Beyond the Boundary:
The Rise of Fantasy Cricket in Delhi, India

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List of Acronyms

BCCI	Board of Control for Cricket in India
FC	Fantasy Cricket
FIFS	Federation of Indian Fantasy Sports
FS	Fantasy Sports
INR	Indian National Rupee
IPL	Indian Premier League
NCR	National Capital Region
NFL	National Football League
OS	Other Sports
OTT	Over-the-top
TWI	Trans World International
USD	United States Dollar

Abstract

In recent years, the fantasy sports industry has gripped millions of users by providing a platform to apply their sporting knowledge and reap monetary and cognitive benefits. Its impact and reach can be seen across various age groups of the society. Walking a fine line between a game of skill and a game of chance, fantasy sports engage audience around the world. India is no different. With a very high population actively involved in either watching or playing sports like cricket, fantasy cricket is no stranger to the Indian audience. This study identifies certain key driving factors of user engagement and further goes on to look at its effect by using surveys and interactions among the people belonging to the age group 18-25 years in Delhi, India. The data collected has been analysed using linear probability models and ordered probit models to reach the required conclusions. Over the course of this research paper, data collection highlights the various reasons behind using fantasy sports like thrill of competition, transfer of knowledge, and winning money, while negating the impact of any demographic factors. It also suggests the input of setting a budget as a factor that hinders participation and tracking spendings as a factor that promotes participation. The data also draws conclusions for the negative effect of fantasy cricket engagement on the efficiency of daily functioning, the ability to cope with stress and anxiety, the control exerted over checking phones for notification and updates, as well as the ability to handle personal relationships. The paper draws conclusions and recommendations for participants, parents, and developers by throwing light upon the potential risks of fantasy cricket.

Relevance to Development Studies

Across the many facets of development, youth stand to gain and lose the most from every change that the world witnesses. This paper deals with youth development across socio-economic fronts, psychological and behavioural changes, digital development, and the legal and ethical considerations. The relationship between technological development and youth culture is constantly evolving and the recent coming of digital sports has really left a mark. Fantasy sports is considered more than just an online game as it is reshaping how people engage with sports by connecting it to money. While it fosters strategic thinking and comes with several positives, it also poses many risks. In an aim to identify these risks, the paper shall offer insights into the challenges as well as opportunities of digital development and its close connection to youth development in India.

Keywords

Fantasy sports; fantasy cricket; addiction; financial risks; youth development; gambling

Chapter 1
Introduction

1.1 Runs, Wickets, and Dreams: Indian Cricket's Theatrical

Cricket is a sport that is deeply embedded in the history of India. Along with various championships and laurels, another thing that cricket has earned in the country is the undying support of its fans and the growing love for the sport. In a population of 1.4 billion Indians (World Bank, 2022), 9 out of 10 people watch cricket (Business Insider, 2024). A lot of these people religiously follow the sport and are also monetarily invested in it.

In India, cricket gained recognition when Kapil Dev's team won the World Cup in 1983. This changed the dynamics of Indian cricket in terms of fan support. Furthermore, in the early 1990s, the Board of Control for Cricket in India (BCCI) sold the television rights of Indian cricket to Trans World International (TWI). Prior to that, BCCI would have to pay money to Doordarshan (Indian state-owned broadcaster) to telecast matches.

In the last three decades, Indian cricket has had a massive change in terms of fan base, fan engagement, and finances. Today, the Board of Control for Cricket in India (BCCI) stands as the richest cricket board in the World. Apart from that, the Indian team also receives majority of the viewership amongst all international teams. (NDTV Sports, Mukherjee, 2023).

Cricket formats have also evolved over the years. Earlier, Test Match would last six days (five playing days and a rest day), with the evolution of time, Test Matches have been reduced to five days (omission of rest day), and various other formats such as one-day internationals, T20 internationals have come into existence (Ghosh, no date).

These formats are viewed widely and have gained immense popularity, especially in the Indian subcontinent. The additions of new formats such as T10 (ten overs a team) and the Hundred (100 balls a team) have brought new kinds of viewers to the sport. Out of all the formats, T20 continues to be the most popular with the highest recorded viewership (Deshpande, 2023).

With so many viewers and such varied formats played at all sorts of levels (from local colonies among children, to international events), cricket has fostered a lot of industries around it. The rise of the sport has not only contributed to the holistic development of players, but also the economic development of the nation.

Cricket receives heavy investments from people around the country. The Indian Premier League (IPL) is the most commercial form of cricket played in India (Sen, 2024) with franchises representing different cities, having players from across the world. The format attracts a lot of money with advertising, sponsorships, and broadcasting rights. Team owners also spend a fortune on auctions.

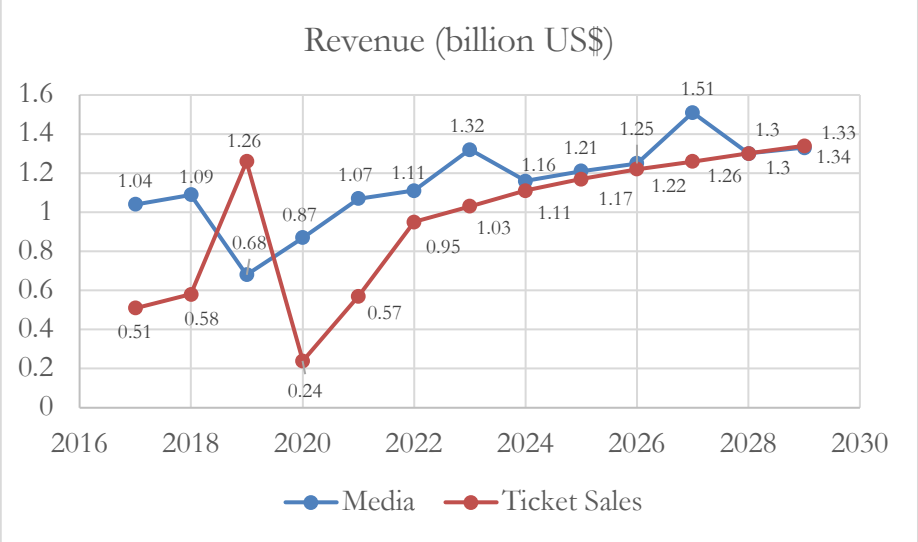
In 2021, two new teams were introduced and were purchased for USD 676 million: Gujarat Titans by CVC Capital, and USD 853 million: Lucknow Super Giants by Sanjiv Goenka (Doe, 2021). Currently, the Indian Premier League is valued at a whopping USD 9.5 billion (as of 2023) making it the second most valued sports league in the world after National Football League (NFL) (Times of India, 2024).

The money involved in cricket seems to know no bounds. Figures 1.1 and 1.2 show the revenue and reach of cricket media subscriptions and ticket sales in India from 2017 to 2024, with forecasts till 2029 (Statista, 2024). Cricket revenue has seen tremendous growth in both ticket sales as well

as media and stands at USD 1.11 and USD 1.16 billion respectively, making the total revenue from cricket viewership USD 2.27 billion.

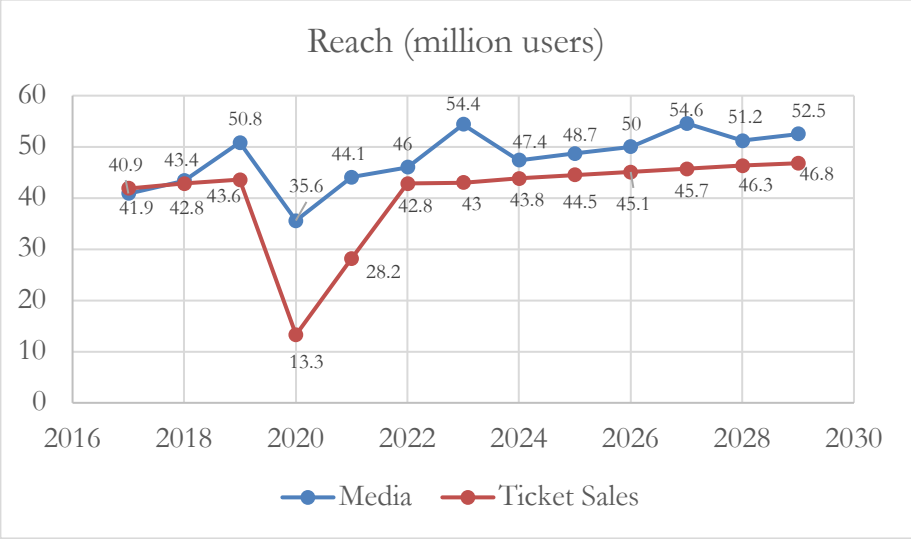
The forecast suggests this value to reach USD 2.67 billion by 2029. The trend looks very promising and has been benefitting from the introduction of online viewing platforms like SonyLiv, Disney+ Hotstar, and Jio Cinema (Sen, 2024). This has help ascertain ease of viewing and greater engagement for live matches as well as match highlights. As for the reach, 43.8 million users and 47.4 million users engage with media subscriptions and ticket sales respectively.

