CHAPTER-IV

Results and Discussion
Chapter-IV

Results and Discussion

The present study was designed to examine the performance of track and field athletes of different Indian universities under the psychological variables. The main thrusts of variables under the study were the competitive state anxiety (cognitive anxiety, somatic anxiety and self-confidence) and general self-efficacy. The data obtained from athletes on the above psychological variables under track and field condition and statistically analyzed by z test to find out the significance differences above mentioned psychological variables. The analysis was carried out for the scores obtained under track and field event separately at different stages. In the first stage, the researcher compared within high and low performance athletes, in second and third stages compared separately with track and field athletes among psychological variable. The main findings are as follow.
Table-1

Showing difference between high and low performance athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Athletes</td>
<td>140</td>
<td>65.22</td>
<td>8.09</td>
<td>2.87*</td>
</tr>
<tr>
<td>Low Performance Athletes</td>
<td>260</td>
<td>67.87</td>
<td>9.16</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

From the table 1, it is observed that the difference between high and low performance athletes on competitive state anxiety is significant because obtained z value (2.87) is greater than tabulated z value (1.96) at 0.05 level of significance with 398 degree of freedom.
Results and Discussion

Figure-1

Showing mean difference between high and low performance athletes on competitive state anxiety
Results and Discussion

Table-1.1

Showing difference between high and low performance athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>High Performance Athletes (N=140)</th>
<th>Low Performance Athletes (N=260)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-variable</strong></td>
<td><strong>Mean</strong></td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>19.57</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>18.33</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>27.28</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

It is clear from above table 1.1 that there are significant differences exist between high and low performance athletes on the variable of cognitive anxiety, somatic anxiety and self-confidence. As a result of computed z values (6.22, 4.89 & 3.56) are greater than tabulated z value (1.96) at 0.05 level of significance with 398 degree of freedom.
Figure-1.1

Showing mean difference between high and low performance athletes on competitive state anxiety sub-variable
Results and Discussion

Table-2

Showing difference between high performance track and field athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Track Athletes</td>
<td>80</td>
<td>65.85</td>
<td>8.97</td>
<td>1.06</td>
</tr>
<tr>
<td>High Performance Field Athletes</td>
<td>60</td>
<td>64.38</td>
<td>6.72</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

The readings of table 2 show that the calculated z value (1.06) is less than tabulated z value (1.96) at 0.05 level of significance with 138 degree of freedom, that means insignificant difference exists between high performance track and field athletes on competitive state anxiety.
Figure-2

Showing mean difference between high performance track and field athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>High Performance Track Athletes</th>
<th>High Performance Field Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td>65.85</td>
<td></td>
<td>64.38</td>
</tr>
</tbody>
</table>
### Results and Discussion

**Table-2.1**

**Showing difference between high performance track and field athletes on competitive state anxiety sub-variable**

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>High Performance Track Athletes (N=80)</th>
<th>High Performance Field Athletes (N=60)</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Anxiety</td>
<td>19.77 ± 3.92</td>
<td>19.30 ± 3.53</td>
<td>0.74</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>18.95 ± 4.47</td>
<td>17.52 ± 3.19</td>
<td>2.11*</td>
</tr>
<tr>
<td>Self Confidence</td>
<td>27.20 ± 5.11</td>
<td>27.38 ± 4.91</td>
<td>0.21</td>
</tr>
</tbody>
</table>

*Significant at .05 level, Tabulated z value = 1.96

The readings of above table show that a significant difference exists on the variable of somatic anxiety. It is due to the fact that computed z value (2.11) is more than tabulated z value (1.96) at 0.05 level of significance with 138 degree of freedom. Further insignificant differences exist on remaining two variable i.e., cognitive anxiety and self confidence between high performance track and field athletes.
Figure-2.1

Showing mean difference between high performance track and field athletes on competitive state anxiety sub-variable.
Results and Discussion

Table-3

Showing difference between low performance track and field athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Performance Track Athletes</td>
<td>190</td>
<td>68.30</td>
<td>9.34</td>
<td>1.29</td>
</tr>
<tr>
<td>Low Performance Field Athletes</td>
<td>70</td>
<td>66.71</td>
<td>8.59</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

It is indicated from the table 3 that insignificant difference exists between low performance track and field athletes on competitive state anxiety. Since, calculated z value (1.29) is less than tabulated z value (1.96) at 0.05 level of significance with 158 degree of freedom.
Figure-3

Showing mean difference between low performance track and field athletes on competitive state anxiety.

