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The Role of Asian Family cricket Background on T-20 International Cricket Careers

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***Abstract*:** This research paper explores the influence of family backgrounds on the careers of T-20 international cricketers in Asia, focusing on cultural, social, and economic factors. While 81% of players come from non-cricketing families, 15% have familial ties to the sport, though only 4% achieve significant success. The study highlights that familial support can provide early advantages, such as mentorship and exposure, but individual talent, perseverance, and hard work are critical for elite performance. No statistically significant performance differences were found among familial pairs, such as the Akmal and Pandya brothers, suggesting family connections do not guarantee superior outcomes. The deep-rooted presence of cricket in countries like India, Pakistan, and Sri Lanka creates an environment where family traditions and communal support nurture talent, while the commercialization of T-20 cricket, particularly through leagues like the IPL, provides financial opportunities. Ultimately, while family ties play a role in player development, they are not definitive predictors of success, with individual attributes and broader cultural and economic contexts being essential.

Keywords: T-20 international cricket, Family background, Asian cricketers, Cricket development, Family influence, Cultural impact on cricket

1. Introduction

Sports and statistics often go hand in hand, offering valuable insights into athlete performance through various metrics. Cricket, in particular, has garnered increasing global attention, becoming one of the most popular sports worldwide (Albert et al., 2007). Its growing popularity has significantly impacted the economy, influencing team valuations, television broadcasting rights, and merchandise sales. With a history spanning over a century, cricket is now the second most popular sport globally, following only soccer (Albert et al., 2017).

Cricket, often described as a religion in many Asian countries, has a profound impact on the lives of individuals and families, shaping social dynamics and cultural practices (Bowala et al., 2021).

The Twenty20 (T20) format, renowned for its fast-paced and exhilarating style, has revolutionized the sport, drawing in a new generation of fans and players with its dynamic and unpredictable nature. This research paper delves into the significant influence of family backgrounds in cricket on the careers of T-20 international cricketers from Asia. The T-20 format presents unique challenges compared to traditional cricket formats. With fewer overs and a more condensed game, players need to exhibit explosive performance, agility, and mental sharpness. The shorter game format also places a premium on adaptability and quick decision-making, characteristics that can be

nurtured in players with early exposure to high-level cricket environments, often provided by familial connections (Longmore, 2003).

The study explores how familial support both financial and emotional plays a critical role in the development and success of T-20 players. It examines how early exposure to cricket within Asian households, combined with cultural values that emphasize perseverance, dedication, and collective pride, contributes to the nurturing of cricketing talent. The paper investigates how family dynamics, such as the involvement of parents, siblings, and extended relatives, can either support or challenge a player's progress (Wikipedia contributors, 2024).

By focusing on key aspects of Asian family life, including the ways families provide coaching, financial backing, and moral encouragement, the research aims to shed light on how these factors influence the trajectory of T-20 cricketers. The paper also addresses the impact of cultural expectations and traditional values on the players' development, highlighting how familial expectations can drive success or present obstacles (Paper Magazine, 2023).

Case studies of prominent T-20I cricketers, including players from diverse backgrounds within Asia, are used to illustrate how family support systems and cultural contexts contribute to their achievements. The research offers insights into how these family environments create a foundation for talent development and how they affect players' paths to international recognition (Sankaran, S., 2014).

Through this comprehensive analysis, the study aims to provide a deeper understanding of the critical role that family backgrounds play in shaping the careers of T-20 international cricketers from Asia. It seeks to illuminate the intricate ways in which familial influence and cultural contexts intersect with the sport, ultimately shaping the future of cricket in the region (Sarika et al., 2019).

2. Literature Review

The impact of family background on athlete development has long been a topic of interest in sports studies. In the context of T-20 cricket, particularly in Asia, the influence of family cricket traditions is especially prominent. In countries like India, Pakistan, and Sri Lanka, cricket is more than just a sport it's a cultural phenomenon deeply woven into the social fabric. Families in these regions play a pivotal role in nurturing young talent, providing emotional and financial support, and fostering a passion for the game from an early age (Gupta, 2017).

Research suggests that early exposure to cricket within a family setting can greatly influence a young cricketer's skill development and career trajectory. In many Asian households, cricket is introduced to children at a very young age, with family members often serving as their first coaches and mentors. This early involvement is crucial in honing the technical skills and mental resilience needed to succeed in the highly competitive T-20 format (Mustafa, 2013).