Fig 1.1: Revenue through cricket media and ticket sales (billion USD)



Source: Graph recreated using data from Statista, 2024

Fig 1.2: Reach of cricket media and ticket sales (million users)



Source: Graph recreated using data from Statista, 2024

The rising love and consumption for cricket shows promising future for the sport. It has fostered the growth of many other industries related to equipment, merchandise, fan engagement, travel, as well as fantasy sports.

1.2 Rise of Fantasy Sports

It is said that even though the world did not grow familiar to "Fantasy Sports" till until the mid 1900s, its introduction can be dated back to mid-1850s with a wooden tabletop and baseball (Burton, Hall, and Paul, 2013). Fantasy sports, as an industry, shows a lot of promise. Over the past several years, the growth of fantasy sports has been extraordinary with a widespread in several countries across the globe.

The actual rise of this industry can be traced back to the 1950s where it gained massive popularity. Since then, it has been a topic of conversation and has faced numerous trials and tribulations while being subjected to phases of massive growth and expansion (Ruhley and Chamberlin, 2021). While fantasy sports has created a space for itself by generating new ways of sports information dissemination and gaining popularity within media and advertising, it is also known to have blurred the lines between skill and betting, raising questions around its legality.

With the advancement of technology from the mid-1900s to the early 2000s, fantasy sports witnessed major transformations as it found a source for widespread dissemination in a swift and dependable manner. This rising user base contributed to huge economic impacts in the western world (Burton, Hall, and Paul, 2013).

Fantasy sports has enabled the viewers to actively engage in sports by means other than watching. Users have the opportunity to make their own line-up or team using their knowledge. This enables engagement and enables the user to reap rewards from their sporting knowledge. While the user base has evolved, the format has largely remained how it was since inception. The user gets to roleplay as a coach or a manager and handpick players to form a team. The real-time performance of the players affects the virtual points of the fantasy team that the user has created, depending on which a leaderboard is formed, and rewards are won (Shipman, 2009).

Initially, fantasy sports started with one sport: baseball. With the increasing popularity of sports, the industry spread to many crowd favorites like football, soccer, cricket, etc. Fantasy sports is often described as an industry that "went from niche to mainstream in a very short time", with even athletes seeing the effect of user engagement on their performance, as they get to witness the support of fans. It has taken user experience beyond simply watching or discussing a sport (Billings, Buzzelli, and Fan, 2021).

Fantasy sports has been defined and conceptualized differently by various researchers (Mahan & Mc Daniel, 2012, Holleman, 2006). However, all of them identify it as a competition between an individual and an entity or a person. A simple, yet holistic definition is one provided by Kumar *et. al.,* (2023) who describe it as a phenomenon that "involves a group of people who choose a set of individual athletes for a fantasy team from a given sport, aggregate the statistical performances of these athletes, and then compete with one another to see whose team generates the highest point totals".

In India, particularly, there exists a humongous sports fanbase and a growing digital infrastructure. This has made room for the potential growth of Fantasy sports, with special emphasis on cricket, India's most watched sport. Rising incomes, and availability and affordability of relevant technology led to a significant rise in fantasy sports user base among Indians in 2020 (Kumar, 2021).

1.3 How is Fantasy Sports played?

Fantasy sports are online prediction games wherein individuals put a virtual team together, the team consists of real sports players who feature on the field. The gamers are referred to as managers as they form a team and manage the team to the best of their abilities in order to earn points.

Gamers earn points based on real-life statistics which are then converted into fantasy points which helps the gamers earn money or prizes. Currently, in India, fantasy sports ranges in nature, there are several sports that managers play – the sports include Cricket, Football, Basketball, and Kabaddi.

Fantasy sports is played by using websites or mobile applications. In India, fantasy sports commenced when an application called Dream11 grabbed headlines. Dream11 popularised fantasy sporting in the country and became the first ever fantasy sports platform to enter the league of unicorns in India. Apart from Dream11, there are several other applications such as Howzzat, Balle Baazi, MPL, My11 Circle, My Team 11 amongst others.

In the current scenario, there are two types of fantasy sports –

1) **Season-long**: In season-long fantasy sports, gamers make a suitable team while considering and picking players from all the teams in the competition, the gamer has the right to make several changes in his team throughout the course of the tournament, this is called the draft system. The gamer with the highest number of points at the end of the season is adjudged the winner.

2) **Daily**: In daily fantasy sports, gamers create a team while picking players from teams who are playing on that particular day. For example: If team A is playing against team B, then the gamer will pick players from these two teams. There are several different leagues in daily fantasy sports, all leagues have different winners, at the end of the match, the gamer with the highest number of points is adjudged the winner of the league, there are different winners for different leagues.

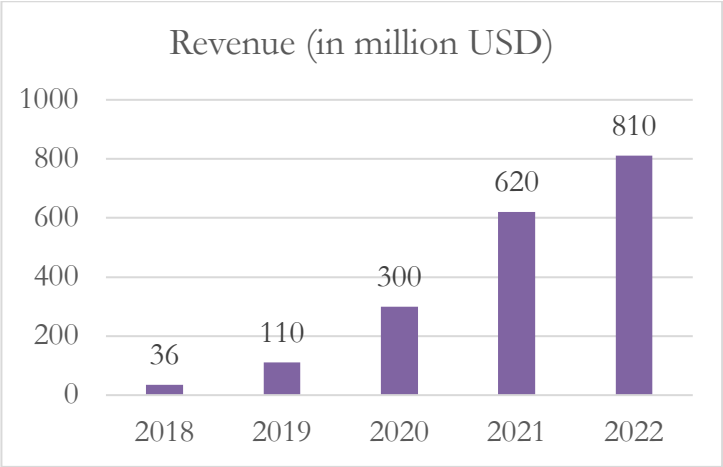
Daily leagues range from a certain amount of money to a certain amount, gamers enrol into different daily leagues by submitting a sum of money (amount mentioned by the application to enrol in a certain league). The gamers are then awarded fantasy points based on the performance of the players of their selection, rankings are announced on the basis of points accumulated, on the basis of rankings, gamers are rewarded money.

1.4 The Indian Fantasy Cricket Takeover

Fantasy sports in India is an upcoming industry, with cricket being the sport with the highest engagement of users. It was only after the commencement of the Indian Premier League (IPL), a T20 cricket league held annually in India, did fantasy sports pick pace. These are mobile-based apps which provide users with a platform to build a virtual team based on real players of a professional sport. These teams compete based on the actual performance of the players in an ongoing match. Points are earned and yield monetary returns.

These are legal-betting platforms (Rai *et al.,* 2023*)*. India is home to the likes of Dream11 and My11Circle, among many others and the fantasy sports industry has shown significant growth over the years, making it worth approximately USD 810 million (as per the current exchange rate of 1USD = 83.88INR) as of 2022 (Fig 1.3) (Statista, 2022).

