self-Controlling	184	9.11	2.86	11	9.18	2.71	193	-.08	.94
	Seeking Social Support	184	7.50	3.56	11	9.91	3.42	193	-2.19	.03*
	Accepting Responsibility	184	5.26	2.10	11	5.36	2.16	193	-.16	.88
	Escape-Avoidance	184	6.65	3.65	11	9.27	3.00	193	-2.34	.02*
	Planful Problem Solving	184	8.31	3.05	11	8.36	2.80	193	-.06	.95
	Positive Reappraisal	184	8.41	3.29	11	10.00	3.03	193	-1.57	.12
5.	Age	185	20.19	.74	15	20.67	1.40	198	-2.22	.03*

Note.
*$p < .05$. **$p < .01$.
Critical t (193) = 1.96, $p < .05$. Critical t (193) = 2.58, $p < .01$.
Critical t (198) = 1.96, $p < .05$. Critical t (198) = 2.58, $p < .01$.

Coping Strategies

Table 16 shows that there was a significant difference in mean seeking support scores between those who passed and those who were taken out of course, where $t\ (193) = -2.19$, $p < .05$. Those who passed used significantly less social support as a coping strategy than those who were taken out of course. Results also indicate that there was a significant difference in the mean escape-avoidance scores between groups, where $t\ (193) = -2.34$, $p < .05$. Hence recruits who passed used significantly less escape-avoidance as a coping strategy than recruits who were taken out of course

Deterioration in Medical Status during Enlistment

Analysis using chi-square test showed that there was a significant difference in the Basic Military Training pass rate between those whose medical status deteriorated during the training period and those whose health status remained unchanged, $\chi^2\ (1, N = 194) = 28.10$, $p < .01$. One in two recruits whose medical status deteriorated during the training period was taken out of course, compared to one in 33 recruits whose medical status had not changed. (See Table 17.)

Table 17. Deterioration in Medical Status and Basic Military Training Pass Rates

Medical Status	Pass Rates in BMT				Total	
	Pass BMT		Out of Course			
	n	%	n	%	n	%
No Change in Medical Status during Enlistment	167	86 1%	5	2 6%	172	88 7%
Developed New or Worsened Medical Condition during Enlistment	15	7 7%	7	3 6%	22	11 3%
Total	182	93 8%	12	6 2%	194	100 0%
χ^2 (1, N = 194) = 28.10, p = .001**						

Note.
**p< 01
Critical χ^2 (1) = 3 84, p < 05 Critical χ^2 (1) = 6 64, p < 01

Confinement

Analysis using chi-square test and Fisher's Exact test showed that there was a significant difference in the Basic Military Training pass rates between those who were confined during the high stress period and those who were not confined, χ^2 (1, N = 194) = 12 75, p < 05 One in two recruits who was confined during the high stress period was taken out of course, whereas only one in 22 recruits who was not confined was taken out of course (See Table 18)

Table 18. Comparison between Those Who and Were Not Confined during the High Stress Period and Basic Military Training Pass Rates

Confinement during High Stress Period	Pass Rates in BMT				Total	
	Pass BMT		Out of Course			
	n	%	n	%	n	%
No	181	93.3%	8	4.1%	189	97.4%
Yes	3	1.5%	2	1.0%	5	2.6%
Total	184	94.8%	10	5.2%	194	100.0%
χ^2 (1, N = 194) = 12.75, p = .001**						

Note.
**p<.01
Critical χ^2 (1) = 3.84, p < .05 Critical χ^2 (1) = 6.64, p < .01

Age

Table 16 shows that there was a significant difference in mean age between recruits who passed the Basic Military Training course and those who were taken out of course. Recruits who were taken out of course were older than recruits who passed Basic Military Training, where t (198) = -2.22, p < .05.

Race

In Table 19, analysis using chi-square test showed that there was a significant difference in the Basic Military Training pass rates between recruits from different races, χ^2 (1, N = 200) = 6.88, p < .01. One in three non-Chinese recruits was taken out of course, compared to one in 15 Chinese.

Table 19. Comparison of Race and Basic Military Training Pass Rates

Race	Pass Rates in BMT				Total	
	Pass BMT		Out of Course			
	n	%	n	%	n	%
Chinese	172	86.0%	11	5.5%	183	91.5%
Non-Chinese	13	6.5%	4	2.0%	17	8.5%
Total	185	92.5%	15	7.5%	200	100.0%
χ^2 (1, N = 200) = 6.88, p =.009**						

Note.

**p<.01.

Critical χ^2 (1) = 3.84, p < .05. Critical χ^2 (1) = 6.64, p < .01.

Other Factors

The following factors were not significantly related with completion of Basic Military Training.

Personal Problems

Analysis using t-test for unequal variance shows that there was no significant difference in the mean number of problems reported by recruits who passed Basic Military Training and those who did not complete training, where $t(198) = -1.57$, $p = .20$. (See Table 16.)

Social Support

The difference in mean social support scores between the two groups was not found to be significant, where $t(198) = -.78$, $p = .44$. (See Table 16.)

Mental Preparedness

There was no difference in the passing rates between those who were mentally not prepared, somewhat prepared, prepared and confident, χ^2 (1, N = 199) = .08, p = .77. (See Table 41 in Appendix J.)

Physical Preparedness

There was no difference in the passing rates between those who were physically not prepared, somewhat prepared, prepared and confident, χ^2 (1, N = 199) = .01, p = .91. (See Table 42 in Appendix J.)

Physical Fitness Level

There was no significant difference in the passing rate of Basic Military Training between recruits who had a silver award in the pre-enlistment physical fitness test and those who had gold award, χ^2 (1, N = 199) = .38, p = .54. (See Table 43 in Appendix J.)

Pre-Enlistment Medical Status

There was no difference in the passing rate of Basic Military Training between those with no pre-existing medical problems and those who had pre-existing minor medical problems, χ^2 (1, $\underline{N}$ = 197) = 1.56, p = .21. (See Table 44 in Appendix J.)