![Bar chart showing mean score comparison between low performance track and field athletes.]

- Low Performance Track Athletes: 68.30
- Low Performance Field Athletes: 66.71
Table-3.1

Showing difference between low performance track and field athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Low Performance Track Athletes (N=190)</th>
<th>Low Performance Field Athletes (N=70)</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S D</td>
<td>Mean</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>22.40</td>
<td>4.23</td>
<td>21.71</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>20.68</td>
<td>4.77</td>
<td>20.44</td>
</tr>
<tr>
<td>Self Confidence</td>
<td>25.27</td>
<td>4.48</td>
<td>25.34</td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value =1.96

It is observed from the table 3.1 that the difference between low performance track and field athletes is insignificant on competitive state anxiety sub-variables, as the calculated z value (1.17, 0.37, 0.90) on each sub-variable (cognitive anxiety, somatic anxiety and self confidence) is less than tabulated z value (1.96) at 0.05 level of significance with 258 degree of freedom.
Figure-3.1

Showing mean difference between low performance track and field athletes on competitive state anxiety sub-variable
Results and Discussion

Table-4

Showing difference between high and low performance track athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Track Athletes</td>
<td>80</td>
<td>65.85</td>
<td>8.97</td>
<td>1.99*</td>
</tr>
<tr>
<td>Low Performance Track Athletes</td>
<td>190</td>
<td>68.30</td>
<td>9.34</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level, Tabulated z value = 1.96

It is observed from above table that there is significant difference exist between high and low performance track athletes on the variable of competitive state anxiety. It is due to the fact that calculated z value (1.99) is greater than tabulated z value (1.96) at 0.05 level of significance with 268 degree of freedom.
Figure-4

Showing mean difference between high and low performance track athletes on competitive state anxiety
Table-4.1

Showing difference between high and low performance track athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Mean</th>
<th>S D</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Track Athletes (N=80)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>19.77</td>
<td>3.91</td>
<td>22.40</td>
<td>4.23</td>
<td>4.75*</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>18.95</td>
<td>4.47</td>
<td>20.68</td>
<td>4.77</td>
<td>2.77*</td>
</tr>
<tr>
<td>Self Confidence</td>
<td>27.20</td>
<td>5.11</td>
<td>25.27</td>
<td>4.48</td>
<td>3.09*</td>
</tr>
<tr>
<td>Low Performance Track Athletes (N=190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level, Tabulated z value =1.96

The difference between high and low performance track athletes on competitive state anxiety sub-variable (cognitive anxiety, somatic anxiety, and self confidence) is significant because obtained z value (4.75, 2.77 & 3.09) is greater on each variable than tabulated z value (1.96) at 0.05 level of significance with 268 degree of freedom.
Figure-4.1

Showing mean difference between high and low performance track athletes on competitive state anxiety sub-variable
Table-5

Showing difference between male and female high performance track athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male High Performance Track Athletes</td>
<td>50</td>
<td>67.58</td>
<td>7.86</td>
<td>2.28*</td>
</tr>
<tr>
<td>Female High Performance Track Athletes</td>
<td>30</td>
<td>62.97</td>
<td>10.05</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level, Tabulated z value = 2.00

For competitive state anxiety, it is evident from the table 5 that there is significant difference exist between male and female high performance track athletes. It is due to the fact that the computed z value (2.28) is greater than tabulated z value (2.00) at 0.05 level of significance with 78 degree of freedom.
Results and Discussion

Figure-5

Showing mean difference between male and female high performance track athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>Male High Performance Track Athletes</th>
<th>Female High Performance Track Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>67.58</td>
<td>62.92</td>
</tr>
</tbody>
</table>

