CHAPTER 6

FINDINGS, RECOMMENDATIONS AND CONCLUSION

In the previous chapter the data were analyzed by using statistical tools and results were tabulated. In the present concluding chapter the main objective is to discuss the major findings supported by theory and empirical evidence wherever applicable, followed by the limitations of the study and implications for theory and practice. Lastly, suggestions and direction for future research are dealt along with conclusion.

6.1 FINDINGS

Having seen the outcome of the statistical computations in the previous chapter, the present sub-section discusses on the major findings of the study with relevance to theory and the earlier empirical studies.

The purpose of present study was threefold: firstly to explore the relationships between the trainees’ attributes of EI, personality traits, self-esteem, motivation to learn and academic achievement. The second was to determine whether there was a mediating effect by self-esteem on EI in one instance and personality traits in the other instance with motivation to learn. Thirdly, to establish a relationship between motivation to learn and academic achievement. Demographic factors like gender, age, family income and education of respondents were studied. As the results indicated that there were no differences between the mean within the groups, homogeneity was assumed and further analysis namely correlation, hierarchical regression analysis, mediation analysis and Sobel’s tests were carried out.
Primary data was collected from cadets undergoing pre-commission training at the Officers Training Academy, Chennai during the period 2012-13. The response rate from the cadets was 92.2 per cent, while those who could not participate in the survey were due to hospitalization or medically indisposed. Gentlemen cadets constituted 74.37 per cent of the total respondents, while Lady cadets tallied 25.63 per cent respectively. The age group of the sample respondents was rather narrow (21–32 years) since the armed forces seek young fighting/workforce.

A cursory look at Table 5.2 would reveal the level of education of the sample respondents as undergraduates (UG) were 68.54 per cent, post-graduates (PG) were 31.46 per cent. Since the eligibility criteria for entry stipulates unmarried candidates no one was married. In addition, none of them have any prior work experience.

Thus, it can be inferred from the Table 5.2 that the sample respondents were predominantly male (74.37 per cent), as compared to female (25.36 per cent). It may be mainly due to the recruitment policy. Sample respondents who are UG qualified (68.54 per cent) are seen more than PG (31.46 per cent). It is likely that these UG candidates may be aware that there is ample opportunity for higher studies in the armed forces besides army run courses that are already recognized by a few universities of India.

Respondents whose family income is below Rs.50,000 p.m. are seen more (68.54 per cent) when compared to family income above Rs.50,000 p.m. which is (31.46 per cent) thereby indicating that in the sample of cadets those whose family belonged to the middle and low income group were relatively more when compared to high income group (31.46 per cent). This is in stark contrast to age old vintage era when nobles and blue blood
family members took to career in armed forces out of pride and prestige. An analysis of standard residuals was carried out, which showed that the data contained no outliers.

### 6.1.1 Hypotheses Testing Results: Model-1

The first segment of the conceptual model (Figure 3.1a) deals with EI as predictors. The research question and its related hypotheses are as shown in Table 6.1.

**Table 6.1 Research questions and related hypothesis for EI**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Research Question</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RQ1: Is there any relationship between EI and self-esteem?</td>
<td>H$_{01}$ There is no significant relationship between personality traits and self-esteem (Path a)</td>
</tr>
<tr>
<td>2</td>
<td>RQ2: Is there any relationship between self-esteem and motivation to learn?</td>
<td>H$_{02}$ There is no significant relationship between self-esteem and motivation to learn (Path b)</td>
</tr>
<tr>
<td>3</td>
<td>RQ3: Is there any relationship between EI and motivation to learn?</td>
<td>H$_{03}$ There is no significant relationship between personality traits and motivation to learn (Path c)</td>
</tr>
<tr>
<td>4</td>
<td>RQ4: Does self-esteem mediate the relationship between EI and motivation to learn?</td>
<td>H$_{04}$ Self-esteem does not mediate the relationship between personality traits and motivation to learn (Path d)</td>
</tr>
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</table>

