

## CHAPTER 5

### IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

The first objective of this study is to discover the factors that are related to coping with Basic Military Training in the Singapore Armed Forces. Coping is firstly defined subjective as the amount of psychological symptoms that the recruits report, secondly, by their performance on the Individual Physical Proficiency Test, and thirdly, by whether they completed the 10-week training programme. The relationship between coping and personality traits, personal problems, perceived social support, types of coping strategies used by the recruits, mental and physical preparedness, physical fitness levels and medical status. Other factors related to coping included exogenous factors such as type of medical leave recruits were given, week-end confinement punishment, secondary appointments, family income and type of housing. Endogenous factors related to coping included age of the recruits, their birth positions in their family, the number of languages that they spoke, and their educational level.

The second objective of the study was to discover which of the above factors predicted the likelihood that recruits would face psychological distress, and the factors that predicted who would do better in their physical performance and who

would likely have difficulty in completing the 10-week training programme. The third objective of the study was to discover the links between personality factors and coping strategies on psychological distress.

The sample in this study comprised of first time enlisted recruits ( $N = 200$ ) who were placed in the enhanced Basic Military Training programme. This is a programme to train recruits to take up future combat vocations. The level of stress from military training was measured by using the Basic Military Training Stress Scale. Subjective coping was measured by using the General Health Questionnaire. Physical performance was measured by using the test results of the recruits on the Individual Physical Proficiency Test. Personality was measured by using the Eysenck Personality Scales. The Ways of Coping Questionnaire was used to measure coping strategies that recruits used to deal with stress of training. The extent of personal problems was measured by using the Personal Problems Checklist. Perceived social support was measured by using the Perceived Social Support Questionnaire. A questionnaire was also constructed to find out other factors related to coping, including mental and physical preparedness, fitness level, medical status, secondary appointments and week-end confinements and other background factors such as race, educational level, number of languages spoken, birth position and socio-economic factors.

### Summary of Main Findings

The findings suggest that in the present sample of recruits, the factors that were significantly related to higher levels of psychological symptoms included having more personal problems and having less social support. Higher levels of neuroticism, impulsiveness and introversion were also found to be very significantly related to higher levels of psychological distress. Other factors included being less mentally and physically prepared, having more physical health problems, and coming from a lower socio-economic background.

Factors that were significantly related to poorer level of physical performance included having more personal problems, having higher levels of neuroticism and impulsiveness and coming from a lower socio-economic background. Other factors included using less planful problem solving coping strategies and being less physically prepared before enlistment.

Factors that were significantly associated with being put out of course from Basic Military Training included having higher levels of neuroticism, being more dependent on social support as a coping strategy and using more escape-avoidance strategy. Developing health problems during the training period, being confined for week-end

remedial training and being older were also significantly related to failure to complete training

Regression analysis was used to determine the predictors of psychological distress. Neuroticism contributed to 29% of the variance followed by the use of painful problem solving (7%), and deterioration in medical status (3%). Furthermore, neuroticism was inter-correlated with other factors not conducive to psychological well being. Persons high in neuroticism are likely to have more personal problems, be rigid and inflexible (as measured by the psychoticism trait), impulsive and use escape avoidance more frequently as a coping strategy. They would also tend to perceive that they have little social support, are introverted and prefer not to conform (see Appendix M)

The results suggest that being fit before enlistment, having the ability to control one's impulse and using specific approaches to solve problems of training seem to be related to better performance on the Individual Physical Proficiency Test. These factors significantly accounted for 8%, 5% and 4% respectively of the variance for predicting better physical performance.

The predictors for completion of Basic Military Training were deterioration in medical status and confinement. The results suggest that recruits who were confined

tended to fail Basic Military Training. However, it is possible that recruits who were confined had also more medical problems and hence had to undergo make-up-training sessions. In this sample, there was no correlation between confinement and deterioration in medical status. This may have been because the number of recruits who were taken out of course was too small.

Main effects of situation were found in determining the types of coping strategies recruits used. Recruits used significantly less strategies overall before enlistment than after enlistment. On the other hand, there was no significant difference in the amount of strategies that were used between the high stress periods in the first three weeks of training, and the low stress period, that is the last three weeks of training. There was also no significant improvement in psychological wellbeing between the third week and the tenth week of training. This suggests that the nature of the Basic Military Training environment may be entirely new, and as such recruits continued to face difficulty in adapting even at the tenth week of training. It is also possible that in the last week of training when the measurements were made, recruits were anxious about their vocational posting after Basic Military Training and hence reported increased levels of distress.