Type of Medical Leave

There was no significant difference in the Basic Military Training pass rates between those who did not take medical leave, and those who were given medical leave to rest in their bunks or at home, χ^2 (1, $\underline{N}$ = 194) = 3.36, p = .07. (See Table 45 in Appendix J.)

Secondary Appointment

There was no significant difference in the Basic Military Training pass rates between those who were given a secondary appointment and those who were not, χ^2 (1, $\underline{N}$ = 195) = .56, p = .45. (See Table 46 in Appendix J.)

Family Income

There was no significant difference in the Basic Military Training pass rates between recruits who come from different family-income groups, χ^2 (1, $\underline{N}$ = 200) = 3.01, p = .08. (See Table 47 in Appendix J.)

Type of Housing

There was no significant difference in the Basic Military Training pass rates between recruits who come from different types of housing, χ^2 (1, $\underline{N}$ = 200) = .14, p = .70. (See Table 48 in Appendix J.)

Position in Family

There was no significant difference in the Basic Military Training pass rates between recruits who come from different birth positions in their family, χ^2 (1, $\underline{N}$ = 200) = .65, p = .42. (See Table 49 in Appendix J.)

Number of Languages Spoken

There was no significant difference in the Basic Military Training pass rates between those who were bilingual and those who were multilingual, χ^2 (1, N = 195) = 1.96, p = .16. (See Table 50 in Appendix J.)

Educational Level

There was no significant difference in the Basic Military Training pass rates between recruits with different levels of education, χ^2 (1, N = 199) = .09, p = .76. (See Table 51 in Appendix J.)

Factors Predicting the Completion of Basic Military Training

Research Question 2c addresses the second research question on what are the predictors of failure to complete Basic Military Training. Using logistic regression analysis, it was found that two factors predicted Basic Military Training passing rate. These were deterioration in medical status during enlistment and confinement. (See Table 20.) For deterioration in medical status, the odds ratio was 10.85, p < .01. This implies that recruits whose medical condition deteriorated were 10.85 times more likely to be taken out of the Basic Military Training course than recruits whose health

status remained unchanged. For confinement, the odds ratio was 12.58, $p < .05$. This implies that recruits who were confined in the weekends were 12.58 times more likely to be taken out of the Basic Military Training course than recruits who were not confined.

Table 20. Factors Affecting Failure to Complete Basic Military Training

Variables	Standardized Beta Coefficient	df	p	R	Odds Ratio
Neuroticism	.10		27	.00	1.11
Seeking Social Support	.08	1	25	.00	1.08
Escape-Avoidance	.13	1	30	.00	1.14
Age	.18		69	.00	1.19
Race	.64		28	.00	1.89
Deterioration in Medical Status	2.38	1	.01**	.29	10.85
Confinement	2.53	1	.02*	.22	12.58
Constant	-16.03	1	.08		

Note.

*$p < .05$. **$p < .01$.

Model χ^2 (7, N = 190) = 20.39, $p < .01$.

Hosmer and Lemeshow goodness-of-fit test, χ^2(8, N = 190) = 6.17, $p = .63$

Effects of Personality and Situation on Coping

Research Question 3 explores firstly, the interaction of situation and personality. Situation refers to the time of measurement of coping and includes coping before enlistment, during the first three weeks of Basic Military Training (high stress period) and during the last three weeks of training (low stress period). Next, the main effects of situations and the main effects of personality are explored. The general linear model repeated measures test was used to analyze the effects of situation and personality as well as their interactions.

Extraversion and Coping

Table 21 shows the main effects of time, interactions between time and extraversion and the main effects of extraversion on coping.

Interaction Effects

Table 21 shows that there was no significant interaction effect between time and extraversion on the use of all the coping strategies. This suggests that both time and extraversion were independent factors and had additive effects on the use of coping strategies to affect psychological well-being. F (4,192) range from .05 to 1.32 for each of the coping strategies, with $p > .05$.

Time Effects

Significant differences were found across time and situations for all the coping strategies except the use of distancing, with F (2,192) ranging from 5.27 to 24.6, $p < .01$. Post hoc analysis using the Scheffe test for multivariate analysis showed that significantly more confrontative coping, self control, seeking social support, accepting responsibility, escape avoidance, planful problem solving and positive reappraisal were used before enlistment than during enlistment. There was no significant difference in the use of these strategies between the high and low stress periods of training. The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms. (See Table 21.)

Personality Effects

Table 21 shows significant differences between groups in the use of planful problem solving, with F (2,192) = 6.62, $p < .01$ and positive appraisal, with F (2,192) = 6.54, $p < .01$. Post hoc analysis using Scheffe test showed that introverted recruits used significantly less of these strategies than did the medium and high extraversion groups before enlistment and during high stress periods. This was associated with significantly more psychological symptoms amongst introverted recruits. (See Figures 3 to 5.)

Time Effects

Significant differences were found across time and situations for all the coping strategies except the use of distancing, with F (2,192) ranging from 5.27 to 24.6, $p < .01$. Post hoc analysis using the Scheffe test for multivariate analysis showed that significantly more confrontative coping, self control, seeking social support, accepting responsibility, escape avoidance, planful problem solving and positive reappraisal were used before enlistment than during enlistment. There was no significant difference in the use of these strategies between the high and low stress periods of training. The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms. (See Table 21.)

Personality Effects

Table 21 shows significant differences between groups in the use of planful problem solving, with F (2,192) = 6.62, $p < .01$ and positive appraisal, with F (2,192) = 6.54, $p < .01$. Post hoc analysis using Scheffe test showed that introverted recruits used significantly less of these strategies than did the medium and high extraversion groups before enlistment and during high stress periods. This was associated with significantly more psychological symptoms amongst introverted recruits. (See Figures 3 to 5.)

