

## **A Comprehensive Analysis: Sports Imagery Ability Of State Level Badminton Players From North-Eastern State India**

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### **ABSTRACT**

Mental Imaging is about running it all over in your mind to practice through imagination. Imagery is also known as visualization, which is practiced in conscious brain to mimic the past experience in real time. The purpose of this study is to explore the current status of the sports imagery ability of state level badminton players in arunachal Pradesh. The data has been collected through sports imagery ability questionnaire (Williams, S. E., & Cumming, J. in 2014) during Dorjee Khandu Memorial State Badminton Championships from 2021 to 2023 held on several districts of Arunachal Pradesh, India. The purposive sampling technique has been employed for collecting the data. The questionnaire has been shared to the players a day before their match with the illustrations regarding it. Total number of 100 state level badminton player the age ranges from 19 to 30 years of age category from different districts of arunachal has been involved to fill the questionnaires. The descriptive statistics and descriptive profile has been employed to evaluate the data in IBM spss version 22. The study reveals that the present status of the imagery ability of the players still needs focus but there is still wide scope to improve. As taking the status views through research the badminton players could be more sensible about their mental imaging ability. The study concludes that imagery practice should include in daily schedule to deal and combining it with physical practice may awake player's positive performance.

**Keywords:** Sports Imagery, Sports performance, Status, Badminton, Arunachal Pradesh State (India).

### **INTRODUCTION**

The performance of an athlete is measured through many dimensions as both in physically and mentally. As for example including speed, weight, height, agility, endurance, heart rate, acceleration and many more are the key elements during assessing athlete's physical performance, where else for the mental capacity their aggression, depression, stress, coping ability, mental toughness, and motivations is been assessed. The matter of fact is that most of this psychological tests for an athlete do measures their external psychological factors and somewhere their internal factors has never been brought up clearly. In between that the athlete's ability to imagine about their sports, their performance, mistakes and also about self is needed to be judged and assessed for the advancement of their performance. The Imagery can be also called as visualization that helps to see the image in mind and experience the emotions and physical sensations in body. In years before in 2009 the imagery of a person or athlete has been explained by Jennifer Cumming and Richard Ramsey that it is the absence of real perception, imagery is defined as an experience that mimics real experience and involves using a range of sensory modalities. Accordingly imagery is well-liked and established technique for raising performance is imagery Cumming & Ramsey, 2009; Murphy, Nordin, & Cumming, 2008). However, how well someone can think up and manage vivid images influences how it works (Martin, Moritz, & Hall, 1999). Recently the imagery has become a common and well-accepted technique among athletes and coaches for improving a variety of performance-related factors. Imagery is an internal psychological process that recalls the physical features of an object that has passed or might do occur in the future (Hall, 2001). Robin et al. (2007) has shown that those with better imagery skills had a greater improvement in the accuracy of their tennis serve returns than those with poor imagery skills. Bringer (2008) According to Bringer, the process of forming a picture involves the activation of working memory, and working memory images are reflected by their vividness when they are displayed. The best athletes frequently use imagery, according to a descriptive study. According to a study by Orlick and Partington in (1988), 99 percent of Canadian Olympic athletes who were surveyed said they used imagery as a training technique. Additionally, athletes at higher levels or with more experience typically report using the strategy more frequently than their less accomplished or inexperienced counterparts (e.g., Callow & Waters, 2005; Cumming & Ste-Marie, 2001). It is practiced by many elite athletes to imagine their game performances and to make out the strategies or plans for future situation. According to

Hall, Mack, Paivio, and Hausenblas (1998) the creation of a brand-new test to better accurately assess athletes' ability is to create mental images of their sporting experiences. Athletes use imagery for five main purposes, (a) practicing motor skills which will come under cognitive specific [CS], (b) practicing competition strategies that will be cognitive general [CG], (c) imagining goals and related activities that will be motivational specific [MS], (d) imagining physiological arousal and emotions experienced during competition that will be motivational general-arousal [MG-A], and (e) to visualize oneself overcoming difficulty and remain confident and in control that will be motivational general-mastery [MG-M]. According to this concept, the function of the imagery applied in a lot of sporting scenarios should match to the desired result. The measuring of imaging ability offers a tool to keep track of how imagery use and ability develop over time. The majority of competitive sports require a high level of emotional involvement, a strong physical and mental battle for victory, teamwork, excellence, and supremacy. The expert performance includes psychological qualities, which can distinguish between successful and unsuccessful athletes, (e.g. Mahoney and Avenier, 1977; Mahoney et al., 1987; Ungerleider et al., 1989; Durand- Bush et al., 2001). The studies shows that elite athletes are more determined to succeed, have greater self-confidence and dedication, and are better at focusing. Despite having equal levels of anxiety, elite athletes perceive their symptoms as more helpful than non-elite athletes during competition (Jones et al., 1993, 1994; Jones and Swain, 1995). Based on this, the study's goal is to evaluate the state of the athletes' sports imagery skills of the state level of badminton in Arunachal Pradesh.

