CHAPTER – V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

SUMMARY

One of the greatest challenges before sports psychologists today is to determine the number and type of psychological attributes that might influence athletic performance. Tireless efforts are being made to identify such psychological variables which are potentially relevant for success in the track and field events as well as in sports. Physical strength and skills are no more the only factors determining the outcome of any sports competition. Sports psychologists are concerned with structured competitive sports in which the only purpose is to outdo one’s opponents in competitive encounters. The psychological preparation is planned and carried out with the sole aim of enabling the sportspersons to be in an optimum psychological state at the time of competition so that the athlete can achieve the maximum possible performance. Cratty (1989) has very aptly observed that “psychological preparedness differentiates the best out of the rest”. Alderman (1974) while emphasizing the significance of psychological factors comments “One essential point which must be stressed in that regardless of how a person prepares for a particular task or athletic pursuit, the success or the quality of his performance will, in the final analysis, probably depend on his particular psychological make-up”. Anxiety, Mental Imagery and Self-esteem are few of those psychological attributes which reflect upon the performance of the athletes.
Anxiety is an emotional reaction that is often irrational and disproportionate to the magnitude of the situation. The term anxiety has been used to describe both a healthy and normal condition, as well as a pathological one. Nearly every human being is thought to be affected somehow by anxiety. The relationship between anxiety and athletic performance has been a widely investigated topic. Recently attention given to this relationship has focused on the multidimensional theory of anxiety. A number of theories exist concerning the effects of anxiety on performance and while there seems to be an interaction between the amount of anxiety necessary to maximally perform certain specific tasks, all theories seem to agree that maximum performance is reduced by too much of anxiety. The area of maximum athletic performance is no exception and both the coaches and the athletes are beginning to give considerable attention to the area of anxiety and its management. Mental imagery can also play a vital role in this process of anxiety management.

Mental imagery can serve either a motivation or a cognitive function. Imagery involves symbolically representing behavioural situations or goals and the activities required to reach these goals. Most of the researchers have investigated the cognitive function of imagery. The research studies have been concerned with the use of mental imagery to strengthen skills or to correct improperly executed ones. Many athletes claim to utilize imagery to mentally review a variety of situations they might be facing during their future competitions. It appears that successful practices for the use of imagery typically have been developed by more accomplished athletes as a result of trial and error method which they used on themselves. There is, thus, emergent need of coordinated and properly planned mental imagery training for
the athletes which will also go a long way in building their self confidence and self-esteem.

Self-esteem is the sum and substance of an athlete’s feelings and thoughts about himself i.e. what he is and how much importance is attached to him. It is his own sense of worth, which is often fragile and sensitive to events that happens on a day to day basis. His emotions and his thoughts about himself are heavily influenced by the perceptions of his performance. One day he may have self esteem and the next day it erodes due to what he thinks is a poor performance or practice. Thus, many athletes and performers often wrongly determine their self worth by how successful they feel about their performance. When an athlete performs well or feels successful he or she can feel good about him or herself. But the opposite is also true; despair and low self esteem results when this person does not perform well or view him or herself as a failure. Such feelings have potential to damage, maintain or increase self-esteem. Therefore, self-esteem is a core issue and it effects every aspect of an athlete’s life. For this reason, the investigator had selected to explore the self-esteem among elite track and field athletes alongwith two other very significant psychological variables i.e. anxiety and mental imagers. The present study was titled as “Study of Psychological Variables Among Athletes”

OBJECTIVES OF THE STUDY

The following were the objectives of the study:

1. To find out the differences between athletes from northern and southern regions on the variables anxiety, mental imagery and self-esteem.
2. To find out the differences between successful and unsuccessful athletes on the variables anxiety, mental imagery and self-esteem.

3. To find out the differences between male and female athletes on the variables anxiety, mental imagery and self-esteem.

4. To find out the interaction between region, performances and gender with respect to the selected psychological variables.

5. To find out the differences between sprinters, jumpers and throwers on the variables anxiety, mental imagery and self-esteem.