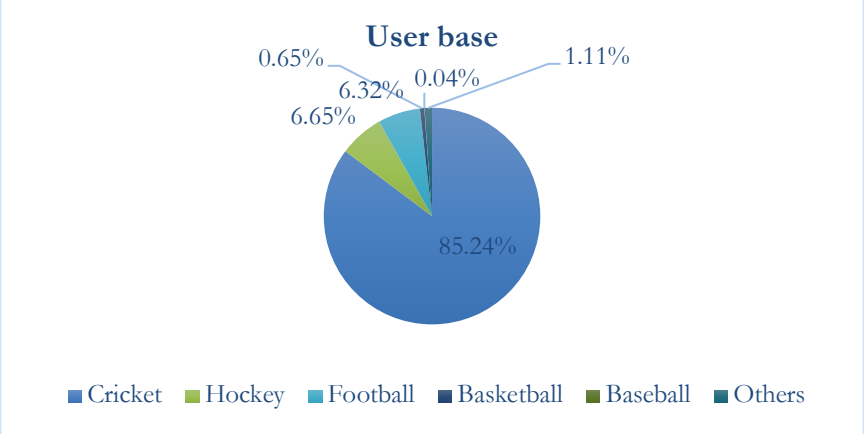
Fig 1.3: Fantasy Sports Revenue in India, 2022



Source: Graph recreated using data from Statista, 2022

Even though the country plays and watches various kinds of sports, sources suggest that fantasy cricket is responsible for about 85% of the total sport-wise user base in India, as seen in Figure 1.4 (Statista, 2021).

Fig 1.4: Sport-wise user base for Fantasy Sports, 2021



Source: Graph recreated using data from Statista, 2021

This noticeable rise in fantasy sports has been due to the consistent growth of technology and its increased accessibility for people (Nower *et. al.,* 2018). Nower also suggests that the rising involvement in fantasy sports affects the gambling behaviors of people, and they are more prone to mental distresses than an average gambler. It is suggested that involvement in fantasy sports further increases the viewership of the sport and in some cases, might affect team loyalty (Jha *et. al.,* 2021). Despite how they might affect human behavior, fantasy sports is considered to be different from sports betting and is called "a game of skill" (FSGA, 2020).

The growth of these fantasy sports companies has been remarkable with Dream11 leading the charge. Dream11 has sponsored the Indian Premier League (IPL) on multiple occasions and currently sponsors the Indian cricket team as the title sponsor. The company is currently valued at $8 billion and receives backing from the venture capitalists like Falcon Edge, Tiger Global, DST Capital amongst others. (Reuters, 2021)

The company has also expanded into other forays such as Digital Sports Content, Sports Experiences, Gaming, Foundation, and venture-capital fund for start-ups. The rise of the company is synonymous with the rise of fantasy sports in India. The expensive valuations are evidence of the increasing and growing popularity and revenue generation prospects of fantasy sports.

1.5 Research Objective

The primary objective of this research paper is to examine the perception of the youth (18-25 years) towards fantasy sports and what drives their engagement. The paper also examines the psychological impacts, socio-economic impacts, risk-taking, decision making, and other possible ways in which engagement with fantasy sports influences day-to-day functioning and behaviour.

To achieve these objectives, the paper aims to answer the following research questions:

a. What are the factors contributing to engagement in fantasy cricket among youth?
b. How is the day-to-day functioning, mental wellbeing, risk taking behaviour, and social involvement of youth affected by this engagement?

1.6 Ethical Considerations[1]

The data was collected using a self-administered questionnaire. The first page of the questionnaire consisted of a consent form which was signed by all the respondents. All the participants were informed, beforehand, the voluntary nature of the research and the option to withdraw whenever they wanted was given to them. They were also made aware of the anonymous nature of the survey and confidentiality of the data.

1.7 Limitations of the Study

The study suffers from several limitations. Firstly, the data collected comes from surveys. This self-reported nature of the data makes it prone to inaccuracies and misreporting by the participants. Second, the data collected also comes from the capital of India and its surrounding areas (Delhi and the National Capital Region), and so can fail to capture the diversity caused by geographical variability.

1.8 Scope of the Study

The study revolves around the idea of identifying factors that lead to user engagement in fantasy cricket and how are users affected by this participation. Youth (18-25 years) is the focus of the study since this group represents the demographic that is most actively and engaged in fantasy cricket, particularly in India. This makes them ideal to explore the social and psychological impacts of this fast-growing activity. In the formative stages of life, this group is prone to changes in behavioural patterns, social interactions, and financial decisions caused by surroundings and digital interactions. In a way, their vulnerability in the digital world contributes a lot in shaping their psychological and financial well-being, as well as overall development. The youth is also seen as early adopters of new technology, and so their patterns tend to be an important to the growth of the digital market and understanding the influence on online platforms. Being the future of the workforce and their existing online presence makes the youth an important demographic to study when it comes to looking at the effect asserted by fantasy cricket.

[1] Sample of the consent form is presented in Appendix 1.

Furthermore, the study has been conducted during the time frame of no important cricket tournament. By utilising quantitative analysis, the aim would be to support this existing literature using empirical justifications. The research aims to provide insights for psychologists, app developers, educational institutes, and the target population itself, and make them aware of the benefits and potential risks of fantasy sports.

The study focuses on drivers of youth engagement towards fantasy cricket as well as the implications this engagement has on behavioural functioning of its users as compared to non-users of fantasy cricket by using primary data collected from 204 people belonging to the age group of 18-25 in a university of Delhi NCR, India. This paper reaches the required results by setting up two econometric models and analysing them using linear probability model and ordered probit regressions, and suggests the contribution of potential benefits, financial patterns, and awareness in driving people to play fantasy cricket. It also highlights the effect that fantasy cricket has on basics such as daily functioning, coping with stress and anxiety, handling personal relations, as well as the frequency with which people check their phones.

The paper caters to four sections, starting with the literature review where a brief description of the topics is provided along with a summary of important research that work in this area. This is followed by the data collection and methodology section that describes, in depth, the questionnaire and its various sections, as well as the econometric modelling. Post this, the paper presents the findings on factors causing users to engage with fantasy cricket and what is the effect of this engagement on these users. The final section of the paper draws implications and conclusions from the analysis and summarises the basic facts as well as key findings discussed over the course of this research paper and makes recommendations for future research.

Chapter 2
Literature Review

2.1 Unpacking player motivation

While games and media to engage with them has been constantly evolving, one thing that has stayed consistent among game designers is the importance given to the factors that actually push users to engage with the platform. University of Silicon Valley (2023), in their blog about the importance of player motivation in game design, highlight this consistency and assert the importance of understanding the underlying psychology of potential users. While the "reason to play" can keep on shifting every now and then, developers often try and find ways to harness as many motivations as possible that lie within their reach (Freeman, 2021).

In the context of fantasy sports, there have been quite a few research papers dealing with the possible motivations of people behind their engagement. Martin et al. (2019) listed out the top four motivational factors as entertainment, competition, social interaction, and arousal. They also suggest that gambling or the drive to make money did not make the cut and hence, cannot be listed as an important determinant in engagement. There were also responses dealing with utilization of sports knowledge, love for sports, and the feeling of achievement behind user motivation. Denham (2019) in a book chapter also drew similar conclusions where entertainment, competition, and social interaction were listed as key factors.

However, Balhara, Gulati, and Rajguru (2024) listed monetary gains as the primary motivation and co-related the gains with gambling. A cross-sectional observational study with semi-structured questionnaire was conducted on 297 (49.8% females) undergraduate students. Out of 297 undergraduate students, 20% students had engaged in fantasy sports at least once while 18% of the students had engaged in gambling at least once. The study found out that participants who indulged in fantasy sports for monetary gains agreed that it is similar to gambling while those who lost money in fantasy sports engaged more significantly in fantasy sports. The study concluded that engagement in fantasy sports is directly associated with the behavior similar to gambling and with monetary motivations and intentions. The study also highlighted the need for further research on the social and psychological implications of fantasy sports, especially in the youth. The study also advocated for further research on exploration of the relationship between fantasy sports, gaming and gambling and the potential of problematic gaming or gambling behavior in youth.

Kumar *et. al.* (2023) surveyed the then existing literature from a communication perspective while describing the history of fantasy sports, and by examining and assessing the future aspects and potential direction of the research topic. In Hill and Woo (2011), another communication perspective was explored, they interviewed industry experts and identified intriguing research possibilities for the future. The prospects laid out by the above mentioned two research have been explored in this research wherein respondents have identified the factors which lead them to fantasy sports.