Table 21. Main Effects of Time and Extraversion and Their Interactions on Coping Strategies and General Symptoms

Coping Strategies	Extraversion	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Confrontative Coping	Within Group Time Effects	146.23	2	73.11	17.51	.01**						
	Interaction with Personality	3.08	4	.77	0.19	.95						
	Between Groups Personality Effects	39.91	2	19.95	1.90	.15	-	-	-	-	-	-
Distancing	Within Group Time Effects	2.41	2	1.21	0.23	.80						
	Interaction with Personality	4.88	4	1.22	0.23	.92						
	Between Groups Personality Effects	57.52	2	28.76	2.36	.10	-	-	-	-	-	-
Self Control	Within Group Time Effects	160.91	2	80.46	16.48	.01**						
	Interaction with Personality	25.74	4	6.44	1.32	.26						
	Between Groups Personality Effects	6.82	2	3.41	0.24	.79	-	-	-	-	-	-
Seeking Social Support	Within Group Time Effects	182.21	2	91.11	13.71	.01**						
	Interaction with Personality	10.70	4	2.68	0.40	.81						
	Between Groups Personality Effects	92.25	2	46.12	2.73	.07	-	-	-	-	-	-
Accepting Responsibility	Within Group Time Effects	132.57	2	66.29	23.01	.01**						
	Interaction with Personality	0.61	4	0.15	0.05	.99						
	Between Groups Personality Effects	10.49	2	5.24	0.71	.49	-	-	-	-	-	-

Note.
(A) Low Group: n = 43, (B) Normal Group: n = 97, (C) High Group n = 52
**p < .01.
Post-hoc between-group comparisons using Scheffe test are given
Critical F (2, 192) = 3.09, p < .05 Critical F (2, 192) = 4.82, p < .01
Critical F (4, 192) = 2.46, p < .05 Critical F (4, 192) = 3.51, p < .01

Table 21. Main Effects of Time and Extraversion and Their Interactions on Coping Strategies and General Symptoms (Continued)

Coping Strategies and General Symptoms	Extraversion	Sum of Squares	df	Mean Square	F Ratio	p	Day 1 Post Hoc	Day 1 p	Week 3 Post Hoc	Week 3 p	Week 10 Post Hoc	Week 10 p
Escape-Avoidance	Within Group Time Effects	78 71	2	39 36	5 27	01**						
	Interaction with Personality	7 58	4	1 89	0 25	91						
	Between Groups Personality Effects	86.24	2	43 12	1 56	21	-	-	-	-	-	-
Planful Problem Solving	Within Group Time Effects	178 35	2	89 18	19 47	01**						
	Interaction with Personality	8.35	4	2 09	0 46	77						
	Between Groups Personality Effects	193 43	2	96 71	6 62	01**	A-C B-C	01** 04*	A-C B-C	02* 02*	-	-
Positive Reappraisal	Within Group Time Effects	305 03	2	152 52	24 60	01**						
	Interaction with Personality	9.90	4	2 47	0 40	81						
	Between Groups Personality Effects	237 92	2	118 96	6 54	01**	A-C	01**	A-C B-C	01** 05*	-	-
General Symptoms	Within Group Time Effects	4035 15	2	2017 58	24 66	01**						
	Interaction with Personality	199 48	4	49 87	0 61	66						
	Between Groups Personality Effects	7444 89	2	3722 44	8 82	01**	A-B A-C B-C	02* 01** 01**	A-C	01**	-	-

Note.
(A) Low Group n = 43, (B) Normal Group n = 97, (C) High Group n = 52
*p < 05 **p < 01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3 09, p < 05 Critical F (2, 192) = 4 82, p < 01
Critical F (4, 192) = 2 46, p < 05 Critical F (4, 192) = 3 51, p < 01

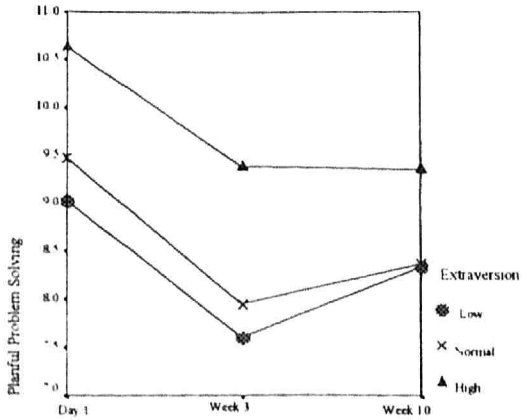

Figure 3. Extraversion and Planful Problem Solving

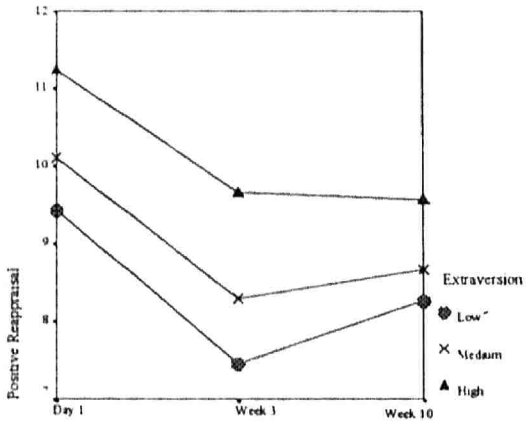

Figure 4. Extraversion and Positive Reappraisal

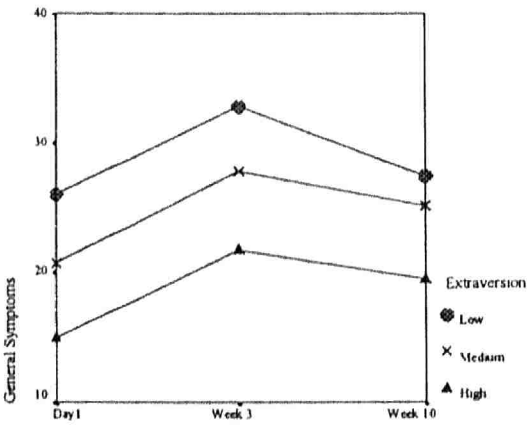

Figure 5. Extraversion and General Symptoms

Neuroticism and Coping

Table 22 shows the main effects of time, interactions between time and neuroticism and the main effects of neuroticism on coping

Interaction Effects

Table 22 shows that there were no significant interaction effects between time and neuroticism on the use of all the coping strategies, where F (4,192) range from .05 to 1.6, $p > .05$. This suggests that both time and neuroticism were independent of each other and had additive effects on the use of coping strategies to affect psychological well being.