The communal nature of cricket in Asian societies creates a supportive environment where young players can flourish. The widespread enthusiasm for the sport within these communities offers aspiring cricketers numerous opportunities to practice and enhance their skills. Beyond the family, this communal support extends to local clubs and schools, which play a vital role in the early stages of a cricketer’s development (Cric News, n.d.).

The economic influence of cricket in Asia is also significant. The commercialization of the sport has opened many doors for young players to pursue professional careers. Financial incentives from T-20 leagues, such as the Indian Premier League (IPL), have made cricket a feasible career option for athletes from diverse backgrounds (Gupta, 2017).

The culture of cricket in South Asia emphasizes familial loyalty, and many cricketers have followed the footsteps of their family members into the national team. For instance, in India, families such as the Amarnaths, Gavaskars, and Mankads have produced multiple generations of cricket stars. In Pakistan, the Akmal and Afridi families are notable examples, while in Sri Lanka, the Jayawardenes have had significant representation. These examples illustrate the deeply embedded tradition of cricket in certain families, raising questions about how much this background contributes to individual success, particularly in T-20 cricket.

This study looks into whether a player's performance is affected by their family's involvement in cricket. In light of the growing prevalence of family ties in cricket, particularly in Pakistan and India, this study will examine the effects of these relationships on player performance and provide insightful information to selection committees.

3. Research Methodology

This section describes the study's procedures and methodology as well as the sample size, geographic scope, and analytical methods employed.

3.1. Data

Numerous sources, including ICC Rankings, Cricbuzz, ESPN Cricinfo, Howstat, and Wikipedia, will provide data for this study. The dataset will be centered around the Asian Twenty20 international cricket teams as of December 2023, which include India, Pakistan, Srilanka, Bangladesh, Afghanistan, and Nepal.

The dataset will include the following variables for each player:

- Serial number
- Player name
- Country
- State
- First and last match dates
- Batting style and performance (runs, highest score, average, fifties, centuries)
- Bowling style and performance (balls bowled, wickets taken, best bowling innings, average)
- Fielding performance (catches, stumpings)
- Playing role
- Man of the Match awards
- Blood relationship type (if applicable)

To achieve the study's objectives, we will analyze variables such as:

- Total number of matches played
- Batting performance metrics (runs, highest score, batting average, fifties, hundreds, balls faced, strike rate, fours, sixes)
- Bowling performance metrics (balls bowled, runs conceded, wickets, bowling average, economy rate)
- Fielding performance metrics (catches, stumpings)
- Man of the Match awards

3.2 Independent Sample T-Test

An independent t-test (also known as a two-sample t-test or between-subjects t-test) is a statistical method used to compare the means of two independent groups to determine whether there is a statistically significant difference between them. This test is applicable when you have two separate, unrelated groups (e.g., Group A and Group B) and you want to see if their average outcomes differ on a particular variable.