Federation of Indian Fantasy Sports (FIFS) with Deloitte (2022) mentioned the role and impact of fantasy sports in India, the existing user base, the fan base, and the economic impact of fantasy sports in India. The research mentioned the key growth drivers of the industry, legal judgements, and the growing popularity of sports with the rise of different leagues. It is one of the few literary works in India when it comes to fantasy sports, the research also identifies various technological disruptions, fan engagements and regulation of the fantasy sports industry.

Several other research have also highlighted different reasons for player motivation. The interactive and engaging nature of fantasy sports allows users to have an autonomy and control which fulfils psychological needs related to self-efficacy and competency with the belief that they are also contributing to the sport and are involved with the operations of the sport.

2.2 Impact of Fantasy Sports[2]

The fantasy sports industry has entered the sporting world by providing a new medium for fans to engage with their favourite games. It has been welcomed with open arms and the influence is spreading everywhere (Carroll, 2013). While the growth of this industry has been quite commendable, one cannot help but wonder the possible impacts it has on its users, by not only looking at its effect on sports media consumption, but also the direct effects on mental and behavioural wellbeing of people. Several researchers have commented on the vulnerability of young adults (Gwon and Jeong, 2018) and have also highlighted their significant participation in fantasy sports (IMARC Group, 2023). The following section deals with the behavioural consequences of this participation.

2.2.1 Skill development in youth

Bobek and Tversky (2016) talk about how skill development is known to take up various forms. With the evolution of technology and teaching, learning systems have also grown exponentially and it has been stated repeatedly that visual learning is known to provide better results than auditory learnings. This has seen further diversification with the introduction of gamification of study materials (*University of Waterloo,* no date.).

This aforementioned gamification can be seen to be alive in fantasy sports where users can come together, learn, and experience skill development through collective means. While there are negative outcomes of this involvement, monitored participation can act as means to improve cognitive, social, and personal skills, all while providing an "enhanced sporting experience" (Purohit, 2023). As it is known to be more than a mere game of "chance", it can also help foster critical thinking, informed decision making, and application of sporting knowledge for monetary gains among people mainly in their early 20s.

One of the major drivers for user participation in fantasy sports is considered to be utilizing existing knowledge and gaining new information. While the user can be well-versed with the rules of the sport, they also learn a lot about it while involving themselves with the fantasy sports user-interface. It is said to improve decision making as well as critical thinking of players (Wheeler, 2023). The knowledge gained goes beyond the team that the user supports. It leads to an enhanced understanding of the sport as one grasps more information about competing teams, conditions, and several other factors of the sport. The thrill of competition and the zeal to win often leads to the participants to analyze previous data and statistics, which builds up their predicting powers (Döpke, Köhler and Tegtmeier, 2023), while also improving competitive skills (Wilkins *et. al.,* 2023).

Fantasy sports has been created to amplify consumer enjoyment and it has left no stone unturned in fulfilling its promises, while also making enough room for other benefits. While it creates positive competition and makes users think outside their emotional comforts, it also provides a platform to reward these changes. It provides an immersive experience to its users where they can engage themselves with their favorite sports through methods apart from simply watching (Wilkins *et. al.,* 2023).

[2] This part of the literature review was previously submitted to be assessed under the course ISS 4348

The real sporting world is known to be overwhelmed with heavy competition. Social banters, too, continue to occupy a lot of space in this area. Through fantasy sports, users get access to live chat and interact within a league group thus allowing social interaction. It tries to foster a community and help fans connect with each other. Through this, it helps in community building. Owing to these factors. Fantasy sports enables users to gain skills related to teamwork, communication, interpersonal and intrapersonal skills through the application of collaborative fantasy sports wherein different users come together and team up to formulate strategies using analysis, data, and reports to finalize their player combination (Rai *et. al,* 2024).

2.2.2 Gambling and risky behavior in youth

Gambling is known to have a lot of disadvantages, apart from its addicting nature. Sohn (2023) states that people in their "early 20s are the fastest growing group of gamblers" and also highlights similar tendencies in adolescents. Being aware of the dark sides of gambling, it becomes important to find out the various reasons behind the growing willingness of young adults to gamble and nip these reasons in the bud.

The Gambling Commission of UK examines this progression for young adults, where they see that early exposure to playing penny-push arcade games or setting off small bets with families to spending money on lotto tickets and scratch cards, have been several contributors to the "adrenaline rush". This enthusiasm to win has later been known to transform itself into frequent casino visits after one reaches the legal age, which further amplifies the influence (2021). Peer pressure or getting swayed by entertainment media also makes these money-making avenues more enticing.

The thrill of the game and the potential monetary benefits of playing might make room for gambling tendencies within the user inflicting gambler's fallacy. This is a key issue as users move towards risky behaviors, financial losses, and severe addiction. The adrenaline rush and excitement experienced when a person wins acts as a valid argument to suspect the contribution of fantasy sports in gambling motivations (Nower *et. al.,* 2018).

2.2.3 Mental repercussions in youth

Anxiety, frustration, stress, anorexia, depression, and lowering patience are among the most important and frequent mental repercussions of fantasy sports engagement on youth. The positive contribution of fantasy sports to social and personal skills also comes quite a few downsides. There have been numerous instances of reckless spending which have resulted in unmanageable stress and in some extreme cases, suicide (Varma, *et. al.,* 2021).

Wilkins *et. al.* (2015), in their paper, talk about the mental outcomes of user engagement in fantasy sports. It is known to inflict anxiety and frustration due to the increasingly competitive structure of the game. It is also known to impact the day-to-day functioning of people. MacInnes (2022), in their paper, highlighted how "mental implications are directly proportional to the amount spent on fantasy leagues" It is also known to cause functional impairments.

Fantasy sports users develop emotional connections with athletes due to dependency on them for points during matches, this influences their consumption intentions and creates bias towards players providing higher number of points to the user. Self-efficacy theory (Turner, 1982) talks about the belief that individuals have on themselves and their ability to complete tasks, this influences their behavior (Ballouli et al., 2013). In the same paper, they also talk about how high engagement in fantasy sports makes daily activities suffer among players as they spend a lot of time in managing and making adjustments to their teams before each game. This also highlights how the consumption of sports is high in these users and may cause instances of severe loneliness,

further disrupting their mental peace. With the team never leaving the user's mind, its effects can be seen in social interactions and general health.

Team attachment is said to be important when it comes to user engagement in fantasy sports. A very interesting research articles tries to compare the fantasy team attachment to real team attachment. Rai et al. (2023), in their paper focus on cricket in India and suggest how awareness regarding the game, the players, and the competitors comes out to be an important link between participants in fantasy sports. They also find that involvement in fantasy cricket increases gambling consumption of the players.

Apart from all these repercussions, social isolation is considered to be an important aftermath of excessive fantasy sports engagement. While the platform acts as means to connect the user with other players, it also limits this interaction to the screen. This limitation leads to social anxiety and often makes the impressionable groups more vulnerable to internet toxicity and cyber bullying (*IIBS: International Institute of Business Studies*, 2023).

2.3 Legal and ethical considerations

According to many, the legality of fantasy sports lies in the grey area with different countries having different rules and regulations. There have been numerous debates and research to talk about the differences between this industry and gambling itself. While many believe there is a fine line between the two, several others disagree. The most important debate amongst the two parties is – is fantasy sports a game of skill or luck?

Das (2021) in their paper that talks about the legal framework for fantasy sports in 21 countries from North-Asia, Southeast Asia, and Oceania and provide several takeaways: sports betting is present in just one-third of the countries studied, the legal framework for sports betting is nearly absent in Asia-Pacific, and the second-largest potential fantasy sports market of this region (Indonesia) is Muslim dominated and so, does not engage in any sort of gambling activity. The paper also suggests a Nevada-based framework which includes a governing body for the industry, political courage, changing public opinion, consumer demand, tax, and industry lobby.