Time Effects

Significant differences were found across time and situations for all the coping strategies except the use of distancing, where F (2,192) ranged from 10.12 to 23.54, $p < .01$ and F (2,192) = 4.12, $p < .05$ for escape avoidance. Post hoc analysis using the Scheffe test for multivariate analysis showed that significantly more confrontative coping, self control, seeking social support, accepting responsibility, escape avoidance, planful problem solving and positive reappraisal were used before enlistment than during enlistment. There was no significant difference in the use of these strategies between the high and low stress periods of training. The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms. (See Table 22.)

Personality Effects

Table 22 shows that there were significant differences between groups in the use of self control, where F (2,192) = 7 92, p < 01, escape-avoidance, where F (2,192) = 31 45, p < 01 and planful problem solving, where F (2,192) = 7 47, p < 01 Post hoc analysis shows that recruits high in neuroticism used significantly more self-control than did the medium group both before and after enlistment They also used significantly more escape-avoidance throughout than the medium and low group Recruits who were low in neuroticism used significantly less escape-avoidance than the medium and high groups both before and after enlistment They also used significantly more the medium group Both situational factors and personality factors impact on psychological well being Recruits high in neuroticism reported significantly more symptoms than the other two groups Recruits low in neuroticism, on the other hand, reported significantly less symptoms than the other two groups. (See Figures 6 to 9)

Table 22. Main Effects of Time and Neuroticism and Their Interactions on Coping Strategies and General Symptoms

Coping Strategies	Neuroticism	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Confrontative Coping	Within Group Time Effects	99 43	2	49 72	12 02	01**						
	Interaction with Personality	17 81	4	4 45	1 08	37						
	Between Groups Personality Effects	60 16	2	30 08	2 89	06	-	-	-	-	-	-
Distancing	Within Group Time Effects	0 29	2	0 15	0 03	97						
	Interaction with Personality	33 09	4	8 27	1 60	18						
	Between Groups Personality Effects	27 19	2	13 60	1 10	34	-	-	-	-	-	-
Self Control	Within Group Time Effects	172 13	2	86 07	17 45	01**						
	Interaction with Personality	6 56	4	1 64	0 33	86						
	Between Groups Personality Effects	208 55	2	104 28	7 92	01**	B-C	03*	B-C	03*	B-C	01**
Seeking Social Support	Within Group Time Effects	134 30	2	67 15	10 12	01**						
	Interaction with Personality	15 73	4	3 93	0 53	69						
	Between Groups Personality Effects	23 84	2	11 92	0 69	50	-	-	-	-	-	-
Accepting Responsibility	Within Group Time Effects	192 73	2	64 87	22 61	01**						
	Interaction with Personality	5 01	4	1 25	0 44	78						
	Between Groups Personality Effects	14 06	2	7 03	0 96	39	-	-	-	-	-	-

Note.
(A) Low Group n = 40, (B) Normal Group n = 116, (C) High Group n = 36
*p < 05 **p < 01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3 09, p < 05 Critical F (2, 192) = 4 82, p < 01
Critical F (4, 192) = 2 46, p < 05 Critical F (4, 192) = 3 51, p < 01

Table 22. Main Effects of Time and Neuroticism and Their Interactions on Coping Strategies and General Symptoms (Continued)

Coping Strategies and General Symptoms	Neuroticism	Sum of Squares	df	Mean Square	F Ratio	p	Day 1 Post Hoc	Day 1 p	Week 3 Post Hoc	Week 3 p	Week 10 Post Hoc	Week 10 p
Escape-Avoidance	Within Group Time Effects	61 57	2	30 78	4 12	02*						
	Interaction with Personality	1 62	4	0 41	0 05	99						
	Between Groups Personality Effects	1330 44	2	665 22	31 45	01**	A-B	03*	A-B	01**	A-B	03*
							A-C	01**	A-C	01**	A-C	01**
							B-C	01**	B-C	01**	B-C	01**
Planful Problem Solving	Within Group Time Effects	151 72	2	75 86	16 50	01**						
	Interaction with Personality	1 94	4	0 49	0 11	98						
	Between Groups Personality Effects	216 30	2	108 15	7 47	01**	A-B	01**	A-B	13*	A-B	01**
Positive Reappraisal	Within Group Time Effects	292 08	2	146 04	23 54	01**						
	Interaction with Personality	8 00	4	2 00	0 32	86						
	Between Groups Personality Effects	60 21	2	30 10	1 57	21	-	-	-	-	-	-
General Symptoms	Within Group Time Effects	3689 92	2	1844 96	22 64	01**						
	Interaction with Personality	322 05	4	80 51	1 00	41						
	Between Groups Personality Effects	24879 15	2	12439 58	37 72	01**	A-B	01**	A-B	01**	A-B	01**
							A-C	01**	A-C	01**	A-C	01**
							B-C	01**	B-C	01**	B-C	01**

Note.
(A) Low Group n = 40, (B) Normal Group n = 116, (C) High Group n = 36
*p < 05 **p < 01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3 09, p < 05 Critical F (2, 192) = 4 82, p < 01
Critical F (4, 192) = 2 46, p < 05 Critical F (4, 192) = 3 51 p < 01