## METHODOLOGY

### Selection of Data

Total number of 100 state level badminton player, age ranges from 19 to 30 years of age category, participating in Dorjee Khandu Memorial State Badminton Championships from 2021 to 2023 held in Arunachal Pradesh, India were involved to fill the questionnaires.

### Sampling Method:

The study had employed a purposive sampling technique to cover the samples from whole population of Arunachal Pradesh state level badminton players.

### Tools for Data Collection

The Sports Imagery Ability Questionnaire (SIAQ) by Williams, S. E., & Cumming, J. in 2014 has been used to evaluate the sports imagery ability of state level badminton players of Arunachal Pradesh. The questionnaire consist total of 15 questions and each questions where distributed randomly to form 5 factors which are Skill Imagery Ability (Sk.I.A), Strategy Imagery Ability (S.I.A), Goal Imagery Ability (G.I.A), Affect Imagery Ability (A.I.A), Mastery Imagery Ability (M.I.A). Participants were supposed to tick the appropriate writing based on the 7 point likert scale provided, in relation to their sports, how easy or hard it is for them to imagine from (1= Very Hard, 4= Not easy, or Hard to 7= Very easy).

### Statistical Analysis of Data

The descriptive statistics and descriptive profile has been employed to evaluate the data in IBM spss version 22.

## RESULT

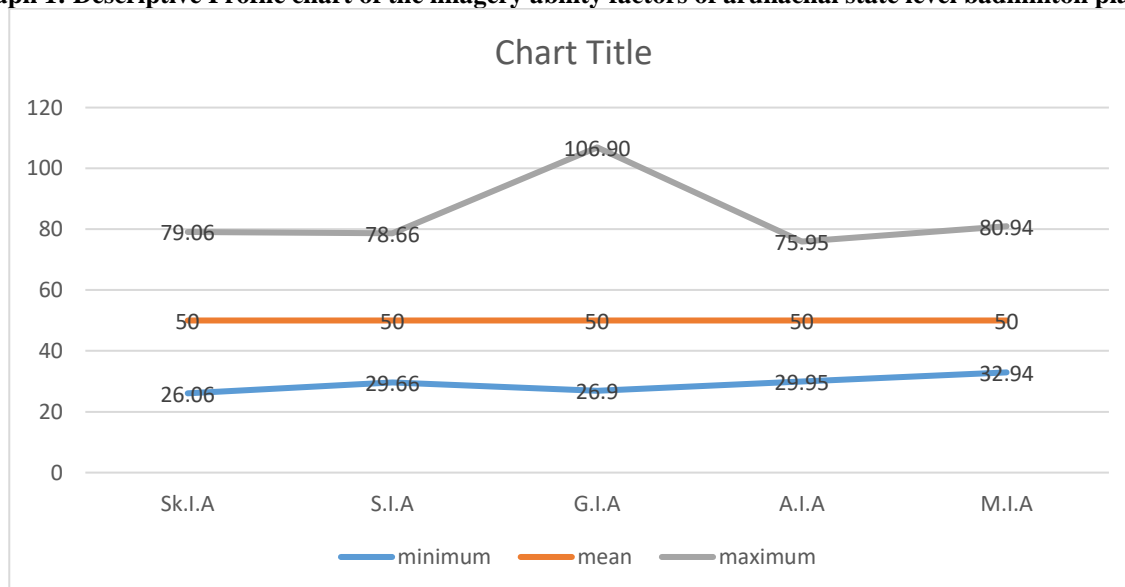
The questionnaires were collected and calculated score is been stored in excel sheet. The scores are used for the interpretation for descriptive statistical outcome through SPSS (version 22) application. Table 1 is Descriptive statistic where all the measures of five different factors is been elaborated as the mean value of skill imagery ability (Sk.I.A) = 4.258, strategy imagery ability (S.I.A) = 4.339, goal imagery ability (G.I.A) = 4.382, affect imagery ability (A.I.A) = 4.991, mastery imagery ability (M.I.A) = 4.423 resulting the highest mean in A.I.A and lowest in Sk.I.A. The standard deviation in the table 1 indicates the arunachal state level badminton players has the highest diverse score in goal imagery ability 1.3236 then in mastery imagery ability with 1.1932, skill imagery ability 1.1526, affect imagery ability with 1.1328 and lowest in strategy imagery ability 1.0494. The coefficient of variance in table 1 denotes the variation in scores of state level badminton players from arunachal where, the highest value can be seen in goal imagery ability with 30 % and lowest value in affect imagery ability with 22 %. All the 4 factor values are negatively skewed indicating the maximum values are directed towards the mean value and more distributed data towards left, accept the goal imagery ability factor resulting towards positively skewed (+.007) which presents the more distribution data towards right side. The kurtosis value of 4 factors are negative which indicates the more flat curve and low distributed data whereas, in goal imagery ability the kurtosis is positive (+1.134) high curve which indicates that the values are more distributed then normal distribution. The table also displays the range between data and maximum, minimum values of all different factors.