Significant effects were found between personality and coping mechanisms. Recruits who had higher levels of neuroticism used more escape-avoidance and self-control

coping strategies. Persons with lower level of neuroticism used more planful problem solving. Recruits with higher level of psychoticism used more confrontative coping. Introverts used less planful problem solving. Recruits with low social desirability and impulsive recruits used significantly more escape avoidance. These differences were also associated with significantly more psychological symptoms. On the other hand, recruits low in neuroticism who had used more planful problem solving had less symptoms.

The results of this study show that time and personality had an additive effect on coping. There were no significant interaction between situation and personality. Certain personality traits appear to be related to more ineffective use of coping strategies across time and situation. Persons high in neuroticism consistently used more self-control and escape-avoidance strategies, with associated higher level of symptoms. Persons low in neuroticism consistently used more planful problem solving and had consistently lower levels of symptoms across situations. Similarly, impulsive recruits consistently used more escape-avoidance strategies and this was associated with consistently more psychological symptoms. Given that the environmental conditions were the same for everyone in that they have the same opportunities for learning, these recruits with neurotic and impulsive traits seemed to adapt poorer than others. This is possibly due to their ineffective coping strategies and these strategies appear to be a manifestation of personality traits in action.

In summary, the overall results above suggest that there may be certain vulnerable recruits, particularly those high in neuroticism who consistently use maladaptive coping strategies and who may have much difficulty in adjusting. As neuroticism accounts for 29% of the variance to predict coping in military training, it is recommended that extra effort should be taken in identifying such recruits for further assistance.

### **Implications and Recommendations for the Singapore Armed Forces**

This research showed that having personal problems was significantly related to poorer coping in terms of subjective experience of symptoms. This is consistent with the findings of the study by Segal and Margalit (1986). However, having personal problems did not have any effect on the completion of Basic Military Training. This suggests that although recruits may be performing adequately in training, they may still feel distressed if they have personal problems and particularly when their personal circumstances deteriorated. It is thus important for trainers and health professionals to recognize this subjective impact on the recruit and to take steps to provide relief. It is recommended that recruits may be allowed to contact their families more regularly. Ground officers and orientation officers can also provide more supportive counselling to these recruits.

The perception of not having sufficient social support from someone close or from family and friends was significantly related to poorer subjective coping. However, it did not have any effect on physical performance. This is consistent with the study done by Flemming, Baum, Gisriel and Gatchel (1985) who showed that having perceived social support was effective in reducing psychological stress but had no impact on physiological arousal. A further distinction needs to be made between the perception of having social support and the seeking of social support as a coping strategy. The use of support seeking as a strategy did not appear to have any overall impact of subjective coping nor on performance. These findings are consistent with the study by Carbone, Cigrang, Tod and Fielder (1999) who found that self-reliance contributed to passing Basic Military Training. Self-reliance, as defined by the authors, is the ability to operate confidently in a stressful situation while deriving emotional support from others. The current findings are also consistent with the finding of Solomon, Noy and Bar-On (1986) who found that reservists were disadvantaged because of competing loyalties to their civilian families. The implication of these findings for trainers and health professionals is that it is useful to make a distinction between perceived social support and the use of social support as a means of coping. Trainers and health professionals may therefore have to take note of recruits seem to be socially isolated as they may be coping more poorly. However,



trainers and health professionals may wish to emphasize cognitive and problem solving modes of coping rather than seeking social support.

Neuroticism, or a tendency toward being emotional, played a significant role in coping both subjectively and objectively. The current finding is consistent with the study by Carbone et al; and with the study by Butters, Retzlaff and Gibertini (1986) on United States Airforce basic trainees. This personality seems to have an overall negative impact on coping in terms of more subjective experience of symptoms, with neuroticism also associated with lower physical performance output. Using multiple regression analysis, it was found that neuroticism played an important role in psychological well being. However, neuroticism did not have any significant impact on physical performance or on pass rates for Basic Military Training. This may be due to the fact that this sample of recruits did not have significant psychological problems to begin with. The impact of neuroticism on a sample of persons who are diagnosed with neurotic disorders going through the "modified Basic Military Training " programme would be worthwhile studying. The implication of the importance of neuroticism as a predictor of psychological well being for the Singapore Armed Forces is that a definition of coping must differentiate between objective and subjective aspects of coping. In the absence of exogenous factors, trainers and health professionals may like to take note of the personality of recruits, particularly the neurotic type. Trainers can also be taught to recognize these traits so

as to allow for early identification of potential poor copers as well as to monitor them subsequently. There is also an implication for screening of predominant personality type for military courses where performance is particularly sensitive to psychological well being. An example of such a vocation is pilot training.