6. To find out the implications of this research and to make consequent suggestions.

**HYPOTHESES**

The following were the hypotheses of this study:

1. There would be significant differences between northern and southern region athletes on the variable state and trait anxiety as well as on sports competition anxiety.

2. There would be significant differences with regard to mental imagery variables between athletes from northern region and southern region.

3. The athletes from northern region would differ significantly from those from southern region on self esteem variables.
4. The better performance group (i.e. successful athletes) would differ significantly from unsuccessful group on state-trait anxiety, and sport competition anxiety.

5. There would be significant differences on mental imagery variables between successful and unsuccessful athletes.

6. There would be significant differences between successful and unsuccessful athletes with regard to variable self-esteem.

7. The two gender groups would differ significantly from each other with regard to state-trait and sports competition anxiety.

8. The male athletes would be significantly different from female athletes with regard to mental imagery variables.

9. The male and female athletes would differ significantly from each other on the variable self-esteem.

10. There would be significant interaction effect between region, performance and gender on all the studied variables i.e. (a) anxiety (b) mental imagery and (c) self-esteem.

11. There would be significant differences between sprinters, jumpers and throwers with regard to the variables (a) anxiety, (b) mental imagery, and (c) self-esteem.

**SAMPLE**

In the present study for the collection of data, the athletes from Northern and Southern regions who had represented their respective universities in various events of track and field (i.e. sprints, jumps and throws) at All India Inter-University level were selected as the subjects.
The sample consisted of 150 male and 136 female athletes. Similarly, there were 144 athletes from successful group and 142 from unsuccessful category. In all 122 were from northern region and 164 from southern region. The whole sample consisted of 286 subjects in the age group of 18 to 25 years studying at the college and university levels.

TOOLS USED

Keeping in view the availability and suitability of the tests, the following tests were used to measure the selected variables.

1. To measure State and Trait Anxiety, Sinha's Comprehensive Anxiety Test (SCAT) developed by Sinha and Sinha (1995) was used.

2. To measure Sports Competition Anxiety, Marten’s Inventory (1977) was used.

3. To measure the different aspects of mental imagery i.e. sensation of seeing, hearing, taste, smell, touch and bodily experience in movements, the Mental Imagery Questionnaire (M.I.Q.) constructed by Rajamanickam (1999) was administered.

4. To measure the variable of self-esteem, Self-Esteem Inventory constructed by Prasad and Thakur (1988) was used.

STATISTICAL DESIGN

The basic statistics, such as the mean and SD were calculated for the groups based on region, performance, gender and types of the events. Analysis of variance (2x2x2 factorial design) was used to find
out the significance of differences and the interaction effect of region, performance and gender. This was followed by 't' test to find out the direction of differences between athletes from selected athletic events i.e. sprint, s, jumps and throws.

**FINDINGS**

**FINDINGS REGARDING ANXIETY**

**STATE AND TRAIT ANXIETY**

On *State and Trait Anxiety*, the ANOVA results demonstrated that there were no significant differences between the athletes from the two regions i.e. Northern region and Southern region.

The two performance groups i.e. successful and unsuccessful athletes also did not differ significantly from each other.

The differences between the two gender groups i.e. the male and female athletes were found to be significant (*p*<0.05, Table-1-a). Female athletes were found to have significantly higher level of anxiety as compared to the male athletes.

Interactions between region and gender as well as between performance and gender were found to be significant (*p*<0.05 in both cases, table 1-a). The interaction between the region and performance was not found to be significant, the 2x2x2 interaction (region x performance x gender) results were not found to be significant.

Regarding the variable *Sports Competition Anxiety* the athletes from the two regions i.e. northern and southern regions, differed
significantly from each other. The athletes from northern region were found to have significantly higher level of sports competition anxiety.

The successful and unsuccessful athletes differed from each other significantly on sports competition anxiety. The unsuccessful athletes had higher level of sports competition anxiety.

Regarding the male and female athletes on this variable, the differences were found to be significant. The female athletes were found to have significantly higher level of sports competition anxiety as compared to the male athletes.