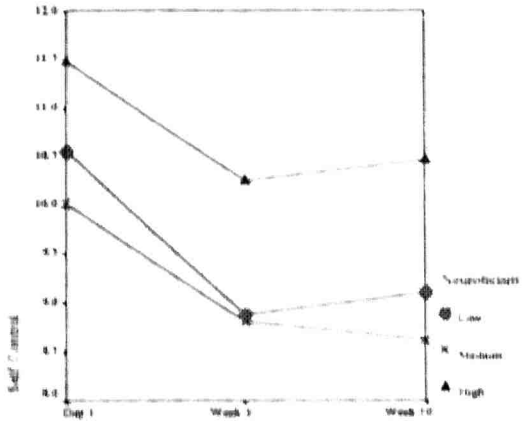

Figure 6. Neuroticism and Self Control

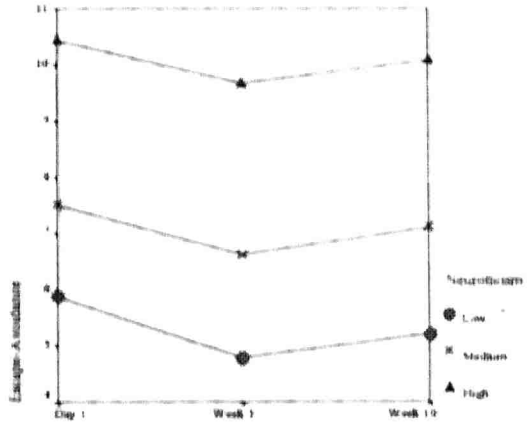

Figure 7. Neuroticism and Escape-Avoidance

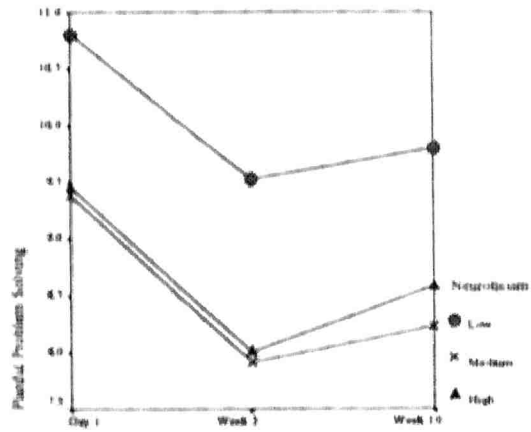

Figure 8. Neuroticism and Planful Problem Solving

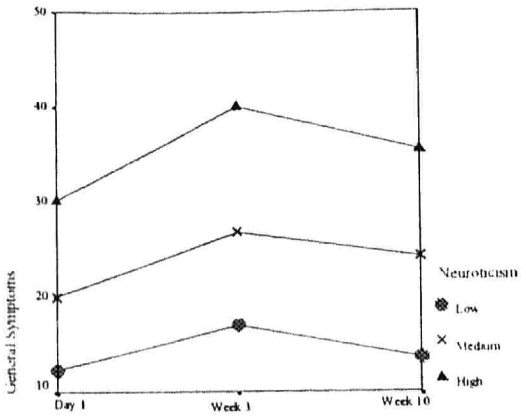

Figure 9. Neuroticism and General Symptoms

Psychoticism and Coping

Table 23 shows the main effects of time, interactions between time and psychoticism and the main effects of psychoticism on coping.

Interaction Effects

Table 23 shows that there were no significant interaction effects between time and psychoticism, where F (4,192) ranged from .43 to 1.64, $p > .05$. This suggests that both time and psychoticism were independent factors that had additive effects on the use of coping strategies to affect psychological well being.

Time Effects

Table 23 shows that significant differences were found across time and situations for all the coping strategies except the use of distancing, where F (2,192) ranged from 5 09 to 22 30, p < 021 Post hoc analysis showed that significantly more of these strategies were used before enlistment than during enlistment There was no significant difference in the use of these strategies between the high and low stress periods of training The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms

Personality Effects

Table 23 shows that significant differences were found between groups in the use of confrontative coping, where F (2,192) = 3 38, p < 05 and escape avoidance, where F (2,192) = 8 51, p < 01 During high training stress period, recruits high in psychoticism used significantly more confrontative coping than the low group They also used significantly more escape avoidance than the low group throughout the three periods Recruits high in psychoticism reported significantly more symptoms than the other two groups only before enlistment but not after (See Figures 10 to 12)

Table 23. Main Effects of Time and Psychoticism and Their Interactions on Coping Strategies and General Symptoms

Coping Strategies	Psychoticism	Sum of Squares	df	Mean Square	F Ratio	p	Day 1 Post Hoc	Day 1 p	Week 3 Post Hoc	Week 3 p	Week 10 Post Hoc	Week 10 p
Confrontative Coping	Within Group Time Effects	94 33	2	47 17	11 32	01**						
	Interaction with Personality	7 18	4	1 79	43	79						
	Between Groups Personality Effects	70 03	2	35 02	3 38	04*	-	-	A-C	04*	-	-
Distancing	Within Group Time Effects	9 63	2	4 81	92	40						
	Interaction with Personality	17 52	4	4 38	84	50						
	Between Groups Personality Effects	42 70	2	21 35	1 74	18	-	-	-	-	-	-
Self Control	Within Group Time Effects	147 08	2	73 54	14 91	01**						
	Interaction with Personality	6 04	4	1 51	31	87						
	Between Groups Personality Effects	6 33	2	3 16	22	80	-	-	-	-	-	-
Seeking Social Support	Within Group Time Effects	116 12	2	58 06	8 79	01**						
	Interaction with Personality	25 20	4	6 30	95	43						
	Between Groups Personality Effects	45 03	2	22 51	1 32	27	-	-	-	-	-	-
Accepting Responsibility	Within Group Time Effects	111 80	2	55 90	19 56	01**						
	Interaction with Personality	9 23	4	2 31	81	52						
	Between Groups Personality Effects	3 17	2	1 58	00	1 00	-	-	-	-	-	-

Note.
(A) Low Group n = 33, (B) Normal Group n = 127, (C) High Group n = 32
*p < .05. **p < .01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3 09, p < .05 Critical F (2, 192) = 4 82, p < .01
Critical F (4, 192) = 2 46, p < .05 Critical F (4, 192) = 3 51, p < .01

Table 23. Main Effects of Time and Psychoticism and Their Interactions on Coping Strategies and General Symptoms (Continued)

