The effect of mental psychological factors on sports performance: a study on basketball senior (u-25) and junior (u-19) girls

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Abstract
The aim of the study was to investigate and compare the sports motivation level and impact of psychology among under-19 school players and (U-25) senior basketball players belonging to the Ajmer district of Rajasthan state. A total number of 40 basketball female players were selected by using random sampling method, taken as the subjects for the study. For collecting data, the mental skill psychological questionnaire test was used as a test. Calculation was done according to the instructions given in the test manual of the checklist. Getting data to investigate the motivation level and performance changes between the school and college teams were statistically analyzed by using two sample’ t’ tests for the independent variables at 0.05 level of significance. The outcome of the study concluded that the senior basketball team was more psychologically strong and motivated because of their maturity level and experiences of the matches while playing the matches in tournament as compare to school basketball team.

Keywords: Psychological factors, goal setting, anxiety, basketball players

1. Introduction
Psychology refers to the many aspects of the mind and how it affects the body. Psychology is one of the biggest determinants of winning and losing at the elite level. Athletes, who have their psychology right, perform at their pinnacle more consistently over time and in various contexts and under various types of pressure. An athlete needs to be able to cope with pressure well, whether it be external or internal, so that they can focus on the competition. Elite athletes have various motivators for to succeed and know how psychology affects their performance. They then develop strategies to enhance motivation and manage anxiety. Many will also have methods that they use to ensure that their body is at an optimal level of arousal for their particular sport. A great example of an athlete with good psychology is Roger Federer, who is known for his calm nature on the tennis court, regardless of the situation. While many people may not think it has that much of an impact, it’s been proven that psychology plays a central role in athletic performance. Studies show that psychological factors can affect performance in either a positive or negative way, depending on the situation itself. Things such as goal setting, personal awareness, routine, concentration, meditation, confidence, control, and even overall flow mindset can determine whether an athlete will perform poorly or exceptionally in their chosen field.

Purpose of the study: The purpose of this study was to assess the psychological factors affecting sports performance among the basketball girls of Senior and junior team of Ajmer.

Objective of the study: To assess that effect of psychological factors on sports performance of basketball senior and junior girls.

Hypothesis of the study: This study is based on the following hypothesis:
1. $H_0$: There is no significant effect of psychological factors on sports performance of senior and junior girls.
2. $H_1$: Psychological factors put a significant effect of on sports performance.
3. Significance Level is: .05
2. Methodology
For reaching at certain findings and conclusions, I adopted following procedure:

2.1 Population
For fulfilling the purpose of the study, a total number of 40 female basketball players were purposely selected from different teams as the subjects for the study in which 20 female players was from school basketball team and another was senior basketball team consist of 20 female players from each team. The mean age of under-19 and senior both the teams were 14.47±1.06 and 21.40±2.53 respectively.

2.2 Instrumentation
The measuring instruments used for the study were the Mental Skill questionnaire (Russell Associates) There were 20 items in the Mental Skill questionnaire which tested motivational level of players and computer for the statistical calculation and chat preparation. The data was collected during the Dr. Bhimrao Ambedkar Girls’ Tournament held at Ajmer. Mental Skill Test was administered to assess the motivation level. Mean and standard deviation was calculated as a descriptive statistics and two samples independent t-test was used if the mean change in scores was significant. Then obtained “t” value was tested at 0.05 level of significance. The assumptions for applying samples independent t-test (parametric data characteristics and equality of variance) were also taken into consideration before applying the test.

2.3 Research Ethics
Before serving questionnaire the researcher however ensured to take the consents from the respondents. In this context, the researcher met with respondents and discussed the objectives of study. The researcher also ensured them that their responses will only be used for research purposes only. After this, the questionnaire handed over to them with request that your early response in data returning the filled questionnaire will highly be solicited.

3. Results
The study was carried out to see the effect of psychology on sports performance. As the results show that the test significance value is less than to the level of significance (P<0.05) in case of all the sports motivational factors. So it can be justify that the data follows the standard deviation, mean and using parametric test (Independent t-test) was the appropriate test for further analysis of data. The descriptive statistics as well as the result of t-test which was applied in order ascertainment the difference between under-19 school girls and (U-25) senior basketball team. The study indicates that intrinsic motivation constituted the major part of motivation in senior team because of their strong will to achieve more and reach at top level at young age. In study we also found that the due to maturity and experience factor the senior basketball girls team found more motivated and psychologically strong then the school U-19 team.

![Chart 1: Showing the sample data](image)

![Chart 2: Showing difference in mean and standard deviation of data](image)
The table1 showing the Mean, SD and ‘t’ value of the senior and junior players formulated hypothesis that there would be significant difference between senior and junior players in their motivation level. The calculated data was tested, and Mean score of the senior basketball girls players was 75.95 and SD is 7.63 and junior basketball players was 61.15 and 6.92 respectively and calculated‘t’ value is 5.57, it reveals that senior basketball girls team mean score is higher than junior basketball girls team, and it also reveals that there is significant difference at motivational level of senior and junior basketball players. Because the calculated‘t’ value (5.57) is greater than table value and it is significant at 0.5 level.

In my result the p value is less than significance value (p<0.5), p-value provides us the smallest level of significance at which the Null Hypothesis would be rejected. A smaller p-value is the strongest evidence of the alternative hypothesis.

On the other hand we found that maximum no. of players of senior team score was 70 and above which shows that they are mentally strong while playing the match. The impact of opponent team does not put much effect on their performance even if they loses the much or not in good position to perform. They become much mentally strong because of their experience and maturity level. On the other hand the under-19 basketball girls’ team score was found to be lies in between 50 to 60, which shoes that the impact of opponent team and winning and losing the game, put much effect on their performance while playing match. Under-19 girls team in which under 10-19 age group girls were participated, the age group between 10-15 was found to be more motivated but on the other hand they found less mentally strong. They become more nervures and their performance level goes down if match stress come upon them. So it’s clearly shows that age factor, metal level and experience of matches plays an important role in performance.

4. Discussions & Conclusions

Sports achievement motivation in respect to sports competition is the degree to which an athlete is willing to approach a competition. As per the results, the female basketball player of senior team having high level of sports achievement motivation. The findings of the present study may be concluded as the professional concept in regards to female basketball players is just developing and getting popularized in many parts of our country and the need of psychologist with the team is highly in demand, as the study shows that the motivation level is played a major role in sports performance, highly motivated sports person show a good performance during the matches. Even though some limitations of the study were identified, the results provided a comprehensive overview.

Specifically, the results suggested senior basketball team would benefit from an environment that incorporated both the opportunity to demonstrate competence, and especially after losing their previous match, an environment that was socially supportive. However, limitations with the sample were apparent, and through these limitations, potential future research has been identified. Subsequently, future research should consider adopting both a micro and macro approach, with an increased sample size. Furthermore, researchers should look to examine the effects of winning and losing within different organisational cultures, such as elite, gender, and sport types.

5. References

5. Lacey A. Competitive Traits Anxiety and Locus Control among Female Athletes in Intercollegiate Individual and Team Sports Completed Research on Health Physical Education Recreation and Dance. 1982; 24:28.

Table 1: Comparison of Mean & SD of Senior and U-19 Girls team

<table>
<thead>
<tr>
<th>Motivational level</th>
<th>Senior (U-25) basketball girls team</th>
<th>U-19 (Junior) basketball girls team</th>
<th>T-ratio</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>75.95</td>
<td>61.15</td>
<td>5.57</td>
<td>0.00001</td>
</tr>
<tr>
<td>S.D.</td>
<td>7.63</td>
<td>6.92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant, t 0.05 (98) = 5.57