In order to answer the research questions RQ1 to RQ4 and to verify the hypotheses from H$_{01}$ to H$_{04}$, Pearson’s product moment Zero-order correlation of all the variables was computed. The variables were significant
and positive having weak to moderate correlations. Prior to undertaking data analysis certain assumptions as pre-requisites were checked and found within limits e.g., outliers, linearity, normality, heteroskedasticity etc. The reliability and validity was checked with Cronbach’s alpha ($\alpha$). The values obtained for $\alpha$ and $t$-test are: EI $\alpha=0.88$ (10.41), motivation to learn $\alpha=0.75$ (3.16), self-esteem $\alpha=0.83$ (14.24). The alpha values were well above the cut-off value (0.70).

In order to test the hypothesis and in turn find answers to the research questions, a series of simple linear regression analysis using enter method were performed. EI and self-esteem had a good fit [$F(1, 513)=22.927, p<0.01$] and the regression of self-esteem on EI ($\beta=-0.207$, $t=4.788$, $p<0.01$), the regression coefficient was significant. Thus the alternate hypothesis ($H_{a1}$) was accepted. Motivation to learn was regressed on Self-esteem. The model fit was good [$F(1, 513)=202.102, t=14.241, p<0.01$] and ($R^2=0.283$, Adj. $R^2=0.282$, and Durbin–Watson=1.073). These results indicated that there was no problem of multi-collinearity among the variables.

The regression coefficient was significant ($\beta=-0.532$, $t=14.241$, $p<0.01$). Thus alternate hypothesis $H_{a2}$ was accepted, meaning that there is a significant relationship between self-esteem and motivation to learn. The third step was conducted by regressing motivation to learn on EI. The model fit was found to be good [$F(1, 513)=144.102, t=12.004, p<0.01$] and ($R^2=0.219$, Adj $R^2=0.218$, $p<0.01$). The regression coefficient was also significant ($\beta=-0.468$, $t=12.994$, $p<0.01$) and Durbin Watson =2.082. Thus alternate hypothesis $H_{a3}$ was accepted. The research question RQ3 gets answered.

The three step procedure of Baron and Kenny were met in full. It was observed that all the predictors were significant. The regression co-efficient (standardised $\beta$) value reduced for EI when compared to the direct
effect of each predictor on the criterion (motivation to learn), i.e. between self-esteem and motivation to learn (from $\beta=0.532$, $p<0.01$ reduced to $\beta=0.455$, $p<0.01$) and between EI and motivation to learn (from $\beta=0.468$, $p<0.01$ reduced to $\beta=0.374$), thereby indicating partial mediation by self-esteem. Self-esteem ($\beta=0.455$, $p<0.01$) has a greater influence as compared to motivation to learn ($\beta=0.374$, $p<0.01$). Further, Sobel test was also performed that reiterated the partial mediation of self-esteem on the relationship between EI and motivation to learn. The fourth hypotheses $H_04$, which proposed that self-esteem, would mediate the relationship between EI and motivation to learn was verified and it was found that self-esteem mediated the relationship between EI and motivation to learn. The results are presented in Table 6.2.

The equation sums up the overall impact of EI on motivation to learn as being almost equal to self-esteem, while concurrently considering the influence of self-esteem. It also brings out that either of the factors could be utilized to advantage in bolstering and motivating any cadet while undergoing the arduous training at the academy.
Table 6.2  Summary of the analytical results for EI, self-esteem and motivation to learn