Talking about the legality of fantasy cricket in India, Shrivastava (2022) explains how India evolved from enforcing state-wise regulations for fantasy sports to the introduction of a single legislative framework to govern the same, as recommended by *Niti Ayog* in 2020. The paper also talks about the need of effective and constant monitoring of the industry due to its dynamic nature.

The State of Bombay vs R. M. D. Chamarbaugwala on April 9, 1957, was the first ever case in which the point of skill versus chance was addressed. Different countries have different rules and laws regarding this, India, however, has followed the laws of the United States of America. As per the ruling of the abovementioned case, the court put forward that if a game contains both elements, i.e. skill and chance, it would be considered a game of skill.

Mehta and Mathur (2018) in a paper dealing with this issue of legality draw comparisons between fantasy sports and the textbook-definition of games of chance, thus highlighting the differences between the two.

In The State of Bombay vs R. M. D. Chamarbaugwala on April 9, 1957, it was held that gambling or conducting the business of gambling is extra-commercium and hence not included within the meaning of 'trade, commerce or intercourse'. Consequently, it is not protected by the fundamental right to trade and profession under Article 19(1)(g) or the freedom of trade, commerce and intercourse under Article 301 of the Constitution of India. (1957 AIR 699, 1957 SCR 874)

While such debates over legality are common in the Indian subcontinent, India has a Federation of Fantasy Sports (FIFS) led by the top management of some companies that offer fantasy sports

services thus bringing into limelight, the question of bias. Some other Indian laws like the Public Gambling Act of 1876 plays a crucial role in the advancement of fantasy sports in the country.

The Public Gambling Act of 1876 is a law that prohibits running or being in charge of a public gambling house in India. According to the Constitution of India, states can frame state specific laws on betting and gambling, as per the Seventh Schedule, state governments can make laws on betting and gambling. Fantasy sports are categorized as a game of skill, as per the law, game of skill does not fall under the ambit of gambling. States such as Assam, Odisha, Telangana are exceptions.

The Public Gambling Act prohibits games of chance while permitting skill-based games. Online gaming is a part of the state list, and thus, states have the right to enact their own regulations. In the past, Indian courts have emphasized and ruled that games in which a candidate's success is contingent on the use of "substantial talent" are exempt from Indian gaming laws despite being games of chance.

2.4 Contribution to existing literature

Keeping in mind the astronomical rise of fantasy sports in the past few years, the main idea of the paper lies around acknowledging the changes it is bringing among viewers while focusing on youth. While the blurry line between gambling and fantasy sports has confused many, it is important to see the hold it has on the younger population and how the remainder (youth not involved in fantasy sports) perceives it. While there are many studies that deal with Fantasy sports across the globe, there is very little literature available for India where the center of attention is Fantasy Cricket and the impact it has on youth. Looking at the impressionable patterns of people belonging to the 18-25 age group, and the captivating outlook of fantasy sports, this topic shall add on to the existing literature by providing a fresh insight into a fairly new demographic by highlighting the key factors that drive people to engage with fantasy sports, particularly cricket, and how this engagement changes the basic behavioral patterns of users. India is an extremely populous country, with over half the country's population being under 30 (Express News Service, 2022). The course that this fresh, young population embarks on has the ability to impact the future of the country's wellbeing. This paper, therefore, carefully looks at a sample of the future workforce of the country and goes on to analyze the relationship they exhibit with fantasy cricket.

Chapter 3
Data Collection and Methodology

3.1 Data Collection

The study primarily focuses on primary data, collected through self-administered survey questionnaires as well as online questionnaires which were later coded and entered into Stata 18. The data collection was conducted among adults between the age group of 18-25, regarded as the youth. It has been considered as the appropriate target population due to their tech-savvy nature, willingness to test out new digital platforms, and the susceptibility to change because of surroundings. The surveys were conducted in Delhi and National Capital Region, consisting of areas including Noida, Ghaziabad, Faridabad, and Gurgaon. The questionnaire has been extensively described in section 3.1.1.

The study also employs secondary data obtained from industry reports and existing literature to supplement the primary data collected and obtain broader insights into the topic.

3.1.1 Questionnaire[3]

The questionnaire was divided into six parts, each catering to a different topic of interest.

a. Individual Characteristics

- ***Demographics***

This part collected basic demographic information on age, education level, gender, employment status, monthly spending budget, marital status, and region. The geographic location of Delhi, NCR was divided into nine sub-categories: North Delhi, South Delhi, East Delhi, West Delhi, Central Delhi, Noida, Ghaziabad, Gurgaon, and Faridabad.

- ***Monthly Budget***

Since most of the people belonging to this age group (18-25) are students, the monetary variable picked was monthly budget instead of annual income.

b. Sports Viewing Behaviour

This part dealt with the sports that people engaged with. Respondents were asked to select, from a non-exhaustive list, the sports they played and watched. The focus then shifts towards solely cricket where they are asked questions pertaining to the frequency with which they watch cricket, their understanding and awareness of the game of cricket, their engagement with the Indian Premier League (IPL), the platforms used to watch cricket, and expenditures related to live matches, travel for cricket, fan parks, and screening.

c. Fantasy Sports

Questions related to engagement with fantasy sports (particularly fantasy cricket), frequency, understanding, awareness, spending, winning, psychological impacts, and motivation to play were asked. The questionnaire consisted of a 5-point Likert scale (from 1 to 5, with 1 being the lowest and 5 being the highest) to understand the impacts like effect on day-to-day functioning, impact on personal relationships, changes in emotional state, peer pressure, etc as well as factors influencing engagement like thrill of competition, knowledge utilisation, winning money, etc.

d. Financial Behaviour

Participants were asked whether they maintain and track their budget and spendings and if applicable, exceed their fantasy sports budget. They were also asked if they engaged in other online

[3] The detailed questionnaire can be found under Appendix 2.

activities with potential monetary returns like online poker, Stake, rummy, etc. and their behaviour while engaging with these platforms.

e. Gambling Perception

This part considers if the respondents have ever heard of or engaged with online or offline gambling platforms and how do they perceive them. It also looks at the perception of respondents regarding the degree of correlation between fantasy cricket and traditional gambling. For this, as well, a 5-point Likert scale was used.

f. Risk-taking behaviour

This part tries to identify the risk-taking behaviour by asking questions regarding how they would spend a windfall gain and their comfort with losing money in the short run, high risk high reward opportunities, and opportunities with unknown risks.

3.2 Methodology

The study makes uses of a quantitative research design and uses a survey based, self-administered questionnaire. To prevent the data from facing any external impacts caused by cricket-tournament enthusiasm, the research was conducted in a timeframe when no major sporting events were taking place. The target population was people between 18-25 years of age. The study makes use of a non-probability convenience sampling method as the sample consists of people who were willing to participate and were relatively easy to access for the researcher (Golzar, Tajik and Noor, 2022). The data was collected in two parts. The first part catered to students and was conducted in **Amity School of Economics, Amity University Uttar Pradesh**. Students currently pursuing their bachelors and masters were approached and asked to fill the questionnaire. The second part dealt with working professionals and the sample mainly constituted of people with Amity School of Economics as their alma mater, along with approachable friends and family members. A total of 215 forms were filled, collected, and enumerated for analysis, out of 204 (11 were incomplete) have been used and analysed using Stata and MS Excel.

3.2.1 Econometric Modelling

The two research questions have been studied by applying the following econometric models. The econometric model applied to examine the factors contributing to the engagement of youth in fantasy cricket has been taken from equation 1.

$$Fantasy\ Cricket\ Engagement = \alpha + \beta_1(Demographics) + \beta_2(Monthly\ Budget) + \beta_3(Potential\ Benefits) + \beta_4(Relation\ between\ Fantasy\ Sports\ and\ Gambling) + \beta_5(Setting\ and\ tracking\ budget) + \epsilon$$

Equation 1

This equation incorporates five vectors as regressors to predict Fantasy Cricket Engagement among the respondents.

a. **Demographics**: The influence of basic characteristics like age, gender, location, and employment status on user engagement has been analysed. The sample comes from six broad locations (Delhi, Gurgaon, Noida, Ghaziabad, Faridabad, Others); and the employment status has been categorised into students and working professionals. This helps deduce if people from the same demographic act in a similar fashion.
b. **Monthly Budget**: Since the sample has been divided into students and working professionals, the socio-economic variable used to check for differences is monthly budget.

c. **Potential Benefits**: This captures the influence of possible benefits, as suggested by literature, on user engagement and include thrill of competition, expanding and utilising knowledge around the sport, connecting with fellow fans, and winning money.
d. **Relation between FS and Gambling**: Despite the legality of fantasy sports, many people still consider these platforms function in a grey area and believe them to have a correlation with traditional gambling. This, too, seems to influence user engagement.
e. **Setting and Tracking Budget**: This final vector controls for basic financial habits like setting a budget and tracking ones' spendings.