	<i>Skill Ability</i>	<i>Imagery Imagery Ability</i>	<i>Strategy Imagery Ability</i>	<i>Goal Imagery Ability</i>	<i>Affect Imagery Ability</i>	<i>Master Imagery Ability</i>
Mean	4.258	4.339	4.382	4.991	4.423	
Standard Error	0.115261495	0.104947269	0.132362984	0.113289608	0.119323472	
Median	4.5	4.4	4.4	5	4.5	
Mode	4.7	5	3.7	4	5	
Standard Deviation	1.152614945	1.049472691	1.323629842	1.132896083	1.193234717	
Sample Variance	1.328521212	1.101392929	1.75199596	1.283453535	1.423809091	
Coefficient of Variance	27.07	24.19	30.21	22.70	26.98	
Kurtosis	-0.160692279	-0.402305472	1.134925447	-0.792219971	-0.792916916	
Skewness	-0.46750592	-0.124379454	0.00717704	-0.143279247	-0.15144151	
Range	5.3	4.9	8	4.6	4.8	
Minimum	1.3	2.1	1	2.4	2	
Maximum	6.6	7	9	7	6.8	
Sum	425.8	433.9	438.2	499.1	442.3	
Count	100	100	100	100	100	
Largest(1)	6.6	7	9	7	6.8	
Smallest(1)	1.3	2.1	1	2.4	2	
Confidence Level(95.0%)	0.228703805	0.208238145	0.26263687	0.224791155	0.236763649	

**Table 1: Descriptive Statistic Analyses Table.**

The study includes descriptive profile chart (Graph 1) indicating insight data values and graphical view of significant findings in the study. As by assuming the data mean range up-to 50 for the comparison to maximum and minimum . The score has been calculated in excel form through the score of mean, standard deviation and maximum, minimum from descriptive table. As in graph it is clear that the gape between mean and maximum is highest in goal imagery ability then other variables with data range of 106.90.

**Graph 1: Descriptive Profile chart of the imagery ability factors of arunachal state level badminton players.**



## FINDING AND DISCUSSION

The present study performs the descriptive study to check the sports imagery ability status of the state level badminton player from arunachal pradesh. The SIAQ reveals the predicted condition of the player's imagery ability related to their

sports into 5 different factors (1) Skill imagery ability related to (imaging and correcting their skills), (2) Strategy (imaging and creating new plans and strategies), (3) Goal (imaging themselves being winner), (4) Affect (imaging emotion and excitements toward own game), and (5) Mastery imagery ability (imaging positive thoughts in bad situation and staying confident). The quantitative form of survey is conducted in study which gathered the information to analyze how players imagine themselves during competitions as well as in complex situations. The study showed that most of the player's sports imagery scores are intermediate with mean value lying between 4.258 to 4.991, study also reveals the players scoring lowest imagery ability in skill imagery ability factor and highest in affect imagery ability factor. Although there had been high scattered values in the study with resulting both skewed and kurtosis. However the study indicates about the current status of players from arunachal has moderate imagery ability, where they can easily imagine themselves being in whole excited mode, happiness of winning medals and being winner but at same they cannot imagine positive about their skills and performance, also they feel somehow hard to imagine better plan, solving problems or strategies during competition. The study indicates that players got somehow easy to imagine the excitement regarding their competitions as the average of Affect Imagery Ability is 4.991. Players in arunachal can still imagine themselves being confident and positive during their match and also they prefer to give their 100% effort to game. In summary, the SIAQ showed great factorial validity, internal and temporal reliability, equality, and the capacity to differentiate between athletes of various competitive levels (Williams & Cumming, 2011). The research proves that age and gender of players had no bearing on their capacity for imagery also both imagery use and imagery ability positively correlated with performance, but neither had any relation to playing level. The study will be useful in determining the best mental practices to improve players' performances (Tabassum, F., Wali, R., & Baig, B. A. 2020).