Extraverts reported significantly less symptoms and performed better physically. These findings are in part consistent with earlier findings of Carbone et al. (1999). They found that 'social introversion' on the Minnesota Multiphasic Personality Profile seemed to be related to poor coping and failing Basic Military Training. High levels of psychoticism or tough mindedness were also found to be significantly related to higher levels of perceived symptoms, particularly symptoms of depression. On the other hand, recruits who conformed more easily (as measured by the social desirability trait) reported significantly less symptoms. This is consistent with the findings of McCraw and Bearden (1990), who found 'achievement via conformance' to be a strong predictor of discharge from service. Persons who were more individualistic tended to do poorer than conforming persons in the military service. This is likely to be due to the emphasis on teamwork in military training and operations.

Impulsiveness was found to be related to higher levels of perceived symptoms and to poorer physical performance. Furthermore, it was found to predict physical

performance. This is consistent with literature on impulsiveness and coping. For example, Allsopp (1986) found that among 18 to 21 year old males, alcohol consumption was positively correlated to impulsiveness. The impact of impulsiveness appears to be behavioural in nature rather than psychological. Trainers and health professionals may wish to identify impulsive recruits who are not coping and who are likely to act out their frustrations. Suicide prevention and substance abuse programmes may be salient in preventing distress amongst impulsive recruits.

The use of planful problem solving was significantly related to physical performance and predicted who would feel better subjectively as well as perform better physically. The results in this study indicate that more active use of behavioural and cognitive approaches rather than emotion-focused coping are more likely to be effective in coping within the context of the Singapore Armed Forces. Efforts may be made to teach effective coping strategies both at a preventive level as well as at a corrective level. At a preventive level, psychological preparation involving the teaching of effective coping methods can be taught to vulnerable individuals. Stress management programmes can also be an integral component of Basic Military Training. At the corrective level, psychotherapy involving the use of problem-solving, cognitive and behavioural approaches may be useful to help recruits who are in distress.

A significant positive relationship was found between mental preparedness and psychological coping. Confident recruits reported significantly fewer symptoms than recruits who felt they were unprepared. Physical preparedness but not mental preparedness significantly affected physical performance. However, expectancy did not have any effect on completion of Basic Military Training. These findings differ from the findings in Carbone et al.'s (1999) study. The importance of motivation did not play as significant a role in the local context as compared to the United States Forces. This may be due to differences between voluntary and conscripted enlistment

Pre-enlistment fitness level did not appear to be helpful in psychological coping nor did it predict the likelihood of completion of training. However, it predicted who would do better in the Individual Physical Proficiency Test. Pre-enlistment screening of fitness level is thus a useful indicator when selecting recruits who are likely to do well in vocations where physical fitness is paramount, such as Commando training or Guardsmen.

Pre-enlistment medical status was not significantly related to psychological coping but it did make a difference in physical performance. On the other hand, deterioration in medical status at enlistment significantly predicted psychological well being and physical performance. Recruits whose health deteriorated after enlistment reported

significantly more anxiety, somatic symptoms and social dysfunction. The development of medical conditions also predicted who dropped out of Basic Military Training. These results concur with Carbone et al.'s study (1999), which found that the main reason for discharge from service was due to medical conditions. Related to deterioration in health is the type of medical leave that recruits were given following their illness. Recruits who were given light duties were not significantly different in their reporting of somatic complaints compared to recruits who rested either in the bunk or at home. Hence, the current use of giving light duties for minor somatic complaints appears to be effective in maintaining psychological well being. Recruits who developed medical problems that affected their training were also rightly taken out of course as the deterioration in their health status significantly affected both their psychological well being and physical performance. The current use of continual monitoring of medical status by the School's medical officers appears to be effective in helping recruits to cope as well as to prevent longer term psychological illness amongst recruits who have genuine medical problems.

Having weekend confinements was found to predict failure to complete Basic Military Training. However, due to the small sample of recruits who did not complete Basic Military Training, it is difficult to generalize these findings. It is possible that some of these recruits who had to undergo remedial lessons as a result of absence from training after having taken medical leave in the week also had medical

problems. This might have affected their ability to pass. The use of weekend confinement for these recruits may be ineffective in helping them to complete training. Time may be given for these recruits to rest and recuperate at home.