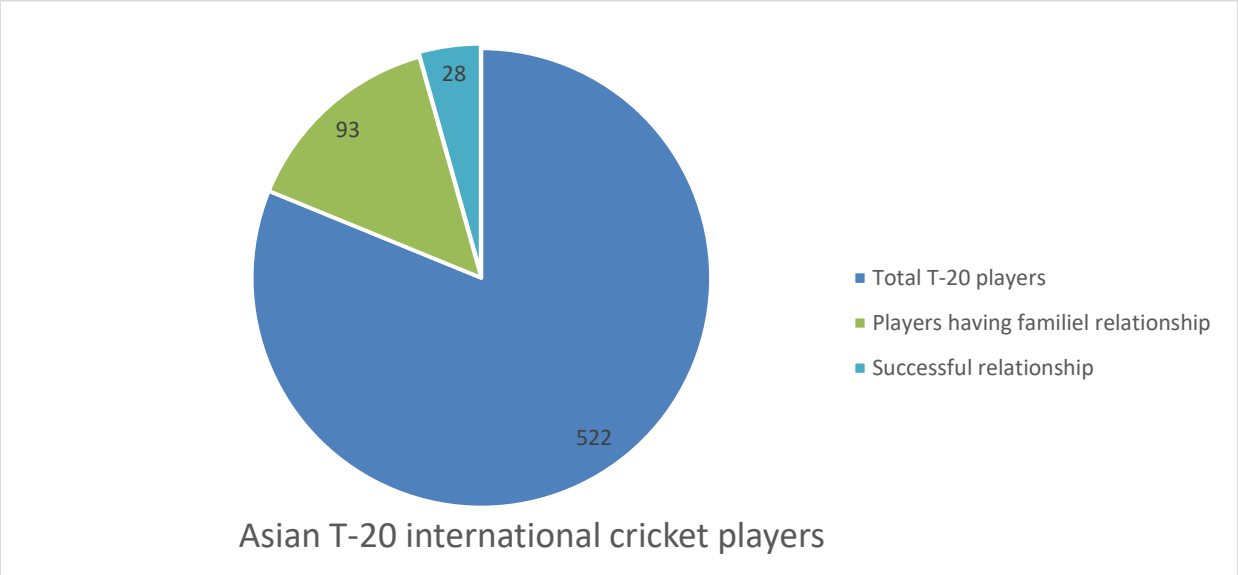
3.3 Multivariate Analysis

To assess the impact of familial involvement (a categorical variable) on performance metrics such as batting average, strike rate, bowling economy, and fielding performance, multivariate analysis was conducted. This technique allowed for the examination of multiple dependent variables simultaneously while considering the familial background as a key factor.

3.4 Analysis of Variance

ANOVA (Analysis of Variance) is a statistical technique used to compare the means of three or more groups to determine if there are statistically significant differences among them. It helps in testing whether the variation in the data is due to the group membership or just by random chance.

Figure 3.1: pie chart of Asian t-20 international player's



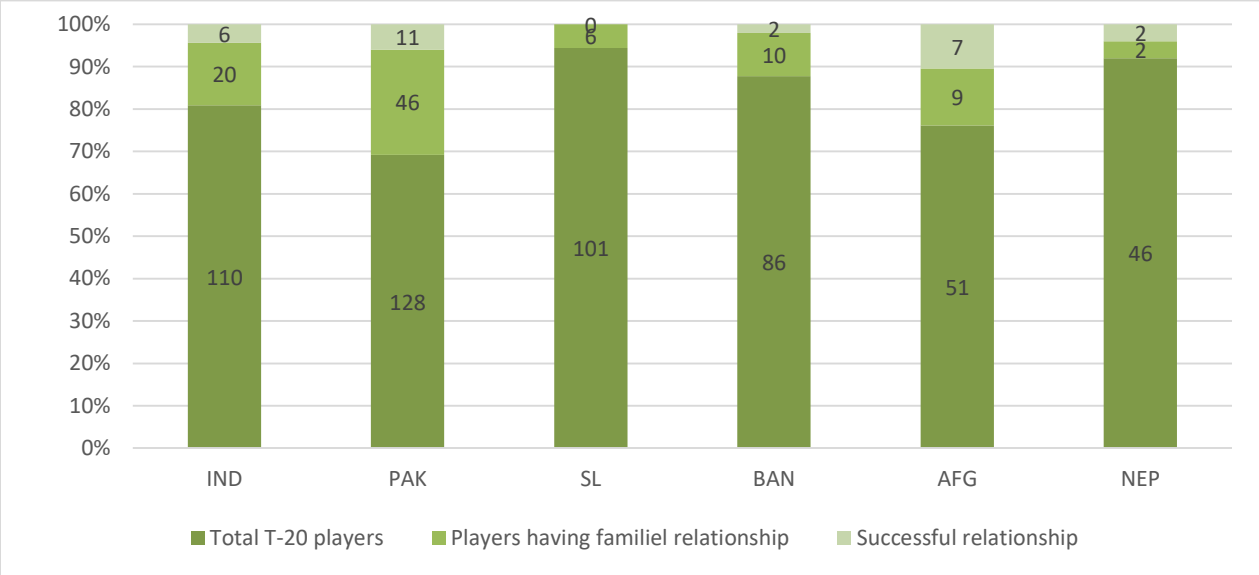
The pie chart highlights the composition of Asian T-20 international cricket players based on their familial connections within the sport. It reveals that 81% of players (522) have no blood relation to other cricketers, suggesting that the vast majority have reached the international stage through their own efforts. Conversely, 15% (93 players) come from cricketing families, indicating that family ties play a role for a smaller segment of players. Notably, only 4% (28 players) with family connections have achieved significant success, underscoring that while family support may provide early advantages, it doesn't necessarily guarantee success. Overall, the chart emphasizes that individual talent and determination are the primary drivers of a player's career, even for those with a cricketing background.