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Paths</th>
<th>Analysis Outcome</th>
<th>Results/Inferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Path ‘a’: EI and Self-esteem</td>
<td>$[F(1, 513)=22.927, p&lt;.01]$</td>
<td>$R^2=0.043, \text{Adj.R}^2=0.041, p&lt;0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EI ($\beta=0.207, t=10.410, p&lt;0.01$)</td>
<td><strong>$H_{a1}$</strong> Alternate hypothesis is accepted</td>
</tr>
<tr>
<td>2</td>
<td>Path ‘b’: Self-esteem and Motivation to learn</td>
<td>$[F(1, 513)=202.804, p&lt;.01]$</td>
<td>$R^2=0.283, \text{Adj.R}^2=0.282, p&lt;0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-esteem ($\beta=0.532, t=18.291, p&lt;0.01$)</td>
<td><strong>$H_{a2}$</strong> Alternate hypothesis is accepted</td>
</tr>
<tr>
<td>3</td>
<td>Path ‘c’: EI and Motivation to learn</td>
<td>$[F(1, 513)=144.102, p&lt;.01]$</td>
<td>$R^2=0.219, \text{Adj.R}^2=0.218, p&lt;0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-esteem ($\beta=0.468, t=8.697, p&lt;0.01$)</td>
<td><strong>$H_{a3}$</strong> Alternate hypothesis is accepted</td>
</tr>
<tr>
<td>4</td>
<td>Path ‘d’ Mediation: EI - Self-esteem - Motivation to learn</td>
<td>$[F(1, 513)=183.383, p&lt;.01]$</td>
<td>$R^2=0.417, \text{Adj.R}^2=0.415, p&lt;0.01$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-esteem ($\beta=0.455, t=13.193, p&lt;0.01$)</td>
<td><strong>$H_{04}$</strong> Partial mediation by self-esteem on the relationship EI - Motivation to learn</td>
</tr>
</tbody>
</table>
It is to be noted that self-esteem augments by (45.5 per cent) enhancing the level of motivation to learn when considered together with EI. This is definitely a substantial increment to the whole process which can be effectively exploited to advantage in the training academy in furtherance of academic achievement which will be discussed in subsequent paragraphs.

The incremental value to the motivation to learn through the inclusion of self-esteem as a factor in the model is the most important finding. Training when re-oriented and restructured with emphasis on these two factors would inevitably bring in desired results and can be used as a mechanism to uplift the sagging performance of average and below average performers. This may be extended to workplace at group/team level.

6.1.2 Hypotheses Testing Results: Model-2

The focus of this section is on the discussion of hypotheses testing and results of the proposed mediation model (second segment) as shown in Figure 3.1(b) relating to inter-relationship among personality traits, self-esteem and motivation to learn. The hypotheses $H_{05}$ to $H_{07}$ were tested as shown in Table 6.3.

Similar analysis as was done for Model-1 was also done for Model-2. The details are presented in Chapter-5. Among the five traits of personality only three of them are found to be significant and positive in the analysis, namely openness, agreeableness, and emotional stability. The hypotheses were tested and the research questions have been adequately answered. Self-esteem mediates the relationship between personality traits (openness and agreeableness) and motivation to learn partially. The consolidated results are presented in Table 6.4. The findings of the present study will be pivotal to the expansion of existing knowledge and critical
understanding of individual dispositions, as well as in the portrayal and prediction of behavioral outcomes. The findings of the current study may help in understanding the complex relationship among the various factors under consideration.

Table 6.3 Research questions and hypotheses for personality traits

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Research Question</th>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>RQ5:</strong> Is there any relationship between personality traits and self-esteem?</td>
<td><strong>H_{05}</strong> There is no significant relationship between personality traits and self-esteem (Path ‘e’)</td>
</tr>
<tr>
<td>2</td>
<td><strong>RQ6:</strong> Is there any relationship between personality traits and motivation to learn?</td>
<td><strong>H_{06}</strong> There is no significant relationship between personality traits and motivation to learn (Path ‘f’)</td>
</tr>
<tr>
<td>3</td>
<td><strong>RQ7:</strong> Does self-esteem mediate the relationship between personality traits and motivation to learn?</td>
<td><strong>H_{07}</strong> Self-esteem does not mediate the relationship between personality traits and motivation to learn (Path ‘g’)</td>
</tr>
</tbody>
</table>

The present findings will help in surmounting low performance among cadets in academics, avoid deviant behavior among youth and bring about awareness of individual potential such that it is harnessed for betterment of functioning in the assigned role or leadership. This knowledge could be used as a tool for overcoming the challenges that are faced in the real world.
Table 6.4  Summary of the analytical results for personality traits, self-esteem and motivation to learn