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Table-5.1

Showing difference between male and female high performance track athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Male High Performance Track Athletes (N=50)</th>
<th>Female High Performance Track Athletes (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S D</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>19.92</td>
<td>3.88</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>19.36</td>
<td>4.65</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>28.30</td>
<td>4.42</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 2.00

It is clear from the above table that there is insignificant difference exists between male and female high performance track athletes on the variable of cognitive and somatic anxiety. The computed z value (0.42, 1.06) is less than tabulated z value (1.96). Further significant difference exists on the variable of self-confidence between male and female high performance track athletes at 0.05 level of significance with 78 degree of freedom.
Results and Discussion

Figure-5.1

Showing mean difference between male and female high performance track athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th></th>
<th>Male High Performance Track Athletes</th>
<th>Female High Performance Track Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Anxiety</td>
<td>19.92</td>
<td>19.53</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>19.36</td>
<td>18.27</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>28.30</td>
<td>25.37</td>
</tr>
</tbody>
</table>
Table-6

Showing difference between male and female low performance track athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Low Performance Track Athletes</td>
<td>130</td>
<td>67.85</td>
<td>9.27</td>
<td>0.97</td>
</tr>
<tr>
<td>Female Low Performance Track Athletes</td>
<td>60</td>
<td>69.27</td>
<td>9.17</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

It is documented from the table 6 that there is insignificant difference between male and female low performance track athletes on competitive state anxiety because calculated z value (0.97) is less than tabulated z value (1.96) at 0.05 level of significance with 188 degree of freedom.
Figure-6

Showing mean difference between male and female low performance track athletes on competitive state anxiety
Table-6.1

Showing difference between male and female low performance track athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Male Low Performance Track Athletes (N=130)</th>
<th>Female Low Performance Track Athletes (N=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S D</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>22.18</td>
<td>4.25</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>20.20</td>
<td>4.89</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>25.48</td>
<td>4.37</td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

When the researcher go through the table 6.1, insignificant differences exist between male and female low performance track athletes with regard to competitive state anxiety sub-variable because calculated z value on each sub-variable (cognitive=1.19, somatic anxiety=1.93 and self confidence=0.91) is less than tabulated z value (1.96) at 0.05 level of significance with 188 degree of freedom.
Figure-6.1

Showing mean difference between male and female low performance track athletes on competitive state anxiety sub-variable
Results and Discussion

Table-7

Showing difference between high and low performance field athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Field Athletes</td>
<td>60</td>
<td>64.38</td>
<td>6.71</td>
<td>1.70</td>
</tr>
<tr>
<td>Low Performance Field Athletes</td>
<td>70</td>
<td>66.70</td>
<td>8.59</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

Since, calculated z value (1.70) is less than tabulated z value (1.96) at 0.05 level of significance with 128 degree of freedom, thus above data provide sufficient evidence to ensure that the difference between high and low performance field athletes is insignificant on competitive state anxiety.
Figure-7

Showing mean difference between high and low performance field athletes on competitive state anxiety

![Bar chart showing mean scores.](image)
Table-7.1

Showing difference between high and low performance field athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>High Performance Field Athletes (N=60)</th>
<th>Low Performance Field Athletes (N=70)</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S D</td>
<td>Mean</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>19.30</td>
<td>3.53</td>
<td>21.71</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>17.52</td>
<td>3.19</td>
<td>20.44</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>27.38</td>
<td>4.91</td>
<td>25.34</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

The readings of the table 7.1 reveal that there are significant differences exist between high and low performance field athletes on the variable of cognitive and somatic anxiety. As a result of computed z value (3.56, 4.29) is greater than tabulated z value (1.96). Further insignificant difference examines on the variable of self-confidence as calculated z value (1.79) is less than tabulated value (1.96) at 0.05 level of significance with 128 degree of freedom.
Results and Discussion

Figure-7.1

Showing mean difference between high and low performance field athletes on competitive state anxiety sub-variable
Results and Discussion