The outcome variable, Fantasy Cricket Engagement, is defined as a binary variable and takes the vale 0 for those who never participated in FC and 1 for those who play FC. To predict the effect of the above-described variables on the outcome variable, we estimate a Linear Probability Model of Equation (1). The model is estimated several times by including and excluding some of the covariates in each time.

To respond to our second research question, we use the model provided under Equation (2) that deals with the possible psychological and behavioral effects of engagement in fantasy cricket.

$$\begin{aligned} Psychological\ Effect \\ = \alpha + \beta_1(Demographics) + \beta_2(Monthly\ Budget) \\ + \beta_3(Fantasy\ Cricket\ Engagement) \\ + \beta_4(Other\ Platform\ Engagement) \\ + \beta_5(Sport - watching\ patterns) + \beta_6(Gambling) + \epsilon \end{aligned}$$

Equation 2

The psychological effect is studied across four different outcome variables, as listed below.

a. **Day-to-day functioning**: This is to look at the effect of fantasy cricket on the efficiency of daily functioning among people. It is measured on a five-point Likert scale, where one suggests extremely low efficiency and five suggests extremely high frequency.
b. **Patterns of stress and anxiety**: This measures the ability of respondents to cope with stress and anxiety on a general basis and the effect of fantasy cricket engagement. It uses a five-point Likert scale for measurement, one suggesting extremely low ability to cope and five suggesting extremely high ability to cope.
c. **Control on phone updates**: This assesses, on a scale of one to five, the level of control the respondents exert over constantly checking their phones for updates. Here, reporting a one would suggest a very high frequency of checking phones for notifications and reporting a five would suggest a very low frequency of checking for notifications.
d. **Handling personal relations**: This variable checks the ease with which people handle their personal relationships on a scale of one to five, where one suggests high difficulty in handling said relationships and five suggests a high level of ease.

Equation (2) makes use of six regressors to predict the outcome variables.

a. **Demographics**: The effect of pre-existing characteristics like age, gender, employment status, and location has been assessed to check if people belonging to similar demographics showcase similar traits.
b. **Monthly Budget**: The socio-economic variable used is that of monthly budget due to a high number of non-working students in the sample.

c. **Fantasy Cricket Engagement**: This includes participation in fantasy cricket and if the user has ever won a game.
d. **Other Platform Engagement**: This captures participation in other money-making platforms such as online poker, stake, rummy, etc.
e. **Cricket watching patterns**: This vector sees if the respondent watches cricket and the other ways through which they engage with the sport (team preferences, watching live matches and screening, using paid platforms to watch the sport, and visiting fan parks).
f. **Gambling**: Awareness and participation in online and/or offline gambling platforms have been grouped under the vector for gambling along with the awareness of pros and cons of engaging with gambling among the participants.

The model has been run four times (once for each outcome variable) and has been predicted using marginal effects from an ordered Probit model.

3.3 Descriptive Statistics

The primary characteristics of the sample are explained below.

Table 3.1: Fantasy Sports Statistics

Fantasy Sports Engagement	No. of observations	Percentage (of total)
Users	62	30.39%
Non-users	142	69.61%
Total	204	100%
Fantasy Cricket Users	60	29.4%

Source: *Own survey data, 2024*

Table 3.1 highlights the fantasy sports engagement status of the sample population. Out of 204 individuals, 30.39% are active users of Fantasy Sports, while 69.61% are non-users. This breakdown is crucial for understanding the adoption rate of fantasy sports within the population. Out of the total sample, 29.4% people engage with fantasy cricket. This accounts for 97% of the sample that plays fantasy sports.

Table 3.2: Basic Statistics and mean difference (users and non-users of fantasy cricket)

Category		Total	Users	Non-users	Mean Difference (Non-Users and Users)	p-value
Age	**Min**	18	18	18		
	Max	25	25	25		
	Average	21	21	20	-0.364	0.314
Monthly Budget (INR)	**Min**	1000	1000	1000		
	Max	100,000	100,000	100,000		
	Average	16,400	20,017	14,964	-5052	0.1033
Gender	**Male**	85	35	49		
	Female	119	25	94	0.240	0.0014
Employment Status	**Student**	150	40	109		
	Working Professional	54	20	34	-0.096	0.161

Source: *Own survey data, 2024*

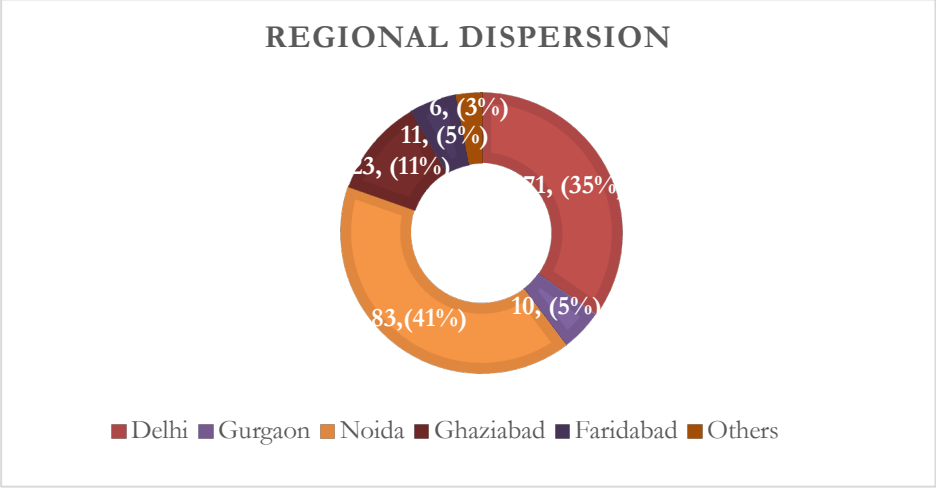
Table 3.2 presents a breakdown of age, monthly budget, gender, and employment status for the sample as a whole, the users, and the non-users of fantasy cricket. The age range for the sample as well as specific categories or users and non-users is between 18-25. The average age of the sample is 21 years, and this is the mean age for fantasy cricket users as well. As for non-users of the game, the average comes down to 20 years. The mean difference of those who do not play fantasy cricket and those who play fantasy sports is -0.364, suggesting that the group that plays fantasy cricket is slightly older than the one who do not play. This result, however, is not statistically significant, implying that age is not a distinguishing factor between users and non-users in this data.

The second category of this table is monthly budget. Th over-all monthly budget recorded for the population ranges between 1000 INR and 100,000 INR. While the overall average budget for the sample is 16,400 INR, the average budget for fantasy cricket players is 20,017 INR, and that of non-players is 14,964 INR. The mean difference between players and non-players is -5,052 INR. This suggests that the group engaging in fantasy cricket tends to have a higher monthly budget than those who do not play fantasy cricket, but the result is not statistically significant. This, therefore, suggests that for the given data set, economic standing or monthly budget is not a differentiating factor between users and non-users.

The third aspect of the table deals with gender distribution. The sample has 85 males (42%) and 119 females (58%). While the data is slightly skewed towards women, it can be seen that out of the 60 people playing fantasy cricket, 35 (58%) are males and 25 (42%) are females. 94 females (66%) and 49 males (34%) make up the part of the sample that does not engage in fantasy cricket. The mean difference between non-users and users of fantasy cricket is 0.240, which is significant at the 1% level of significance, thus suggesting that gender is a differentiating factor between those who play and don't play fantasy cricket. This could be due to multiple reasons like the imbalance in the spread and fandom of men's and women's cricket tournaments, targeting men while marketing cricket and fantasy cricket, and the long-standing gender imbalance in the sporting world from not only a player's point of view, but also a viewer's point of view.