The results regarding the interaction between region and gender, performance and gender, and three-way interaction between region, gender and performance were not found to be significant. The interaction between region and performance were found to be significant.

MENTAL IMAGERY

Regarding Visual Imagery the differences between the athletes from two regions were not found to be significant.

The two performance groups i.e. successful and unsuccessful athletes also did not indicate any significant differences between them. The two gender groups i.e. male and female athletes demonstrated significant gender differences on the variable visual imagery. Male athletes were found to have significantly better visual imagery abilities as compared to female athletes. Interaction effects between region and performance, region and gender, performance and gender, as well as
between region, performance and gender have not been found to be significant.

Regarding the variable **Auditory Imagery**, significant differences were found between the athletes from two regions i.e. northern and southern. The athletes from northern region had higher auditory imagery abilities.

Successful and unsuccessful athletes did not demonstrate any significant differences among them.

With regard to the two gender groups, the differences among them were also not found to be significant.

Interaction between region and performance, gender x perform and 3 way interaction i.e. region x performance gender were not found to be significant. The region x gender interaction produced significant results.

Regarding **Gustatory Imagery** the athletes from the two regions differed significantly from each other. The athletes from northern region had better gustatory imagery abilities as compared to southern region athletes.

The two performance groups i.e. successful and unsuccessful athletes revealed no significant differences among them.

The two gender groups did not differ from each other significantly on this variable.
The results of region x performance, gender x performance and 3 way interaction i.e. region x performance x gender revealed no significant interaction whereas the interaction between the region and gender was found to be significant.

On the variable *Olfactory Imagery*, the athletes from northern and southern regions showed no significant differences among them.

The successful and unsuccessful athletes also did not demonstrate any significant differences.

The differences between male and female athletes were also not found to be significant.

The interaction between region and performance, gender and performance were not found to be significant. The region x gender interaction as well as the 3 way interaction were found to be significant.

Regarding *Tactual Imagery* the athletes from the two regions differed significantly from each other (p<0.01). The athletes from northern region had better tactual imagery abilities as compared to southern region athletes.

The two performance groups i.e. successful and unsuccessful athletes also did not indicate any significant differences between them on this variable i.e. Tactual Imagery.

With regard to the two gender groups, the differences among them were also not found to be significant.
The results of region x performance, gender x performance and of 3 way interaction i.e. region x performance x gender revealed no significant interaction whereas the interaction between the region and gender was found to be significant (p<0.01).

Regarding the variable Organic Imagery significant differences were found between the athletes from two regions i.e. northern and southern (p<0.05). The athletes from northern region had higher organic imagery abilities.

The two performance groups i.e. successful and unsuccessful athletes also did not indicate any significant differences between them on the variable Organic Imagery.

The results of interaction between region and performance and region x gender were found to be significant. The interaction regarding performance x gender and the three way interaction results were not found to be significant.

Regarding Total Mental the differences between the athletes from two regions were not found to be significant.

The successful and unsuccessful athletes demonstrated that the differences were not significant.

The gender differences on the variable total mental imagery were also not found to be significant.

The interaction i.e. region x performance, gender x performance and the 3 way interaction were not found to be significant. The interaction between region and gender was found to be significant.
SELF-ESTEEM

Regarding *Personally Perceived Self-Esteem* significant differences were found between the athletes from the two regions. The athletes from the northern region had higher level of personally perceived self-esteem.

The differences between the successful and unsuccessful athletes were not found to be significant.

The male and female athletes were found to differ from each other significantly on this variable. The male athletes had higher level of personally perceived self-esteem as compared to their female counterparts.

The results regarding two way interaction i.e. region x performance, region x gender and performance x gender as well as the results of 3 way interaction between these groups were not found to be significant.

With regard to the *Socially Perceived Self-Esteem*, no significant differences were found between the athletes from the two regions i.e. the northern and southern regions.

The differences between successful and unsuccessful athletes were also not found to be significant.

The gender differences on socially perceived self-esteem were also not found to be significant.
The interaction between the two regions and two performance groups as well as between the region and the gender were found to be significant. No other interaction effect was found to be significant.