<table>
<thead>
<tr>
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<th>Paths</th>
<th>Analysis Outcome</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Path ‘e’ : Personality traits and Self-esteem</td>
<td>[F(1, 513)=22·927, p&lt;·01] R²=·043, Adj.R²=·041, p&lt;·01 EI= (β= ·207, t=10·410, p&lt;·01)</td>
<td>Hₐ5a, Hₐ5b and Hₐ5c Alternate hypotheses are accepted (for openness, agreeableness and emotional stability with self-esteem)</td>
</tr>
<tr>
<td>2</td>
<td>Path ‘f’ : Personality traits and motivation to learn</td>
<td>[F(1, 513)=144·102, p&lt;·01] R²=·219, Adj.R²=·218, p&lt;·01 Self-esteem = (β= ·468, t=8·697, p&lt;·01)</td>
<td>Hₐ6a, Hₐ6b Alternate hypothesis is accepted (openness, agreeableness with motivation to learn)</td>
</tr>
<tr>
<td>3</td>
<td>Path ‘g’ Mediation: Personality traits – Self-esteem</td>
<td>[F(1, 513)=183·383, p&lt;·01] R²=·417, Adj.R²=·415, p&lt;·01 Self-esteem = (β= ·455, t=13·193, p&lt;·01) EI= (β= ·374, t=10·853, p&lt;·01)</td>
<td>Hₐ7a, Hₐ7b Partial mediation: by self-esteem on the relationship personality traits - Motivation to learn (openness, agreeableness)</td>
</tr>
</tbody>
</table>

6.1.3  Hypotheses Testing Results: Model-3

The relationship between motivation to learn and academic achievement was examined using hypothesis Hₐ8. The results indicated there is a significant relationship between motivation to learn and academic achievement.
6.2 RECOMMENDATIONS

The major contribution from the findings of this research is dealt with in this section. Higher the EI higher will be the self-esteem in individuals, which in turn will lead to higher motivation to learn. Therefore when the objective is to enhance motivation to learn, then either individually or jointly each of the variables can be manipulated in order to derive the desired level of motivation to learn. Accordingly intervention mechanisms have to be structured. There is every possibility to enhance the academic performance when the effort is in enhancing any one or more of the elements of EI and self-esteem or motivation to learn.

Similarly, personality traits like openness, agreeableness and emotional stability play a significant role in enhancement of self-esteem, motivation to learn, thus better academic achievement. The present study has brought out the importance of EI and personality traits in the development of the cadets performance in the academy despite the tough training schedule.

Employees are sent overseas for various international assignments for three main reasons: as part of the overall development strategy of enterprises, expansion of operations into emerging markets through transfer of technology, and filling competency deficiency thereby drives the growth in global mobility. Motivation to do the tough and strategic work of exploiting stressful circumstances into growth opportunities including commitment or type A/B personality characteristics enable easy acclimatization with new environments. Dispositions of agreeableness and openness to experience enable easy embracing/adaptation. Hardiness contributes to cross-cultural adjustment. Factors beyond technical competency other factors need to be evaluated for successful execution of international assignments Hannay,(2015). An enterprise is capable of sustaining competitive advantage
in an increasingly challenging global environment. These requirements are similar to foreign assignment for officers in the army. The findings have few implications to theory as well as practice which are brought out in the following section.

6.2.1 Theoretical Implications

In the context of the present investigations, a few implications for educators and practitioners are of significance. First, EI, particularly 'adaptability' and self-regulation of emotions can be taught to improve both academic achievement and socio-emotional abilities. The capacity to face challenges during the course of the training can be instilled among cadets. Teaching EI through collaborative programs involving parents can be undertaken. Self-esteem learning can be trained through an umbrella of programs aimed at prevention of depression, suicide, drug abuse, delinquency and stress. The aim of such programs must concentrate on skill training for conflict resolution, impulse control, self-control of temperament, coping with stress, circumventing negative emotions, and identifying and understanding of one's own and others' emotions.