Table-8

Showing difference between male and female high performance field athletes on competitive state anxiety

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male High Performance Field Athletes</td>
<td>32</td>
<td>64.47</td>
<td>7.04</td>
<td>0.10</td>
</tr>
<tr>
<td>Female High Performance Field Athletes</td>
<td>28</td>
<td>64.28</td>
<td>6.45</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

It is indicated from the table 8 that there is insignificant difference between male and female high performance field athletes on competitive state anxiety, this is due to the obtained z value (0.10) is less than tabulated z value (2.00) at 0.05 level of significance with 58 degree of freedom.
Results and Discussion

Figure-8

Showing mean difference between male and female high performance field athletes on competitive state anxiety
**Table-8.1**

**Showing difference between male and female high performance field athletes on competitive state anxiety sub-variable**

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Male High Performance Field Athletes (N=32)</th>
<th>Female High Performance Field Athletes (N=28)</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Anxiety</td>
<td>19.47 3.21</td>
<td>19.10 3.91</td>
<td>0.39</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>16.91 2.84</td>
<td>18.21 3.46</td>
<td>1.61</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>27.75 5.76</td>
<td>26.96 3.77</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

Since, calculated z value on each sub-variable of competitive state anxiety (cognitive anxiety=0.39, somatic anxiety=1.61 and self-confidence=0.61) is less than tabulated z value (1.96) so insignificant differences exist between male and female high performance field athletes at 0.05 level of significance with 58 degree of freedom.
Results and Discussion

Figure-8.1

Showing mean difference between male and female high performance field athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th></th>
<th>Male high Performance Field Athletes</th>
<th>Female high Performance Field Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Anxiety</td>
<td>19.47</td>
<td>19.10</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>16.91</td>
<td>18.21</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>27.75</td>
<td>26.96</td>
</tr>
</tbody>
</table>
Results and Discussion

Table 9

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Low Performance Field Athletes</td>
<td>35</td>
<td>67.34</td>
<td>9.10</td>
<td>0.61</td>
</tr>
<tr>
<td>Female Low Performance Field Athletes</td>
<td>35</td>
<td>66.08</td>
<td>8.13</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

There is insignificant difference exist between male and female low performance field athletes on competitive state anxiety because the computed z value (0.61) is less than tabulated z value (2.00) at 0.05 level of significance with 68 degree of freedom.
Results and Discussion

Figure-9

Showing mean difference between male and female low performance field athletes on competitive state anxiety

![Bar chart showing mean scores between male and female low performance field athletes. Male mean score is 67.34 and female mean score is 66.08.](chart.png)
Results and Discussion

Table-9.1

Showing difference between male and female low performance field athletes on competitive state anxiety sub-variable

<table>
<thead>
<tr>
<th>Sub-variable</th>
<th>Mean</th>
<th>S D</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Anxiety</td>
<td>21.48</td>
<td>4.27</td>
<td>21.94</td>
<td>3.99</td>
<td>0.46</td>
</tr>
<tr>
<td>Somatic Anxiety</td>
<td>20.08</td>
<td>4.73</td>
<td>20.80</td>
<td>4.02</td>
<td>0.68</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>25.77</td>
<td>4.37</td>
<td>24.91</td>
<td>9.84</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

From the table 9.1, it is observe that there are insignificant differences exist between male and female low performance field athletes with regard to each variable of competitive state anxiety, it may be due to the fact that calculated z value of each sub-variable (0.46, 0.68, 0.47) is less than tabulated z value (2.00) at 0.05 level of significant with 68 degree of freedom.
Figure-9.1

Showing mean difference between male and female low performance field athletes on competitive state anxiety sub-variable.
Table-10

Showing difference between high and low performance athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Athletes</td>
<td>140</td>
<td>32.96</td>
<td>4.83</td>
<td>5.80*</td>
</tr>
<tr>
<td>Low Performance Athletes</td>
<td>260</td>
<td>29.88</td>
<td>5.21</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