The results regarding Overall Self-Esteem revealed that the athletes from the northern region had a “balanced self-esteem”. The athletes from southern region had “negative self-esteem”.

The successful group of athletes fell in “balanced self-esteem” category. The unsuccessful group of athletes had negative self-esteem. The male athletes had leaning towards negative self-esteem. The results regarding female athletes indicated towards negative self-esteem.

**FINDINGS REGARDING MALE SPRINTERS, JUMPERS AND THROWERS**

**ANXIETY**

On the variable State and Trait Anxiety significant differences were found between the sprinters and throwers. The throwers exhibited much higher level of state and trait anxiety.

With regard to Sports Competition Anxiety. There were significant differences, between jumpers and throwers, the later being more anxious.

**MENTAL IMAGERY**

Sprinters were found to be significantly better than throwers on Auditory Imagery, Gustatory Imagery, Olfactory Imagery, Organic Imagery and total Mental Imagery. Sprinters were also found to be
significantly better than jumpers on *Organic Imagery*. Even jumpers were found to be significantly better than throwers on *Gustatory imagery* and *Olfactory imagery*. Infact, throwers were having the comparatively lowest mental imagery on all its components and total imagery.

**SELF-ESTEEM**

With regard to the *Personally Perceived* and the *Socially Perceived Self-Esteem*, the three groups i.e. sprinters, jumpers and throwers did not demonstrate significant differences among them. Overall, the athletes of all the three groups were found to have “balanced self-esteem”.

**FINDINGS REGARDING FEMALE SPRINTERS, JUMPERS AND THROWERS**

**ANXIETY**

*State and Trait Anxiety*

On the variable *State and Trait Anxiety* no significant differences were found between the three groups. The three groups had almost same level of anxiety.

*Sports Competition Anxiety*

With regard to *Sports Competition Anxiety*, the sprinters who had the highest level of anxiety demonstrated significantly higher level as compared to the throwers, who were found to have comparatively lowest sports competition anxiety.
MENTAL IMAGERY

Regarding the mental imagery, no significant differences were found between the three groups of female athletes on Visual Imagery, auditory imagery, gustatory imagery, olfactory imagery, tactual imagery, organic imagery and total mental imagery. However, sprinters were having a little higher level of auditory imagery, gustatory imagery, tactual imagery, organic imagery and total mental imagery whereas the jumpers were better on visual and olfactory imagery. Throwers were having the lowest level on all the components of mental imagery and total mental imagery.

SELF-ESTEEM

The sprinters, demonstrated significant differences from throwers on Personally Perceived Self-Esteem only. The former group had the highest level and the later group, the lowest level on this variable. With regard to the Socially Perceived Self-Esteem, all the three groups had almost identical level and no significant differences were found. Overall, the sprinters and jumpers were found to have balanced self-esteem" whereas the throwers were found to have “negative self-esteem”

CONCLUSIONS

DIFFERENCES BETWEEN ATHLETES FROM NORTHERN AND SOUTHERN REGION

ANXIETY

ANOVA results with regard to the athletes from two regions did not demonstrate any significant differences between them on the variable State-Trait Anxiety.
The athletes from the northern region obtained significantly higher scores as compared to the southern region athletes (p<0.01) on the variable Sports Competition Anxiety which demonstrated that the athletes from northern region experienced higher sports competition anxiety.

The hypothesis number 1 that there would be significant differences between the athletes from the two regions has been rejected regarding the variable state-trait anxiety, whereas, in the case of sports competition anxiety, the same has been retained.

**MENTAL IMAGERY**

The results in respect of the Auditory Imagery, Gustatory Imagery, Tactual Imagery and Organic Imagery demonstrated that the athletes from northern region exhibited significantly higher level than athletes from southern region on these indices of the variable mental imagery.

However, significant differences were not found between the athletes from two region with regard to the two indices of mental imagery i.e. Visual Imagery and Olfactory Imagery, as well as with regard to the Total Mental Imagery.