Coping Strategies and General Symptoms	Psychoticism	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Escape-Avoidance	Within Group Time Effects	75 59	2	37 79	5 09	01**						
	Interaction with Personality	19 76	4	4 94	67	62						
	Between Groups Personality Effects	440 33	2	220 16	8 51	01**	A-C B-C	01** 01**	A-C	01**	A-C	04*
Planful Problem Solving	Within Group Time Effects	102 19	2	51 10	11 29	01**						
	Interaction with Personality	29 76	4	7 42	1 64	16						
	Between Groups Personality Effects	40 26	2	20 13	1 31	27	-	-	-	-	-	-
Positive Reappraisal	Within Group Time Effects	275 05	2	137 52	22 30	01**						
	Interaction with Personality	22 49	4	5 62	91	46						
	Between Groups Personality Effects	92 28	2	46 14	2 44	09	-	-	-	-	-	-
General Symptoms	Within Group Time Effects	3238 44	2	1619 22	19 92	01**						
	Interaction with Personality	406 99	4	101 75	1 25	29						
	Between Groups Personality Effects	3959 48	2	1979 74	4 49	01**	A-C B-C	01** 01**	-	-	-	-

Note.
(A) Low Group n = 33, (B) Normal Group n = 127, (C) High Group n = 32
*p < 05 **p < 01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3 09, p < 05 Critical F (2, 192) = 4 82, p < 01
Critical F (4, 192) = 2 46, p < 05 Critical F (4, 192) = 3 51, p < 01

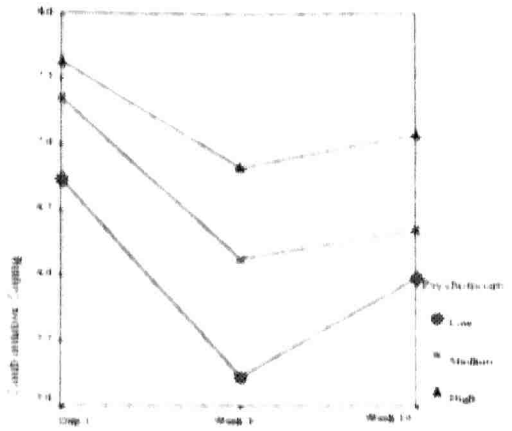

Figure 10. Psychoticism and Confrontative Coping

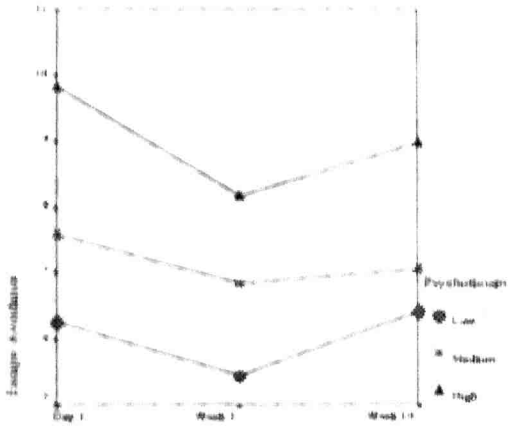

Figure 11. Psychoticism and Escape-Avoidance

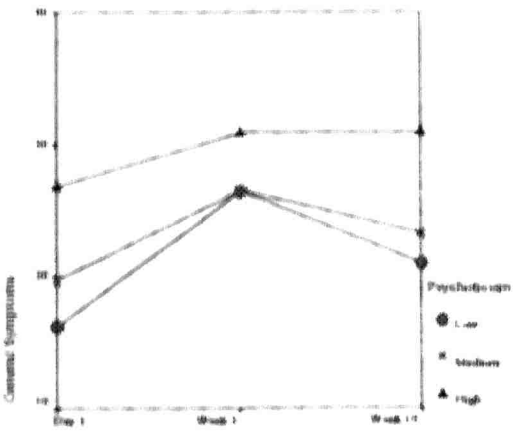

Figure 12. Psychoticism and General Symptoms

Social Desirability and Coping

Table 24 shows the main effects of time, interactions between time and social desirability and the main effects of social desirability on coping

Interaction Effects

Table 24 shows that there were no significant interaction effects between time and social desirability on the use of all the coping strategies, where F (4,192) ranged from .26 to 1.5, p > .05. This suggests that both time and this personality were independent factors that had additive effects on the use of coping strategies to affect psychological well being

Time Effects

Table 24 shows that significant differences were found across time and situations in the use of confrontative coping, seeking social support, accepting responsibility, planful problem solving and positive appraisal, where F (2, 192) ranged from 8.51 to 24.04, p < .01. Post-hoc analysis showed that significantly more of these strategies were used before enlistment than during enlistment, but not between the high and low stress periods of training. The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms

Personality Effects

Table 24 shows that significant differences were found between groups in the use of escape avoidance over the three period, where F (2,192) = 9.68, p < .01. Recruits low in social desirability used significantly more escape-avoidance than the medium and high groups after enlistment. They also used significantly less planful problems solving during the low stress period of training, where F (2,192) = 4.55, p < .05. These recruits also reported significantly more symptoms than the other two groups during enlistment. (See Figures 13 and 15)

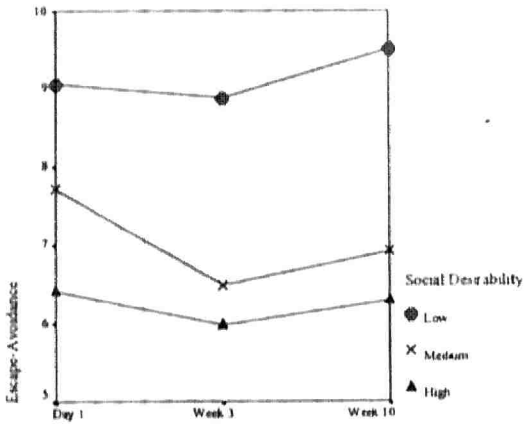

Figure 13. Social Desirability and Escape-Avoidance

Table 24. Main Effects of Time and Social Desirability and Their Interactions on Coping Strategies and General Symptoms