Significant differences were found in depression levels and in social dysfunction among recruits from the lower socio-economic status levels. This suggests that these recruits may have financial difficulties after enlistment, and that some of these recruits may have to spend whatever spare time they have on the weekends to make ends meet financially, leaving them psychologically not replenished. It is thus important for the Singapore Armed Forces to look into ensuring that National Service does not result in financial hardship amongst poorer recruits.

Although significant differences were found between non-Chinese and Chinese in Basic Military Training pass rates, race did not play a significant role in predicting completion of training. The sample of non-Chinese recruits was too small in this study for the effects of race to be generalized.

The results of family position on coping in this study do not concur with the Rim's (1986) study. It is possible that in the local context, there is an assigned meaning that most Singaporeans give to National Service, and that this may have a significant impact. National service is seen as a moral obligation and something to be proud of.

a rites of passage into adulthood as well as raising the employment status of those who complete National Service.

Psychological well being was not affected when recruits were given secondary leadership appointments. This suggests that the use of secondary appointments to identify or train potential leaders as well as to promote unit cohesion through shared responsibility and peer leadership appears to be useful and non-detrimental to well-being.

The results of this study also show that factors that affect completion of Basic Military Training may be of different in Singapore compared to other countries where persons voluntarily join the Forces. The parameters to measure likelihood of being discharged are different in the local context. Based on the initial findings of this study, it is postulated based that medical status is an important determinant of discharge from service.

A further implication of this research is that it is useful to differentiate between psychological coping and performance coping. Passing Basic Military Training may not be indicative of psychological coping. A recruit may perform adequately even though he may feel psychologically distressed. Presently, psychological screening is not done in assigning of vocations after recruit training. Recruits are currently posted

to various vocations based on performance factors such as type of education and fitness or on their medical status. Psychological factors are taken into account for posting to vocations only when the recruit presents at a mental health clinic. It would be useful for vocational placement to do psychological profiling of recruits, especially in determining their personality type, as well as their psychological symptom level. To offset the problem of malingering, Singapore Armed Forces norms on the General Health Questionnaire could be derived, and scores above two standard deviations could be used as the cut-off criteria in differentiating personnel who are coping from those who are not coping.

#### **Scope of Study and Limitations**

This study looked mainly at healthy recruits with mostly Diploma educational level. Comparisons can be made and implications can be applied to recruits enlisted into the "Enhanced Basic Military Training" module but not to recruits who are enlisted into the "modified Basic Military Training" module. This study has limited application in studying recruits who have to redo Basic Military Training course after having spent some time in National Service.

This study concentrated more heavily on subjective coping to elucidate the factors related to psychological well being and has application for counselling and clinical



practice. Although performance factors were included, these were limited to physical performance on the Individual Physical Proficiency Test and excluded technical competency measures. There are empirical evidence (Bartram, 1995; King, Retzlaff and McGlohn, 1997, and Siem and Murray, 1994) which suggest that personality variables are related to top performance amongst pilots. Future research should include such competency measures if this research is to be applied to personnel selection. As potential officers are selected from the enhanced Basic Military Training batch, this research can be applied to future research on the selection of officers into the officer cadet course.

#### Evaluation of the Ways of Coping Questionnaire

Schwarzer and Schwarzer (1996) suggested that one problem with the Ways of Coping Questionnaire is that there may be theoretical cross-linked relationships between scales. Inter-correlations of scales are presented in Appendix N. This study shows that most of the scales are inter-correlated positively except for seeking social support, which is not correlated with distancing and escape-avoidance. Planful problem solving is also not significantly related to escape-avoidance. It is possible, based on the findings of the importance of trait factors, that coping is personality in action. Further longitudinal research measuring coping across a longer period and across more varied situations is needed to expound on this.

## Conclusion

This study showed that several factors seemed to affect the amount of psychological distress that recruits faced during Basic Military Training. These included having personal problems, lacking social support, having high levels of the neuroticism and impulsiveness trait, using ineffective coping strategies such as escape-avoidance, feeling mentally and physically unprepared, deterioration in medical status, and coming from lower socio-economic background. Recruits high in the neuroticism trait were also found to report more personal problems, feel less social support and to use consistently more escape-avoidance. They also reported significantly more psychological symptoms than recruits that had low or medium levels of the neuroticism trait. This suggests that such recruits may be more psychologically vulnerable and may need further assistance in coping with Basic Military Training.

The predictors of physical performance in Basic Military Training included physical fitness level, the ability to control impulses, and the use of planful problem solving. It is also postulated that in a conscripted army such as the Singapore Armed Forces, medical problems are likely to be the main reason for discharge from National Service. The implications of the findings and recommendations are presented in chapter five.