The final aspect of table 3.2 deals with employment status. The sample consists of a large number of students (150, 74%) and 54 (26%) working professionals. Out of those who play fantasy cricket, 40 (67%) are students and 20 (33%) are working professionals. For the group that does not play fantasy cricket, 109 (78%) are students and 34 (22%) are working professionals. The mean difference between players and those who do not play fantasy cricket is -0.096, suggesting a very little difference between employment status. This result, however, is not significant and so, employment status is not considered as a factor determining users or non-users in this data set.

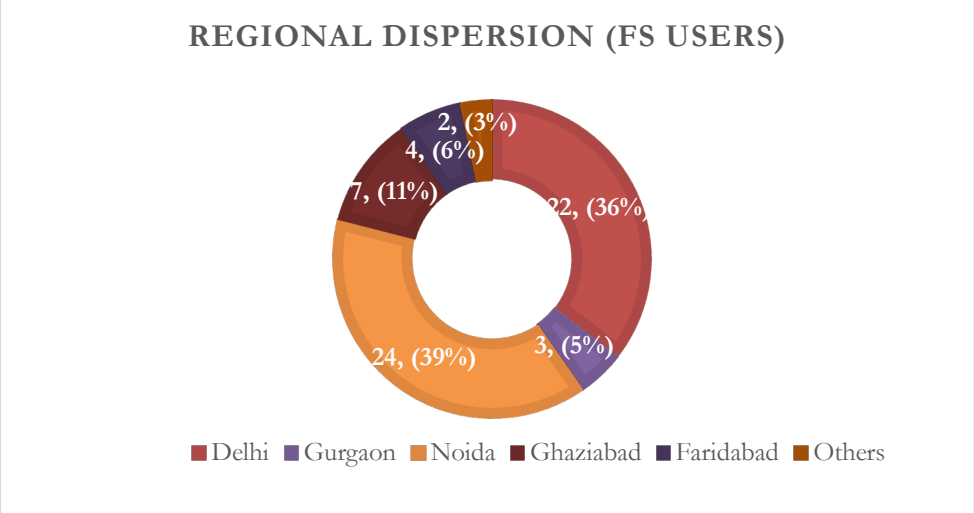
Fig 3.1: Regional Dispersion of the Sample



Source: *Own survey data, 2024*

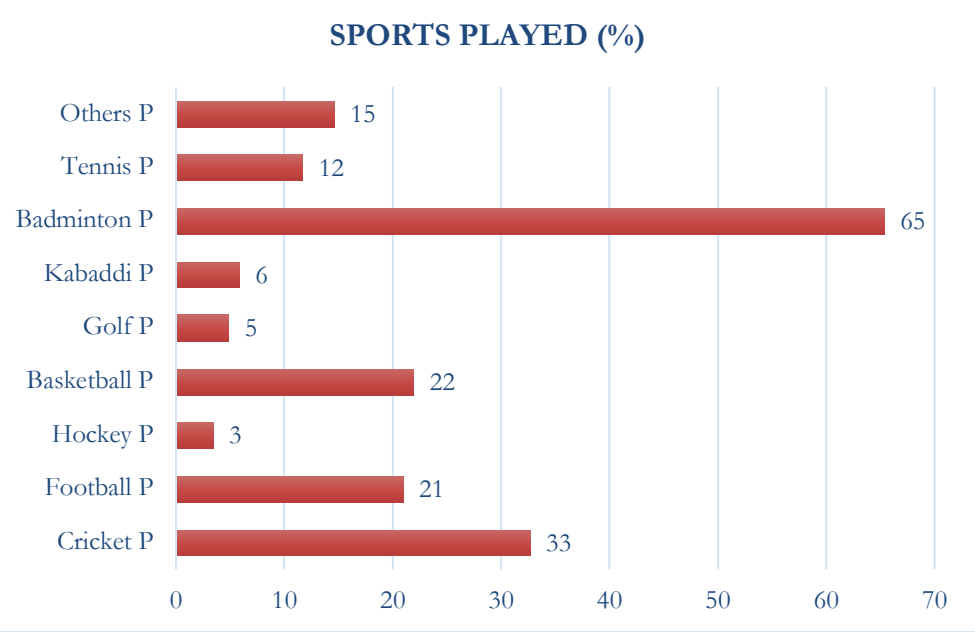
Figure 3.1 and **Figure 3.2** show the regional dispersion of the sample, and that of the people engaging in fantasy cricket respectively. Majority of the sample (41%) comes from Noida followed by 35% belonging to Delhi. 23% of the population is from Ghaziabad, 5% from Gurgaon and Faridabad, and 3% of the sample is from outside Delhi, NCR. 39% of the fantasy sports users in the sample are from Noida and 36% users are from Delhi. While this constitutes about two-thirds of the fantasy sports users, 11% is from Ghaziabad, 6% from Faridabad, 5% from Gurgaon, and 3% users are from outside Delhi NCR.

Fig 3.2: Regional Dispersion of FS Users



Source: *Own survey data, 2024*

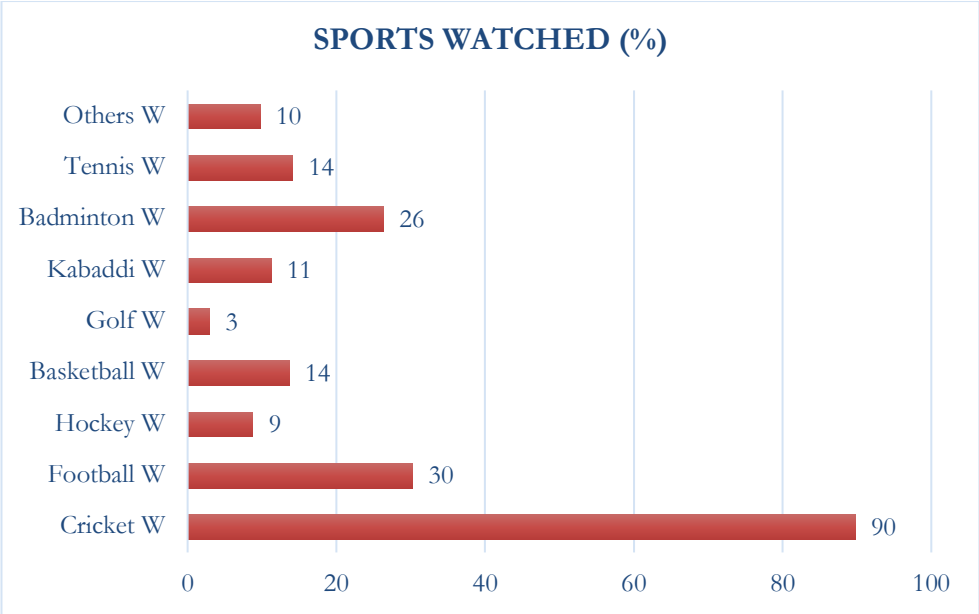
Fig 3.3: Sports Played



Source: *Own survey data, 2024*

Figure 3.3 illustrates the percentage distribution of various sports played by the respondents. The most popular sport is **Badminton**, with 65% of the participants reporting it as one of the sports they engage in. This is followed by **Cricket**, which is played by 33% of the respondents. Other notable sports include **Basketball** (22%), **Football** (21%), and **Tennis** (12%). Less popular sports include **Kabaddi** (6%), **Golf** (5%), and **Hockey** (3%). A category labelled "Others" represents 15% of the participants, indicating involvement in sports outside of the listed categories.

Fig 3.4: Sports Watched



Source: *Own survey data, 2024*

Figure 3.4 showcases the percentage distribution of various sports watched by the respondents. The overwhelming majority of respondents, 90%, reported watching **Cricket**, making it the most viewed sport. **Football** follows at 30%, with a significantly lower but notable viewership. Other sports like **Badminton** (26%), **Basketball** (14%), and **Tennis** (13%) also capture a decent share of the audience. Lesser-watched sports include **Kabaddi** (11%), **Hockey** (9%), **Golf** (3%), and a category of "Others" at 10%, representing interest in sports not specifically listed.