The hypothesis number 2 has been, therefore, partially retained with respect to four indices of mental imagery i.e. auditory, gustatory, tactual and organic imagery, whereas the same has been partially rejected with regard to the visual and olfactory imagery indices of mental imagery as well as with regard to the total mental imagery.
SELF-ESTEEM

The athletes from northern region demonstrated significantly higher level of personally perceived self-esteem as compared to those from southern part of India. The results with regard to socially perceived, self-esteem, however, did not reveal any significant differences. No significant differences were found between the two regional groups of athletes with regard to the overall self-esteem. Both the groups fell in “balanced self-esteem” category.

The hypothesis No. 3 that there would be significant differences between northern and southern region athletes has been partially retained qua personally perceived self-esteem, and has been partially rejected in respect of socially perceived self-esteem and overall self-esteem.

DIFFERENCES BETWEEN THE SUCCESSFUL AND UNSUCCESSFUL ATHLETES

ANXIETY

There were no significant differences between the two performance groups i.e. successful and unsuccessful athletes with regard to the variable state-trait anxiety.

The results with regard to the sports competition anxiety demonstrated significant differences between the successful and unsuccessful athletes.

Hypothesis number 4 predicting significant differences between the two performance groups has been retained with regard to sports
competition anxiety and the same stands rejected in respect to state-trait anxiety.

MENTAL IMAGERY

The ANOVA results pertaining to the two performance groups of i.e. successful and unsuccessful did not demonstrate significant differences on any of the indices of mental imagery as well as with regard to total mental imagery.

The hypothesis number 5, therefore, stands rejected.

SELF-ESTEEM

The successful athletes and unsuccessful athletes did not differ form each other significantly with regard to their personally perceived self-esteem, socially perceived self-esteem, as well as overall self-esteem. Both the performance groups were found to have “balanced self-esteem”.

Hypothesis number 6 that there would be significant differences between the two performance groups, stands rejected.

DIFFERENCES BETWEEN MALE AND FEMALE ATHLETES

ANXIETY

The female athletes were found to differ significantly from their male counterparts on the variable state-trait anxiety as well as with regard to sports competition anxiety.
The hypothesis number 7 suggesting gender differences with regard to the variable anxiety has, therefore, been retained.

**MENTAL IMAGERY**

There were significant differences between the two gender groups with regard to only one indice of mental imagery i.e. visual imagery alone. So far as other indices of mental imagery and total mental imagery is concerned, no significant differences were found between these two gender groups.

Hypothesis number 8 has been partially retained only in respect to the visual imagery, indice of mental health. This hypothesis stands rejected with regard to the other five indices of mental imagery as well as total mental imagery.

**SELF-ESTEEM**

Between the two gender groups, the male athletes exhibited significantly higher personally perceived self-esteem whereas no significant differences were observed with regard to the socially perceived self-esteem. The two groups i.e. male and female athletes also did not differ significantly from each other with regard to overall self-esteem. Both male and female athletes were having “balanced self-esteem”

The hypothesis No. 9, therefore, stands retained partially so far as personally perceived self-esteem is concerned and the same has been rejected with regard to the socially perceived self-esteem and overall self-esteem.
INTERACTION BETWEEN REGION, PERFORMANCE AND GENDER

ANXIETY

The region x performance was not found to be significant on state-trait anxiety whereas the same has been found to be significant with respect to sports competition anxiety.

On the other hand, region x gender interaction effect was found to be significant on state-trait anxiety but the same was not significant with regard to sports competition anxiety.

With regard to performance x gender interaction too, significant results were obtained with regard to state-trait anxiety only.

The three way interaction i.e. region x performance x gender was not found to be significant with regard to both the state-trait anxiety and sports competition anxiety as well.

The hypothesis number 10(a) has been partially rejected and partially retained.

MENTAL IMAGERY

The region x performance interaction was not found to be significant with regard to total mental imagery as well as all the indices of mental imagery except organic imagery.

The results regarding region x gender interaction revealed significant results with regard to the total mental imagery and all other indices of mental imagery except visual imagery where these were not found to be significant.
The interaction between performance x gender did not produce significant results at all with regard to all the indices of mental imagery as well as the total mental imagery.