It is clear from the table 10 that calculated z value (5.80) is greater than the tabulated z value (1.96) at 0.05 level of significance with 398 degree of freedom, so there is significant difference exist between high and low performance athletes on the variable of self-efficacy.
Results and Discussion

Figure-10

Showing mean difference between high and low performance athletes on self-efficacy

![Bar chart showing mean difference between high and low performance athletes on self-efficacy. The chart displays two bars: one for high performance athletes with a mean score of 32.96 and another for low performance athletes with a mean score of 29.88.]
Results and Discussion

Table-11

Showing difference between high performance track and field athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Track Athletes</td>
<td>80</td>
<td>32.25</td>
<td>4.46</td>
<td>2.04*</td>
</tr>
<tr>
<td>High Performance Field Athletes</td>
<td>60</td>
<td>33.92</td>
<td>5.16</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

It is indicated from the table 11 that computed z value (2.04) is greater than tabulated z value (1.96) at 0.05 level of significance with 138 degree of freedom, thus data provide sufficient evidence to ensure that the difference between high performance track and high performance field athlete is significant on the variable of self-efficacy.
Results and Discussion

Figure-11

Showing mean difference between high performance track and field athletes on self-efficacy

[Bar chart showing mean scores for high performance track athletes and high performance field athletes]
Results and Discussion

Table-12

Showing difference between low performance track and field athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Performance Track Athletes</td>
<td>190</td>
<td>29.73</td>
<td>5.32</td>
<td>0.74</td>
</tr>
<tr>
<td>Low Performance Field Athletes</td>
<td>70</td>
<td>30.27</td>
<td>4.89</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

It is observe from the table 12 that insignificance difference exists between low performance track and low performance field athletes on self-efficacy. Since, calculated z value (0.74) is less than tabulated z value (1.96) at 0.05 level of significance with 258 degree of freedom.
Results and Discussion

Figure-12

Showing mean difference between low performance track and field athletes on self efficacy

<table>
<thead>
<tr>
<th>Mean Score</th>
<th>Low Performance Track Athletes</th>
<th>Low Performance Field Athletes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>29.73</td>
<td>30.27</td>
</tr>
</tbody>
</table>
Results and Discussion

Table-13

Showing difference between high and low performance track athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Track Athletes</td>
<td>80</td>
<td>32.25</td>
<td>4.46</td>
<td>3.72*</td>
</tr>
<tr>
<td>Low Performance Track Athletes</td>
<td>190</td>
<td>29.73</td>
<td>5.32</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

When the researcher critically examines the table 13 than a significant difference exists between high and low performance track athletes with regard to self-efficacy. It is due to the fact that calculated z value (3.72) is more than tabulated z value (1.96) at 0.05 level of significant with 268 degree of freedom.
Results and Discussion

Figure-13

Showing mean difference between high and low performance track athletes on self efficacy

![Bar chart showing mean scores]

- High Performance Track Athletes: 32.25
- Low Performance Track Athletes: 29.73
Results and Discussion

Table-14

Showing difference between male and female high performance track athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male High Performance Track Athletes</td>
<td>50</td>
<td>32.30</td>
<td>4.77</td>
<td>0.13</td>
</tr>
<tr>
<td>Female High Performance Track Athletes</td>
<td>30</td>
<td>32.16</td>
<td>4.97</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

It is depicted from the table 14 that there is no significant difference between male and female high performance track athletes on the variable of self-efficacy because the calculated z value (0.13) is less than tabulated z value (2.00) at 0.05 level of significance with 78 degree of freedom.
Figure-14

Showing mean difference between male and female high performance track athletes on self efficacy

![Bar chart showing mean difference between male and female high performance track athletes on self efficacy](chart.png)
Results and Discussion

Table-15

Showing difference between male and female low performance track athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Low Performance Track Athletes</td>
<td>130</td>
<td>29.57</td>
<td>5.45</td>
<td>0.77</td>
</tr>
<tr>
<td>Female Low Performance Track Athletes</td>
<td>60</td>
<td>30.08</td>
<td>4.92</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 1.96