## CONCLUSION

The present study reveals that the present status of the imagery ability of the players is moderate and still needs focus but also there is still wide scope to improve. The relative research could be performed with various sports to recognize the imagery status and conduct imagery training program with associate to physical training. As taking the status views through research the badminton players could be more sensible about their mental imaging ability. The study concludes that imagery practice should include in daily schedule to deal and combining it with physical practice may awake player's positive performance.

## REFERENCES

1. Epstein, M. L. (1980). The relationship of mental imagery and mental rehearsal to performance of a motor task. *Journal of Sport and Exercise Psychology*, 2(3), 211-220.
2. Cumming, J., & Hall, C. (2002). Deliberate imagery practice: the development of imagery skills in competitive athletes. *Journal of Sports Sciences*, 20(2), 137-145.
3. Williams, S. (2011). *Athlete imagery ability and effective imagery use* (Doctoral dissertation, University of Birmingham).
4. Williams, S. E., & Cumming, J. (2011). Measuring athlete imagery ability: The sport imagery ability questionnaire. *Journal of Sport and Exercise Psychology*, 33(3), 416-440.
5. Onufrak, K. (2019). Relationship between Utilization of Imagery and Performance in College Athletes. <https://scholarworks.calstate.edu/downloads/fn107464f>.
6. Duwarah, T., & Phukan, M. (2018). Sports imagery ability status of national and state level Shuttlers in Assam. *International Journal of Physical Education, Sports and Health*, 5(4): 91-93.
7. Stefanello, J. M. F., Marques, C. P., & Rodacki, A. L. F. (2010). Assessment of motor imagery ability and training. *Revista Brasileira de Cineantropometria & Desempenho Humano*, 12, 395-400.
8. Williams, S. E., & Cumming, J. (2014). The sport imagery ability questionnaire manual. *Birmingham, UK: Author*.
9. Tabassum, F., Wali, R., & Baig, B. A. (2020). EFFECTS OF IMAGERY ABILITY AND IMAGERY USE ON THE PERFORMANCE OF HOCKEY PLAYERS. *Shield: Research Journal of Physical Education & Sports Science*, 15.
10. Budnik-Przybylska, D., & Karasiewicz, K. (2020). Reliability and validity of the Polish version of the Sport Imagery Ability Questionnaire (SIAQ). Psychometric characteristics of the SIAQ. In *Polskie Forum Psychologiczne*, 25(2).
11. Lee, S. M., & Horino, H. (2022). Psychometric Support for a Japanese Version of the Sport Imagery Ability Questionnaire. *Perceptual and Motor Skills*, 00315125221134314.
12. <https://quizlet.com/714503686/performance-enhancement-techniques-flash-cards/>
13. Short, S. E., Zostautas, N., & Monsma, E. V. (2012). The use of imagery by successful hockey players: A comparison among skill levels. *Journal of Imagery Research in Sport and Physical Activity*, 7(1).
14. Gregg, M., Hall, C., & Nederhof, E. (2005). The Imagery Ability, Imagery Use, and Performance Relationship. *The Sport Psychologist*, 19(1), 93-99. <https://doi.org/10.1123/tsp.19.1.93>

15. White, A., & Hardy, L. (1995). Use of different imagery perspectives on the learning and performance of different motor skills. *British Journal of Psychology (London, England: 1953)*, 86 ( Pt 2), 169–180.
16. Hidayat, Yusup. (2011). The Effect of Goal Setting and Mental Imagery Intervention on Badminton Learning Achievement Motor Skill at 10-12 Years Old: The Context of Indonesia” in EDUCARE. *International Journal for Educational Studies*, 3(2), 129-144.
17. Evans,L.,Jones,L.,& Mullen,R. (2004). An imagery intervention during the competitive season with an elite rugby union player. *The Sport Psychologist*, 18(3), 252-271.
18. Callow, N., Hardy, L., & Hall, C. (2001). The effects of a motivational general-mastery imagery intervention on the sport confidence of high-level badminton players. *Research Quarterly for Exercise and Sport*, 72(4), 389-400.
19. Cumming, J., & Ramsey, R. (2008). Imagery interventions in sport. In *Advances in applied sport psychology* (pp. 15-46). Routledge.
20. Cumming, J., & Eaves, D. L. (2018). The nature, measurement, and development of imagery ability. *Imagination, Cognition and Personality. Sage Journals*, 37(4), 375-393.
21. C. R. Hall (2001) Imagery in sport and exercise, *Handbook of sport psychology*, vol. 2, pp. 529-49.