Table 3.1: Overall player's detail

Category	Percentage
Total T-20I players from Asian country	81%
Players having familial relationship	15%
Successful relationship	4%
Total	100%

This table summarizes the percentage distribution of Asian T-20 international cricket players in terms of total players, those with familial relationships, and those with successful relationships.

Figure 3.2: Players detail team wise



The bar chart highlights the relationship between total T-20 international players and those with familial ties in cricket across various Asian countries, as well as the number of successful players from such backgrounds. Pakistan has the highest number of players with familial connections (46) and the most successful cricketers from cricketing families (11). India follows with 20 players having familial ties, 6 of whom are considered successful. Sri Lanka, despite having a significant number of total players (101), shows only 6 players with familial connections and none deemed successful. Bangladesh has 10 players with familial ties, 2 of whom are successful, while Afghanistan, with a smaller total player base, has 9 players with familial connections and 7 marked as successful. Nepal, with a smaller cricketing pool, has 2 players with familial ties, both of whom are successful. The chart reveals considerable variation in the impact of family background on cricket careers across these countries, with Pakistan showing the strongest familial influence on success in T-20 cricket.

4. Analysis

4.1. Performance Analysis of Family-Related Players

4.1.1 Team India

For Team India, the performance analysis of family pairs reveals interesting patterns:

Yusuf Pathan vs. Irfan Pathan: (Brothers)

The boxplot summary indicates that Yusuf Pathan's performance data is closely grouped with a low median and minimal interquartile range (IQR). However, there are outliers in runs, balls faced, strike rate, and balls bowled. In contrast, Irfan Pathan exhibits greater variability, with a higher median and a larger IQR. Notable outliers in his performance are observed in balls bowled and runs conceded. The group statistics show that Yusuf Pathan has a mean of 57.39 and a standard deviation (SD) of 91.09, whereas Irfan Pathan has a higher mean of 93.06 and an SD of 172.83. Hypothesis testing reveals no significant difference in their average performance, with p-values greater than 0.05.

Hardik Pandya vs. Krunal Pandya: (Brothers)

For the Pandya brothers, Krunal Pandya's performance data is tightly clustered with few outliers. Hardik Pandya, on the other hand, shows more variability with higher extreme values. The group statistics reveal that Krunal Pandya has a mean of 81.58 and an SD of 153.42, while Hardik Pandya's mean is significantly higher at 374.25, with an SD of 653.43. Despite these differences, hypothesis testing indicates no significant difference in their average performance, with p-values above 0.05.

Rahul Chahar vs. Deepak Chahar: (Cousins)

Analyzing the Chahar brothers, Rahul Chahar's data shows a lower median and a small IQR, with moderate outliers. Deepak Chahar's performance exhibits a higher median and a larger IQR, with more extreme outliers. Group statistics for Rahul Chahar show a mean of 25.83 and an SD of 51.12, while Deepak Chahar has a mean of

95.80 and an SD of 206.94. Hypothesis testing indicates no significant difference in their average performance, with a p-value greater than 0.05.

4.1.2 Team Bangladesh

Mushfiqur Rahim vs. Mahmudullah:

The boxplot analysis for Mushfiqur Rahim and Mahmudullah, who are brothers-in-law, shows closely clustered central values. Mushfiqur Rahim has significant outliers around 1500, while Mahmudullah has higher outliers reaching up to 2500. Performance metrics reveal that Mushfiqur Rahim has strong bowling statistics, while Mahmudullah shows a balanced performance across both batting and bowling categories. Mahmudullah's mean performance score is higher, but his variability is also larger compared to Mushfiqur Rahim. Statistical tests indicate no significant difference between their average performances, supported by Levene's test showing similar variances.

Team Pakistan

Umar Akmal vs. Kamran Akmal: (Brothers)

The side-by-side boxplot analysis of Umar Akmal and Kamran Akmal's performances shows similar distributions, with Umar displaying higher extreme values in runs (1690) and balls faced (1377) compared to Kamran (987 runs and 825 balls faced). The interquartile ranges (IQRs) for both players suggest that most of their data points are clustered at lower values, with Umar Akmal exhibiting more variability. In terms of metrics, Kamran Akmal generally outperforms Umar in total runs, highest score, and balls faced, though Umar shows slightly better averages and strike rates. Kamran also has more "man of the match" awards, indicating significant match-winning contributions. However, an independent two-sample t-test reveals no significant difference in their average performances, with p-values of 0.580 and 0.581 for equal and unequal variances, respectively.