From table 15, it is clear that the resultant value of z (0.77) is less than tabulated value of z (1.96) at 0.05 level of significance with 188 degree of freedom; it means there is insignificant difference between male and female low performance track athletes on self-efficacy.
Results and Discussion

Figure-15

Showing mean difference between male and female low performance track athletes on self-efficacy
Results and Discussion

Table-16

Showing difference between high and low performance field athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance Field Athletes</td>
<td>60</td>
<td>33.92</td>
<td>5.16</td>
<td>4.12*</td>
</tr>
<tr>
<td>Low Performance Field Athletes</td>
<td>70</td>
<td>30.27</td>
<td>4.89</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level, Tabulated z value = 1.96

From the table 16 it is observed that calculated z value (4.12) is greater than tabulated z value (1.96) at 0.05 level of significance with 128 degree of freedom, thus above data provide sufficient evidence to ensure that the high and low performance field athletes are significantly differ on the variable of self-efficacy.
Results and Discussion

Figure-16

Showing mean difference between high and low performance field athletes on self-efficacy

![Bar chart showing mean scores between high and low performance field athletes on self-efficacy]
### Results and Discussion

#### Table-17

Showing difference between male and female high performance field athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male High Performance Field Athletes</td>
<td>32</td>
<td>34.75</td>
<td>6.16</td>
<td>1.35</td>
</tr>
<tr>
<td>Female High Performance Field Athletes</td>
<td>28</td>
<td>32.96</td>
<td>3.57</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

From the above table, it is observe that calculated z value (1.35) is lesser than tabulated z value (2.00) at 0.05 level of significance with 58 degree of freedom which shows insignificant difference between male and female high performance field athletes with regard to self-efficacy.
Results and Discussion

Figure-17

Showing mean difference between male and female high performance field athletes on self-efficacy
Table-18

Showing difference between male and female low performance field athletes on self-efficacy

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S D</th>
<th>Z-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Low Performance Field Athletes</td>
<td>35</td>
<td>30.43</td>
<td>5.14</td>
<td>0.27</td>
</tr>
<tr>
<td>Female Low Performance Field Athletes</td>
<td>35</td>
<td>30.11</td>
<td>4.71</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Tabulated z value = 2.00

When the researcher goes through the table 18, it is observed that there is no significant difference between male and female low performance field athletes on the variable of self-efficacy. It is due to the fact that calculated z value (0.27) is less than tabulated z value (2.00) at 0.05 level of significance with 68 degree of freedom.
Figure-18

Showing mean difference between male and female low performance field athletes on self-efficacy
Discussion

The present empirical research conducted on track and field athletes to determine the differences on the variables of competitive state anxiety (cognitive anxiety, somatic anxiety and self-confidence) and self-efficacy. Investigator discuss the result by evaluating the effectiveness of psychological interventions by reaching an individual with differing competitive state anxiety (cognitive anxiety, somatic anxiety and self-confidence) and self efficacy, present investigation also carried to decide that how we could improve our outreach efforts to adapt the psychological demand of athletes. The results of the present study showed a tendency for competitive state anxiety and self efficacy by athletes in the following approach.

It was hypothesized that athletes having low competitive state anxiety would be high performers in their respective event, It may be observed from table 1 that high and low performance athletes significantly differ with each other on competitive state anxiety at 0.05 level of significance. The mean score (M=65.22) of high performance athletes was lower as compared to low performance athletes (M=67.87). While referencing to the mean value of the table 1.1, it was observed that high performance athletes recorded higher mean score on self-confidence
and lower score on cognitive and somatic anxiety sub-variable as compared to low performance athletes.

High performance track athletes have significantly lower level of competitive state anxiety because the mean score (65.85) of high performance track athletes was less than low performance track athletes (68.30). Further significant differences were found on sub-variable of competitive state anxiety (Table 4 & 4.1), thus the proposed hypothesis is accepted. High performance athletes reported lower level of competitive state anxiety.