Psychologists have a sterling role to play firstly as advocates for timely counseling, as evaluators, facilitators and resource personnel in instructional sessions and professional consultants. Secondly, it is imperative for teachers and counselors to be particularly trained on the effects of high EI among cadets.

Tse et al (2008) recommended facilitation of EI through service-oriented training programs. EI enables superior coping capabilities against stress, as brought out earlier and it results in more self-satisfaction (DeDreu
An investigator of the association between motivation to learn and EI or self-esteem can utilize the findings from the current study.

The requirements for emotional awareness may differ among varied institutions. Future research should address the requirements for emotional awareness in other training institutions. These types of studies not only will help streamline the overall requirements for emotional awareness, but will also help designing customized training programs tailored to meet end user requirements at the same time to match the changing environment.

Thus methods to enhance EI with self-esteem and motivation to learn can be identified. It will enable cadets to inculcate the ability to comprehend, express and regulate emotions for better decision-making, eventually leading to better academic achievement. The results of the present study can be beneficial for psychologists, consultants, practitioners and students. Formal assessment of individual EI in pre-service selection may be incorporated with as much emphasis and weight age as given to other factors during the screening process.

Through this research precise methodology and theoretical insight could be developed and applied in the field contexts without broaching upon curricular content or pedagogy. Instead, by emphasizing on the factors considered in the study would open students to learning opportunities by removing psychological barriers that may otherwise inhibit them. It can even forestall the exacerbation cycle by helping students see their underperformance as a normal and temporary part of the transition from college to training academy. It will also be most beneficial to academic achievement among at-risk students.
In fact, after having identified the low achievers, deficits can be addressed to in greater detail with particular reference to the variables that have been examined in the present study. An understanding of the variables, concentrating on them at the academy or even in an educational institution will go a long way in improving the overall performance.

The outcome of this study deriving its sustenance from Self-Affirmation Theory (Steele 1998) provides an idea of the quantum and nature of critical feedback that needs to be inoculated for leveraging necessary and meaningful academic achievement even among the below average and low performers. By paying close attention to the psychological forces at play in real-world environments and by designing interventions to deflect those forces, social psychologists can effect positive changes, enhance performance and attain overall gain in various spheres.

Research has shown that almost 8 per cent decline in course failures through a 90-minute exercise is no extraordinary feat when far more good could come of finding effective ways to foster adaptive student psychology during the duration of the course in high school students’ academic year (Kolb & Kolb 2005). The same when scaled up, perhaps would even reduce achievement disparities systemically. Future research should reflect on ways and means to scale up these interventions so that they shrink achievement inequalities without wasting institutional resources and time of those who would be unlikely to benefit from them.

6.2.2 Practical Implications

The most predominant factor, openness to experience is able to explain 50.8 per cent of the variance in motivation to learn when all other factors are kept constant. Similarly, 26.7 per cent of the variance in
motivation is explained by agreeableness while self-esteem alone is able to contribute 31.4 per cent. Considering the inter-alia weight age as individual factors, it can be safely concluded that what personality traits together can do, can be singly contributed by self-esteem alone.

In other words, in contingencies where trade-offs have to be done between any single personality factor and self-esteem, according to the derived equation a safe bet can be with replacing personality trait with self-esteem. This arguably, is figuratively appropriate. However ground reality would be that increased self-esteem will have a potent effect on the overall motivation to learn. In brief, self-esteem is comparable to any of the personality traits in its contribution towards motivation to learn. This would bring in a paradigm shift in the emphasis given to personality development during training of the cadets. To put it succinctly, self-esteem could be conveniently traded-off with either agreeableness or openness in the event of any cadets lacking in even in one of the personality traits.