Umar Akmal vs. Usman Qadir: (Brothers in law)

Both players exhibit low median performances with small interquartile ranges (IQRs), but Umar Akmal shows higher outliers in runs (1690) and balls faced (1377), contrasting with Usman Qadir's outliers in strike rate (120) and balls bowled (432). This suggests that while both players have generally consistent performances, Umar Akmal occasionally achieves much higher levels. In terms of metrics, Umar Akmal excels in batting, whereas Usman Qadir outperforms in bowling statistics. However, a t-test indicates no significant difference in their average performances, with p-values of 0.304 and 0.309 for equal and unequal variances, respectively.

Babar Azam vs. Kamran Akmal vs. Umar Akmal: (Cousins)

Babar Azam demonstrates more consistent performance metrics compared to Kamran and Umar Akmal, who both have wider distributions with significant outliers. Babar Azam excels particularly in runs scored, highest score, and balls faced. However, ANOVA results show no significant difference in average performance among Babar Azam, Kamran Akmal, and Umar Akmal, with an F-statistic of 0.976 and a p-value of 0.384. While Babar generally outperforms the Akmal brothers in key batting metrics, Kamran slightly edges ahead of Umar in some areas.

Shahid Afridi vs. Shaheen Afridi: (Father in law vs. Son in law)

Shahid Afridi displays high outliers in runs (1416), balls faced (944), and other metrics, whereas Shaheen Afridi's outliers are primarily in balls bowled (1534) and runs conceded (1958), with both players showing similar variability in their performance distributions. Shahid Afridi excels in batting metrics, while Shaheen Afridi performs better in bowling statistics. A t-test indicates no significant difference in their average performances (p-value = 0.403), and Levene's test confirms similar variability (p-value = 0.125).

Umer Gul vs. Abbas Afridi: (Uncle vs. Nephew)

Umer Gul and Abbas Afridi have similar performance distributions, though Umer Gul shows higher variability and outliers in balls bowled (1203) and runs conceded (1443), while Abbas Afridi has notable outliers in strike rate (113.88) and balls (191). Umer Gul generally outperforms Abbas Afridi in several metrics but with higher variability. A t-test reveals no significant difference in their average performances (p-value = 0.175), although Levene's test indicates significant variance differences between the two (p-value = 0.016).

4.1.3 Team Afghanistan

Ali Zadran vs. Mujeeb Ur Rahman vs. Ibrahim Zadran (Uncle vs. Nephews)

For Noor Ali Zadran, Mujeeb Ur Rahman, and Ibrahim Zadran (uncle and nephews), the boxplot analysis shows Noor Ali Zadran with several high outliers. Mujeeb Ur Rahman and Ibrahim Zadran also exhibit high outliers in performance, particularly in balls bowled and runs scored. Mujeeb Ur Rahman excels in bowling metrics, while Ibrahim Zadran shows superior batting metrics. Noor Ali Zadran's performance trends are similar to Ibrahim's but with less variation. ANOVA results reveal no significant differences in mean performance among the three players, despite individual performance variations.

Mujeeb Ur Rahman vs. Ibrahim Zadran (Cousins)

The boxplot comparing cousins Mujeeb Ur Rahman and Ibrahim Zadran reveals similar performance ranges with some notable outliers, indicating occasional high performances. Mujeeb Ur Rahman excels in bowling metrics, while Ibrahim Zadran has a more balanced performance in batting. Group statistics show similar mean performance scores for both players, and an independent t-test confirms no significant difference in their average performances, suggesting that their overall performance levels are statistically similar.

Asghar Afghan vs. Karim Janat (Brothers)

The boxplot comparing brothers Asghar Afghan and Karim Janat reveals similar low central performance scores, with both players occasionally achieving significantly higher performance levels, as shown by their outliers. Asghar Afghan demonstrates notable peaks in both batting and bowling metrics, indicating his strength as an all-rounder, while Karim Janat shows higher values in bowling categories. Despite Karim Janat having a slightly higher mean performance score, group statistics and an independent t-test reveal no significant difference between their average performances, suggesting that their overall performance levels are statistically similar.