Coping Strategies	Social Desirability	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Confrontative Coping	Within Group Time Effects	88.88	2	44.44	10.68	.01**						
	Interaction with Personality	8.21	4	2.05	.49	.74						
	Between Groups Personality Effects	40.27	2	20.13	1.92	.15	-	-	-	-	-	-
Distancing	Within Group Time Effects	3.94	2	1.97	.38	.68						
	Interaction with Personality	31.21	4	7.80	1.50	.20						
	Between Groups Personality Effects	20.39	2	10.19	.82	.44	-	-	-	-	-	-
Self Control	Within Group Time Effects	3.94	2	1.97	.38	.68						
	Interaction with Personality	31.21	4	7.80	1.50	.20						
	Between Groups Personality Effects	20.39	2	10.19	.82	.44	-	-	-	-	-	-
Seeking Social Support	Within Group Time Effects	112.99	2	56.49	8.51	.01**						
	Interaction with Personality	13.90	4	3.48	.52	.72						
	Between Groups Personality Effects	26.87	2	13.44	.78	.46	-	-	-	-	-	-
Accepting Responsibility	Within Group Time Effects	137.49	2	68.75	24.04	.01**						
	Interaction with Personality	8.50	4	2.13	.74	.56						
	Between Groups Personality Effects	11.90	2	5.95	.81	.45	-	-	-	-	-	-

Note.
(A) Low Group n = 34, (B) Normal Group n = 123, (C) High Group n = 35
**p < .01
Post-hoc between-group comparisons using Scheffe Test are given
Critical F (2, 192) = 3.09, p < .05 Critical F (2, 192) = 4.82, p < .01
Critical F (4, 192) = 2.46, p < .05 Critical F (4, 192) = 3.51, p < .01

Table 24. Main Effects of Time and Social Desirability and Their Interactions on Coping Strategies and General Symptoms (Continued)

Coping Strategies and General Symptoms	Social Desirability	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Escape-Avoidance	Within Group Time Effects	27.67	2	13.84	1.87	.16						
	Interaction with Personality	28.93	4	7.23	.98	.42						
	Between Groups Personality Effects	495.19	2	247.60	9.68	.01**	A-C	.01**	A-B A-C	.01** .01**	A-B A-C	.01** .01**
Planful Problem Solving	Within Group Time Effects	166.88	2	83.44	18.19	.01**						
	Interaction with Personality	5.74	4	1.44	.31	.87						
	Between Groups Personality Effects	135.61	2	67.81	4.55	.01**	-	-	-	-	A-B	.04*
Positive Reappraisal	Within Group Time Effects	234.34	2	117.17	18.87	.01**						
	Interaction with Personality	6.49	4	1.62	.26	.90						
	Between Groups Personality Effects	70.17	2	35.08	1.84	.16	-	-	-	-	-	-
General Symptoms	Within Group Time Effects	3727.57	2	1863.78	23.91	.01**						
	Interaction with Personality	1665.21	4	416.30	5.34	.01**						
	Between Groups Personality Effects	9155.75	2	4577.88	11.09	.01**	-	-	A-B A-C	.01** .01**	A-B A-C	.01** .01**

Note.
(A) Low Group: n = 34, (B) Normal Group: n = 123, (C) High Group: n = 35.
*p < .05. **p < .01
Post hoc between-group comparisons are given.
Critical F (2, 192) = 3.09, p < .05. Critical F (2, 192) = 4.82, p < .01.
Critical F (4, 192) = 2.46, p < .05 Critical F (4, 192) = 3.51, p < .01.

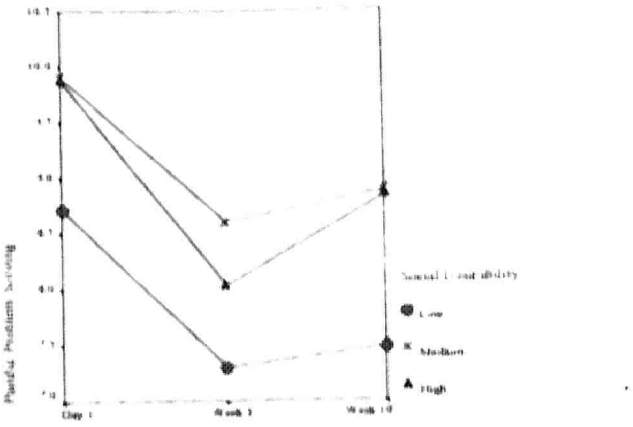

Figure 14. Social Desirability and Planful Problem Solving

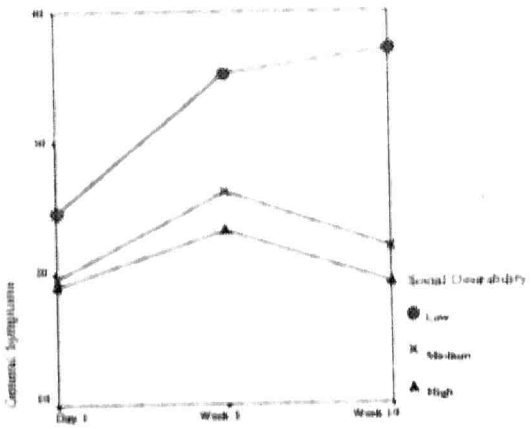

Figure 15. Social Desirability and General Symptoms

Impulsiveness and Coping

Table 25 shows the main effects of time, interactions between time and impulsiveness and the main effects of impulsiveness on coping

Interaction Effects

Table 25 shows that were no significant interaction effects between time and impulsiveness on the use of all the coping strategies, F (4,192) ranged from .54 to 1.76, $p > .05$. This suggests that both time and impulsiveness were independent factors that had additive effects on the use of coping strategies.

Time Effects

Table 25 shows that significant differences were found across time and situations for all the coping strategies except the use of distancing, where F (2,192) ranged from 4.70 to 26.90, $p < .01$. Post hoc analysis showed that these strategies were used significantly more before enlistment than during enlistment. There was no significant difference in the use of these strategies between the high and low stress periods of training. The use of less overall coping strategies after enlistment was associated with a significant increase in psychological symptoms.