Insignificant difference existed on the variable of competitive state anxiety and two sub-variables i.e., cognitive anxiety and self-confidence, and significant difference found on the sub-variable somatic anxiety between high performance track and field athletes. High performance track athletes showed slightly higher level of somatic anxiety as compared to high performance field athletes (Table 2, 2.1).

Insignificant difference was observed between high and low performance field athletes on competitive state anxiety. However, the mean score (M=64.38) of high performance field athletes was lower than low performance field athletes (M=66.70) on competitive state anxiety than the proposed hypothesis also partially accepted because high
performance field athletes had low level of anxiety (Table.7). Further it was observed from table 7.1 that significant difference was existed between high and low performance field athletes on the sub-variable of cognitive, somatic anxiety and insignificant on self-confidence. The mean score of low performance field athletes on cognitive and somatic anxiety was significantly higher (M=21.71, 20.44) as compared to high performance field athletes (M=19.30, 17.52). Hence, it may be concluded that low level of competitive state anxiety positively contributed to the track and field athletes towards their better and economical performance. It may be due to the fact that high performance track and field athletes have active participation in this type of athletic competition as result of they had more experience, capacity and capabilities to manage such type of stress, tension and unpleasant feelings that happen in competitive environment, than low performers or less experience athletes. These findings greatly support with the findings of Karne and Williams (1994) suggested that less experience players have higher level of anxiety while compare to more experienced players. On the other hand, it is in line with the inverted-U hypothesis that the level of performance decrease when anxiety is either too low or too high (Burton, 1988; Weinberg & Genuchi, 1980). A moderate or low level of anxiety may be helpful to excel in higher level of sports, and Wiggins and Brustad, (1996) found that
athletes with lower scores on cognitive and somatic anxiety, and higher score on self confidence perceived their anxiety as more facilitative of performance these athletes also had significantly higher score on the expectation of performance scale.

This falls in accordance with the results of previous studies done by Khan and Ali (2010) found that elite high jumpers indicated higher level of self-confidence and low level of cognitive and somatic state anxiety while compared to non elite high jumpers. Similar study conducted by Mullen, Lane and Hanton (2009) while states that a significant main effect was identified for trait worry revealing that low trait anxious athletes reported lower level of cognitive and somatic anxiety and higher self-confidence and further study done by Awolframm and Micklewright (2008) found that riding-specific skills in the elite rider may have higher self-confidence with lower levels of somatic anxiety as non elite riders,

Table 5 and 5.1 revealed that significant difference existed between male and female high performance track athletes on competitive state anxiety and insignificant differences existed on sub-variables i.e. cognitive and somatic anxiety. Insignificant difference existed between male and female high performance field athletes on competitive state
Results and Discussion

anxiety and same result were found on cognitive anxiety, somatic anxiety and self confidence (Table 8 & 8.1). Further significant difference existed on the level of self confidence between male and female high performance track athletes at 0.05 level of significance. Hence, it may be concluded that high performance male athletes have higher level of self confidence while compared to high performance female athletes with their respective event. Gender differences affect the self-confidence on higher level of performers but cognitive and somatic anxiety had no difference. These empirical findings supported the observation of Scanlan and Passer, 1979; Wark and Witting, 1979 which indicated that male athletes typically display lower levels of anxiety and higher self-confidence than female athletes. The above findings appear to support the existing theories on intensity (Mellalieu, Neil & Hanton, 2006; Parfitt & Pates, 1999); Stavrou, Psychoudaki and Zevars, (2006); Woodman and Hardy, (2003); Wilson and Raglin, (1997) demonstrate that the more experienced athletes showing lower levels of cognitive and somatic anxiety than the less experienced players.