Region x performance x gender interaction results demonstrated significant results with regard to olfactory imagery indice only. No significant results were observed on other indices of mental imagery as well as on the total mental imagery.

Hypothesis number 10(b) that there would be significant interaction effects on the variable mental imagery has, therefore, been retained partially and rejected partially.

**SELF-ESTEEM**

The results of interaction between region and performance, region and gender, performance and gender and region x performance x gender did not produce any significant results with regard to personally perceived self-esteem. However, there were significant interaction effects of region x performance, and region x gender only on socially perceived self-esteem.

The hypothesis No. 10(c), therefore, stands accepted partially and rejected partially.

**DIFFERENCES BETWEEN MALE SPRINTERs, JUMPERS AND THROWERS**

**ANXIETY**

The results demonstrated significant differences between male sprinters and throwers, the later group having higher level of state-trait anxiety. The jumpers did not differ significantly from the sprinters or the throwers.
The throwers demonstrated significantly higher level of sports competition anxiety as compared to the jumpers. However, the sprinters did not reveal any significant differences from the other two groups of athletes.

The hypothesis number 8(a) that there would be significant differences between the three groups of athletes has been partially accepted and partially rejected.

MENTAL IMAGERY

The male sprinters differed significantly from male throwers on auditory, gustatory, olfactory and organic imagery indices as well as on the total mental imagery. The sprinters were found to have significantly better mental imagery abilities as compared to the throwers. Ever jumpers demonstrated significantly better mental imagery abilities on gustatory and olfactory imagery indices of mental imagery.

The hypothesis No. 11(b) propounding significant differences between the three athletic groups on the variable mental imagery has been partially retained and partially rejected.

SELF-ESTEEM

No significant differences were found between the three groups of male athletes i.e. sprinters, jumpers and throwers on the personally perceived self-esteem and socially perceived self-esteem. On the overall self esteem, all the three groups fell in “balanced self-esteem” category.
Hypothesis number 11(c) that there would be significant differences on the variable self-esteem among male athletes has been rejected.

**DIFFERENCES BETWEEN FEMALE SPRINTERS, JUMPERS AND THROWERS**

**ANXIETY**

With regard to state-trait anxiety, the three groups of female athletes did not demonstrate any significant differences. However, on sports competition anxiety the sprinters were found to have significant higher level of sports competitive anxiety as compared to the throwers who were at the lowest level among the three groups.

The hypothesis number 11(a) has been rejected regarding state-trait anxiety and has been partially accepted and partially rejected in respect of sports competition anxiety.

**MENTAL IMAGERY**

The three groups of female athletes i.e. sprinters, jumpers and throwers did not demonstrate any significant differences among them on all the indices of mental imagery as well as on the total mental imagery.

The hypothesis number 11(b) that there would be significant differences among sprinters, jumpers and throwers on the variable mental imagery stands rejected.
SELF-ESTEEM

The results demonstrated significant differences between the female sprinters and throwers only with regard to personally perceived self-esteem. No differences were found between the three groups of athletes in respect to the socially perceived self esteem. With regard to the overall self esteem, the female throwers were found to be having “negative self-esteem” as compared to the sprinters and jumpers who fell in “balanced self-esteem” category.

Hypothesis number 11(c) has, therefore, been partially retained and partially rejected.

IMPLICATIONS OF THE STUDY

Anxiety is one psychological factor which plays crucial role in the final outcome of all the sports encounters. It is being explored incessantly in different sports settings, regarding different sports groups, and at different levels. In the present study, all the groups i.e. regional, performance and gender groups were found to fall in “extremely high anxiety” category of state and trait-anxiety. This points towards an alarming situation and immediate remedial measures are needed to be taken to control, manage and regulate their anxiety level and bring down the same to desirable levels by adopting suitable psycho-regulatory techniques. Northern region athletes were found to have higher level of anxiety as compared to those from southern region irrespective of having achieved success or not. Coaches and other officials concerned with selection and training of athletes from northern region need to monitor and adopt serious measures for anxiety
regulation of their athletes. Among the gender groups, female athletes had significantly higher level of anxiety, and this deserves immediate attention of coaches and sports psychologists who constantly interact with these athletes.