Personality Effects

Table 25 shows that significant differences were found between groups in the use of escape-avoidance, where F (2,192) = 12.84, $p < .01$. Recruits high in impulsiveness used

significantly more escape-avoidance than the other two groups. They also reported significantly more symptoms than the other two groups. (See Figures 16 and 17.)

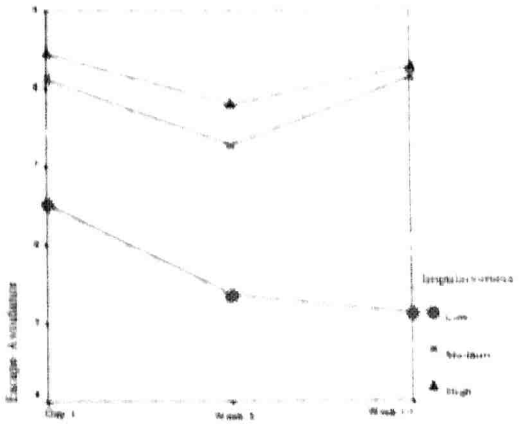

Figure 16. Impulsiveness and Escape-Avoidance

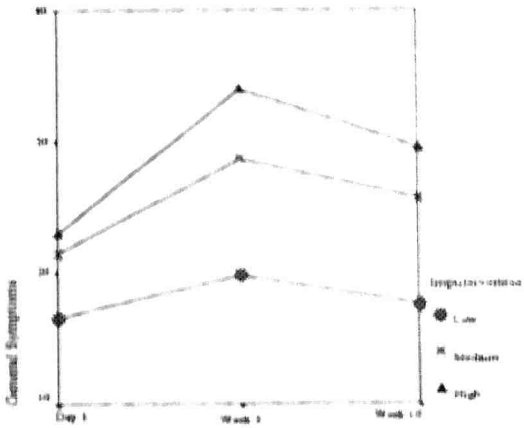

Figure 17. Impulsiveness and General Symptoms

Table 25. Main Effects of Time and Impulsiveness and Their Interactions on Coping Strategies and General Symptoms

Coping Strategies	Impulsiveness	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Confrontative Coping	Within Group Time Effects	167.30	2	83 65	20 36	01**						
	Interaction with Personality	28 98	4	7.24	1 76	14						
	Between Groups Personality Effects	33 45	2	16 72	1 59	21	-	-	-	-	-	-
Distancing	Within Group Time Effects	2 65	2	1 32	25	78						
	Interaction with Personality	13 45	4	3 36	64	63						
	Between Groups Personality Effects	45 45	2	22 73	1 86	16	-	-	-	-	-	-
Self Control	Within Group Time Effects	206 73	2	103 37	21 13	01**						
	Interaction with Personality	21 99	4	5 50	1 12	35						
	Between Groups Personality Effects	44 38	2	22 19	1 58	21	-	-	-	-	-	-
Seeking Social Support	Within Group Time Effects	205 12	2	102 56	15 45	01**						
	Interaction with Personality	14 25	4	3 56	54	71						
	Between Groups Personality Effects	26 04	2	13 02	76	47	-	-	-	-	-	-
Accepting Responsibility	Within Group Time Effects	127 00	2	63 50	22 22	01**						
	Interaction with Personality	9 20	4	2 30	81	52						
	Between Groups Personality Effects	14 88	2	7 44	1 01	37	-	-	-	-	-	-

Note.
(A) Low Group n = 57, (B) Normal Group n = 93, (C) High Group n = 42
**p < .01.
Post hoc between-group comparisons using Scheffe test are given
Critical F (2, 192) = 3 09, p < 05 Critical F (2, 192) = 4 82, p < 01
Critical F (4, 192) = 2 46, p < 05 Critical F (4, 192) = 3 51, p < 01

Table 25. Main Effects of Time and Impulsiveness and Their Interactions on Coping Strategies and General Symptoms (Continued)

Coping Strategies and General Symptoms	Impulsiveness	Sum of Squares	df	Mean Square	F Ratio	p	Day 1		Week 3		Week 10	
							Post Hoc	p	Post Hoc	p	Post Hoc	p
Escape-Avoidance	Within Group Time Effects	69.39	2	34.70	4.70	.01**						
	Interaction with Personality	41.32	4	10.33	1.40	.23						
	Between Groups Personality Effects	637.53	2	318.77	12.84	.01**	A-B A-C	.03* .03*	A-B A-C	.01** .01**	A-B A-C	.01** .01**
Planful Problem Solving	Within Group Time Effects	201.50	2	100.75	22.05	.01**						
	Interaction with Personality	12.92	4	3.23	.71	.59						
	Between Groups Personality Effects	24.37	2	12.18	.79	.46	-	-	-	-	-	-
Positive Reappraisal	Within Group Time Effects	329.60	2	164.80	26.90	.01**						
	Interaction with Personality	37.90	4	9.48	1.55	.19						
	Between Groups Personality Effects	6.48	2	3.24	.17	.85	-	-	-	-	-	-
General Symptoms	Within Group Time Effects	4516.80	2	2258.40	28.15	.01**						
	Interaction with Personality	801.57	4	200.39	2.50	.04*						
	Between Groups Personality Effects	9548.23	2	4774.11	11.62	.01**	A-B A-C	.03* .02*	A-B A-C	.01** .01**	A-B A-C	.01** .01**

Note.
(A) Low Group $n = 57$, (B) Normal Group $n = 93$, (C) High Group $n = 42$
*$p < .05$ **$p < .01$
Post-hoc between-group comparisons using Scheffe test are given.
Critical F (2, 192) = 3.09, $p < .05$ Critical F (2, 192) = 4.82, $p < .01$
Critical F (4, 192) = 2.46, $p < .05$ Critical F (4, 192) = 3.51, $p < .01$

This chapter presented the results of the study. These included the factors related to subjective psychological distress. The factors related to physical performance on the Individual Physical Proficiency Test and factors related to completion of Basic Military Training were also presented. Main effects were found for the types of coping strategies used by recruits. These included situational factors as well as personality factors. No significant interactions were found between situation and personality.