6.2.3 Limitations

The study is not without limitations that have to be noted. Firstly, all of the measures came from the individual cadet themselves. While this was an added advantage, self-reports basically help in comprehending the internal phenomena, inflated relationships between variables may be quite likely. Secondly, primary data collection was limited to structured questionnaire methodology. Thirdly, the time constraint due to short duration of course/training precluded the possibility of longitudinal studies. Lastly, the cadets undergoing training at the academy have been screened by stringent selection process meeting the qualitative requirement for serving in the army as officers. This aspect could have had a subtle bias in the response pattern
that was not taken into account while arriving at the conclusion in data analysis.

It should be noted, however, that many of the constructs measured in this study are intra-psychological and hard for others to assess by observation. For example, the assessment that emotional stability is stable or unstable must necessarily be a subjective one. There are also some advantages to asking participants about naturally occurring real-life like situations as compared to observing those situations in an artificial lab setting in order to assess the related characteristics. Ideally, multiple methodologies should be used in future research to more fully understand how self-esteem relates to EI and personality traits or motivation to learn.

Additionally, it is important to note that the findings of this study do not infer causality, and the association between self-esteem and motivation to learn behavior may be bidirectional. In future research, mediation models such as the ones estimated here can be elaborated upon using structural equation modeling, which allows the testing of competing hypotheses regarding directionality, as well as the estimation of models in which bidirectional effects are hypothesized.

6.2.4 Scope for Future Research

The results generated, suggest that the depth of a cadet’s EI, personality traits, motivation to learn and self-esteem does account for a meaningful proportion of the variance in academic achievement. When exploring cadets’ potential within an organizational context, work on the larger research agenda appears to be a natural progression.
Future research on the predictability of EI is needed with other criteria and populations. For example, paucity of research exists on the relationship between EI and other objective measures of behavior (e.g., identification of emotional/behavioral dysfunctions, social–emotional relationships and temperament. Research on the development of EI among cadets on post commissioning is also needed. Research in these areas will improve understanding of the contribution of EI to individual differences in important outcomes.

Future studies may benefit from using the other constructs for measuring the variables and a bigger sample to allow for factor level analyses by personality traits and other variables such as gender and culture. Also, other measures of non-cognitive ability could have been used to have a broader picture of the relationships between EI and the variables studied. Future research will benefit from including samples of cadets enrolled in other academy (e.g., National Defence Academy, other Officers training academy within the country) or alternatives to educational pursuit (e.g., short term-courses and workforce) to expand on the results found in the present study.

6.3 CONCLUSION

A growing body of research suggests that EI is associated with self-esteem, but relatively few studies have examined the association of EI with self-esteem and motivation to learn together in predicting academic achievement or individual behavior. Utilizing the perspectives of self-determination theory and expectancy value theory, a balanced integration of self-esteem into the relatedness with the functioning of positive relationships and motivation to learn that is crucial to academic achievement and thus the overall performance in the academy can be attained. Greater emotional
resilience while encountering challenging situations and in inter-relationship satisfaction with peers and superiors, development of mutual support and team building are the other fallout of this study that can be taken up in future study. Although, the composition of this sample was multilingual and multi-cultural since the cadets were drawn from all over India, yet the study did not consider it as one of the factors. It would also be worthwhile to examine the way self-esteem impacts EI, motivation to learn and personality traits within specific cultural or regional contexts.

Finally, the openness to new ideas, experience, being adaptive, flexible and being resilient and remaining composed even in difficult circumstances are found to be supportive in enhancing the motivation level to learn resulting in better academic achievement. The present study would be helpful to policy-makers and psychologists in that they would be in a position to spell out well defined and specific directives in relation to personality development, pertaining to the relation between EI and performance in various domains of everyday life, improving level of motivation to learn and bringing in quantum overall change in academic performance among learners. Finally, a number of other approaches could be taken to further the field’s comprehension of how constructs in the domain of EI, personality traits, self-esteem and motivation to learn contribute to trajectories of academic performance.

However, given that research addressing the concomitant effect of EI, self-esteem and motivation to learn on performance trajectories has yet to be conducted in other similar training academies in an applied setting. The present study provides an initial start in this direction. More broadly, it is suggested that researchers continue to examine correlates of performance trajectories, including characteristics of individuals, as well as situations, contexts or environments.