The findings of different tables (6, 6.1 & 9, 9.1) showed insignificant difference between male and female low performance track athletes and male and female low performance field athletes on the variable of competitive sate anxiety and it sub-variables namely cognitive
anxiety, somatic anxiety and self confidence. The mean value of female athletes was slightly higher regarding to cognitive anxiety, somatic anxiety and male showed higher mean score on self confidence but these differences were negligible. It means male and female low performance field athletes had same anxiety level. Insignificant difference also found between low performance track and field athletes on above mentioned sub-variables of state anxiety. There was insignificant difference on low level of track and field condition (Table 3 & 3.1), so it may be concluded that male and female low performers had same level of anxiety, our findings supported by the findings of various researchers such as Khan and Ali, (2011); Finkenberg, Dinucci, McCune, McCune, (1992); Matheson and Mathews, (1991); Jones, Swain and Cale, (1991) and a numbers of researches have shown that there was no significant difference among male and female athletes. Seeley, Storey, Wagner, Walker and Watts, (2005); Ramella- DeLuca, 2003; Sharma (2011) study supported that there was no gender difference in pre-competitive somatic anxiety. Eric and Kring, (1996) reported that female athletes had higher cognitive and somatic anxiety, and lower self confidence compared to male and these finding are consistent with present findings.

Further it was hypothesized that high self-efficacy record holders would be high performers, It had been reported in table 10 that self
Results and Discussion

efficacy came out to be significant \((z = 5.80, p > 0.05)\) at .05 level of significance. High performance athletes had significantly higher mean score \((M = 32.96)\) for self-efficacy when compared to low performance athletes \((M = 29.88)\). Similar result was found between high performance track and field athletes as the mean value \((33.92)\) of high performance field athletes for self-efficacy was significantly higher as compared to high performance track athletes \((32.25)\).

Table 13 revealed that significant difference existed between high as well as low performance track athletes with regard to self-efficacy. The calculated \(z\) value \((3.72)\) was greater than tabulated \(z\) value \((1.96)\) at 0.05 level of significance, same trained was found from table 16 that the difference between high and low performance field athletes was significant. The mean value \((33.92)\) of high performance field athletes was significantly higher as the mean value \((30.27)\) of low performance field athletes. The results clearly suggested that high performance record holders recorded higher level of self-efficacy to execute a particular task in stressful situation while compared to low performance track athletes, thus the proposed hypothesis strongly accepted. Performance accomplishments have proved to be the most influential source of efficacy information because they were based on one's own mastery experiences. Athletes mastery experiences affect self-efficacy beliefs.
through the cognitive processing of such information. High performers have highly salient or meaningful mastery experiences over the skill. These findings supported by Bandura (1977a) hypothesized that self-efficacy affects choice of activities, effort, persistence, and achievement. Compared with athletes who doubt their capabilities, those with high self-efficacy for accomplishing a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level. The present investigation is in line with the findings of Khan and Khan, (2010); Khan and Ali, (2012); Treasure, Monsoon, and Lox, (1996) they found the difference among high and low performance athletes self-efficacy was a stronger predictor of performance when the measure was process oriented rather than win and loss. Singh, Bhardwas, and Bhardwas (2009) showed that School National level athletes were significantly better on perceived within one self. Mills, Munroe & Hall (2001) suggested who are high in self-efficacy in competition situations tend to use more motivational imagery than their low self-efficacy counterparts.

Male and female high performance track athletes showed higher level of self efficacy. There was no significant difference existed relating to male high performance track athletes (M=32.30) and female high performance track athletes (M=32.16) with regard to self efficacy (z
Results and Discussion

=0.13 <, p.05) (Table 14). From the table 12 it was found that insignificant difference between low performance track and field athletes with regard to self efficacy (z = 0.74 <, p .05).

Insignificant difference existed between male and female low performance track athletes with regard to self efficacy because the tabulated z value was more than calculated z value (1.96 > 0.77) and the mean score of male track athletes (29.57 < 30.08) was less as compared to female athletes.

Furthermore, it has been monitored through the table17 that insignificant difference existed between male and female high performance field athletes on self efficacy.

There is no significant difference exist between male and female low performance field athletes on the variable of self efficacy (z =0.27 <p.05) (Table18), but female athlete have more belief oneself as male athletes, thus proposed hypothesis is accepted. These finding supported by Fraser and Polito (2007) they found that women also had a greater belief in their ability to control their M S (Multiple Sclerosis) than the men, although the difference was not significant.