The athletes from northern region were found to have significantly higher level of sports competition anxiety as compared to those from southern region, rather they fell in a “above average level” classification. This again needs to be regulated to bring it down to “optimum level” because over zealousness is bound to be counter productive. Female athletes were having significantly higher level of sports competition anxiety and were on the verge of being in “above average level”. This needs immediate attention and psycho-regulatory techniques should be applied for bringing it down to “optimum level”.

With regard to mental imagery, being elite athletes, all the groups irrespective of being classified on regional or performance or on the gender basis, had demonstrated “fairly vivid image” mental imagery abilities on all its components as well as on total mental imagery abilities. The findings of present investigation support the view that mental imagery abilities are of utmost importance for athletic performance. These can be further exploited by regularly and systematically subjecting the athletes to various mental simulation and imagery training sessions, and then we too can hope for producing world class athletes.

Self esteem, self-concept or self confidence, infact comes to the rescue of an individual when he has perform extra ordinary feats. It has been rightly said faith moves mountains. Faith in oneself is undoubtedly the most important pre-requisite for success in any field of
life, more so in sports arena. Southern region athletes indicated a leaning towards negative self esteem as compared to athletes from northern region who were found to have “balanced self-esteem”. The training incharge and coaches from southern region need to bolster up the self-confidence and self-esteem of their athletes. Similarly, female athletes also needed help to boost up their self-esteem as they too had indicated leaning towards negative self-esteem. Unsuccessful athletes too were found to be slightly on negative side on this very pertinent psychological variable. This finding provides scientific support to the notion that one's faith in oneself is of paramount importance. By bolstering up the self-esteem and self-confidence among the athletes, they can be prompted towards achieving what they today consider unachievable.

Among the three categories of male athletes i.e. the sprinters, jumpers and throwers, the sprinters demonstrated their superiority on all the three studied variables. The male jumpers were also having almost the same level of anxiety, mental imagery and self-esteem as compared to the sprinters. This was, perhaps, due to the fact that generally sprinters also participate in most of the jumping events. (legendry Carl Leous of USA is one such example). The third group i.e. the throwers were found to be wanting on various psychological parameters. They had higher level of state and trait anxiety as well as sports competitive anxiety wherein they were nearing “above average level” of anxiety. Throwers also demonstrated comparatively lower level of mental imagery capabilities.

The three groups of female athletes i.e. the sprinters, jumpers and throwers indicated no significant inter-se differences on state-trait anxiety and mental imagery. However, as in the case of male athletes,
the throwers were found to be lagging behind on all these psychological parameters. Throwers, both male and female, indeed require prompt psychological help with regard to the variables examined in the present study. On self-esteem too, they had demonstrated significantly negative self-esteem which pointed out the startling fact that they consider their socially perceived self-esteem (i.e. in the eyes of others) as more important than their personally perceived self-esteem. The sports psychologists and the coaches will have to take appropriate and suitable measures to remedy this tilt in their self-perception.

**SUGGESTIONS FOR FUTURE RESEARCH**

1. The scope of the study can be widened by involving the athletes participating in different athletic events which have been left out in the present study. Further, the athletes taking part at other levels of competitions may also be included for carrying out more extensive and elaborate study.

2. Since the present study has been confined to only three psychological variables, further research may be carried out by examining these variables individually as well as in tandem with other pertinent psychological variables which influence the sports performance.

3. The present study has been undertaken involving athletes from two regions i.e. northern and southern regions of the country. Studies may be attempted to cover the whole of the India to further broaden the investigations.
4. Studies may be undertaken pertaining to the athletes from track and field events as well as the players from various other games and sports disciplines to obtain further better comparative results.

5. Future investigators may attempt to conduct longitudinal studies on these variables to find out the relationship of performance with the variables studied in the present study.

6. To add more authenticity to the studies of this type, the factors such as socio-cultural background, socio-economic status, health status etc may be taken into account.