4.1.4 Team Nepal

Aasif Sheikh vs. Aarif Sheikh:

The analysis of Nepali players Aasif Sheikh and Aarif Sheikh shows that Aasif has a higher average score (154.10) compared to Aarif (86.17), but his performance is more inconsistent, with greater variability. Aarif's performance is more stable, and his average is a more reliable estimate. An independent t-test further indicates that the difference in their mean scores (67.93) is not statistically significant, as the p-value is 0.500. The confidence interval also includes zero, confirming no meaningful difference in performance between the two players.

5. Conclusion

This research paper delves into the nuanced relationship between familial backgrounds and the careers of T-20 international cricketers in Asia, focusing on the cultural, social, and economic factors that influence athletic achievement. The analysis reveals that, despite 81% of players coming from non-cricketing families, familial connections still play a significant role in the journeys of some athletes. Notably, while 15% of players with family ties reached the international level, only 4% attained substantial success. This highlights that while familial support can provide early advantages, it is the individual's talent, perseverance, and hard work that are essential for achieving elite performance.

Moreover, the study shows no statistically significant performance differences among familial pairs, such as the Akmal and Pandya brothers, suggesting that while familial relationships can offer mentorship and exposure, they do not guarantee superior outcomes. Culturally, cricket's deep-rooted presence in countries like India, Pakistan, and Sri Lanka fosters an environment where family traditions and communal support nurture talent from an early age. Values such as dedication and resilience are often instilled through familial involvement, shaping young players' skills and mental fortitude. The economic evolution of T-20 cricket, particularly through lucrative leagues like the Indian Premier League, further intertwines family influence with financial opportunities, enabling diverse athletes to pursue successful careers.

Ultimately, this research underscores the complex interplay between familial influence and individual performance in T-20 cricket. While family ties can provide vital support and resources, they do not serve as definitive predictors of success. This study advocates for a broader perspective on talent development that includes personal characteristics, cultural influences, and economic contexts, suggesting avenues for future research to further explore these dynamics and their implications for player development in Asian cricket.

References

Albert, J., & Koning, R. H. (Eds.). (2007). Statistical thinking in sports. CrC Press.

Albert, J., Glickman, M. E., Swartz, T. B., & Koning, R. H. (Eds.). (2017). Statistical thinking in sports. CRC Press.

Bowala, S., Manage, A. B., & Scariano, S. M. (2021). Modeling T20I cricket bowling effectiveness: A quantile regression approach with a Bayesian extension. *Journal of Sports Analytics*, *7*(3), 197-221

Longmore, A. (n.d.). Twenty20 cricket. In *Encyclopaedia Britannica*. Retrieved from https://www.britannica.com/sports/Twenty20-cricket

Wikipedia contributors. (n.d.). Twenty20 International. In *Wikipedia, The Free Encyclopedia*. Retrieved from https://en.wikipedia.org/wiki/Twenty20_International

Paper Magazine. (n.d.). The Only Thing That Can Silence Conflict is Cricket. Retrieved from https://www.papermag.com/cricket-south-asian-identity

Sankaran, S. (2014). Comparing pay versus performance of IPL Bowlers: an application of cluster analysis. International Journal of Performance Analysis in Sport, 14(1), 174-187.

Sarika, S., Balajirao, W. S., & Shenoy, S. (2019). Evaluation of acute effects of combined stretching methods on flexibility, agility and speed among cricket players. *European Journal of Physical Education and Sport Science*.

Gupta, A. (2017). Cricket: The Indianization of an Imperial Game. In *The Oxford Handbook of Sports History*. Oxford University Press.

Mustafa, F. (2013). Cricket and globalization: global processes and the imperial game. *Journal of Global History*, 8(2), 318-341.

Cric News. (n.d.). The Cultural Canvas of Cricket: A Global Perspective. Retrieved from https://cricnews.com/international-cricket/the-cultural-canvas-of-cricket-a-global-perspective/

Gupta, A. (2017). Cricket: The Indianization of an Imperial Game. In *The Oxford Handbook of Sports History*. Oxford University Press.

https://www.icc-cricket.com/rankings

https://www.cricbuzz.com/

https://www.espncricinfo.com/

https://www.howstat.com/Cricket/Home.asp

https://www.wikipedia.org/