Table 3.3: IPL Statistics

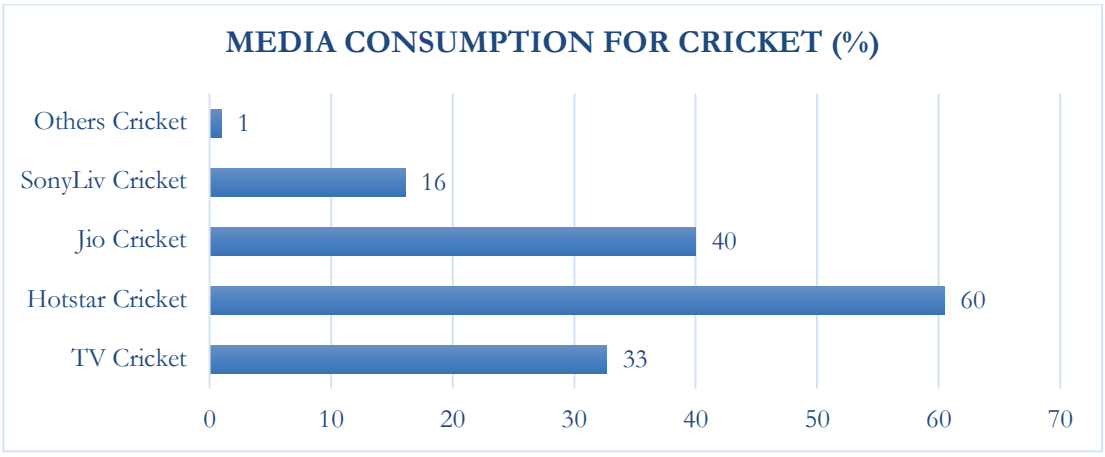
	IPL	**%Engagement**
All Observations	**Viewers**	165 (81%)
	Frequency	
	Regular	27%
	Often	25%
	Occasional	34%
	Rare	15%
Fantasy Sports Users	**Viewers**	57 (92%)
	Frequency	
	Regular	33%
	Often	42%
	Occasional	18%
	Rare	7%

Source: *Own survey data, 2024*

Table 3.3 presents the engagement levels with the Indian Premier League (IPL) among all observations and Fantasy Sports users. A total of 81% of the overall sample reported watching IPL, while a notably higher percentage (92%) of Fantasy Sports users are IPL viewers.

When analysing viewership frequency, for the entire sample, 27% of respondents watch IPL regularly, 25% watch often, 34% are occasional viewers, and 15% watch rarely. Among fantasy sports users, engagement is higher, with 33% watching IPL regularly and 42% watching often. Fewer fantasy sports users are occasional or rare viewers, with 18% and 7% respectively. Widely regarded as the "Cricket Festival of India", IPL is an eagerly awaited annual cricket league played in India. This table highlights the love and viewership that IPL receives in the country. It should also be noted that it was after the inception of IPL in 2008 that fantasy sports could exert a hold over the Indian market. With the interest that viewers showcase in this league, a part of this interest is likely to spill towards engagement in fantasy cricket as well.

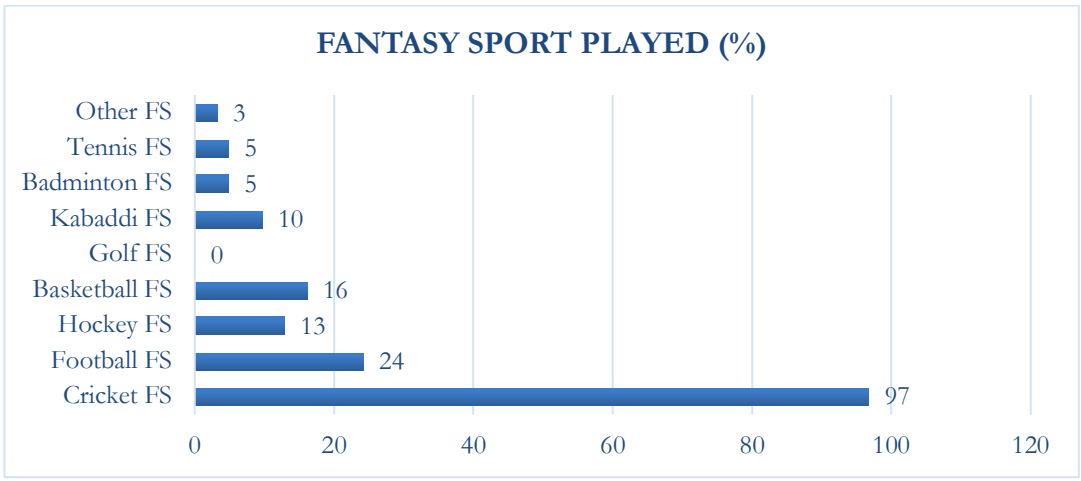
Fig 3.5: Media Consumption



Source: *Own survey data, 2024*

Figure 3.5 outlines the media platforms used by respondents to consume cricket content. The most popular platform is **Hotstar**, used by 60% of the respondents, followed by **Jio** at 40%. Traditional **TV** remains a significant medium, with 33% of participants reporting that they watch cricket on television. **Sony Liv** is used by 16% of respondents, while only 1% reported using "Others," which could include less common or niche platforms.

Fig 3.6: Fantasy Sports Played



Source: *Own survey data, 2024*

Figure 3.6 illustrates the percentage distribution of different sports played in fantasy sports platforms by respondents. **Cricket** dominates the Fantasy Sports landscape, with 97% of users engaging with cricket-related fantasy sports games. **Football** comes next, with 24% of participants playing fantasy football. Other sports like **Basketball** (16%), **Hockey** (13%), and **Kabaddi** (10%)

also have some traction. Less popular sports include **Tennis** and **Badminton** (both at 5%), while **Golf** sees no representation in fantasy sports. A small portion (3%) of users play fantasy sports in other, unspecified categories.

Table 3.4: Interest and Understanding of the sample towards FC

Variable	% of sample
Interest in FC	
High Interest	19.1%
Medium Interest	41.7%
No Interest	39.2%
Understanding of FC	
Hugh Understanding	21.6%
Medium Understanding	41.7%
No Understanding	36.7%

Source: *Own survey data, 2024*

Table 3.4 provides insights into the level of interest and understanding of fantasy cricket among the respondents. When examining interest levels, 19.1% of the sample indicated high interest in fantasy cricket, while the largest portion of respondents (41.7%) reported medium interest. A significant portion of the sample (39.2%) expressed no interest in fantasy cricket, highlighting a notable segment of the population that is disengaged from the platform.

Regarding the understanding of fantasy cricket, 21.6% of the sample demonstrated a high understanding of fantasy cricket, while 41.7% have a medium understanding. However, 36.7% of respondents indicated that they have no understanding of fantasy cricket, suggesting that a substantial portion of the population may lack the knowledge needed to engage in fantasy cricket effectively.

Table 3.5: Spending and winning of users in FC

Variable	% of users
Typical Spending	
Free Leagues	16%
1-100	32%
101-500	21%
501-1000	13%
>1000	18%
Winnings (In Indian Rupee, INR)	76%
1-100	14%
101-500	12%
501-1000	40%
>1000	34%

Source: *Own survey data, 2024*

Table 3.5 suggests that 16% of the total users engage in free leagues indicating a decent interest in cost-free participation. The distribution of spending shows that 32% of users spend between 1 to 100 units, while 21% spend between 101 to 500 INR in a single game, on an average.

A smaller segment, 13%, spends between 501 to 1000 INR in a single game, on an average, and 18% of users report spending over 1000 INR in one game, on an average. This data suggests a diverse range of spending habits among users, with a preference for lower investment levels.

76% of users report winning from their Fantasy Cricket participation. Among these winners, the majority (40%) have winnings between 501 to 1000 INR in one game, on an average, while 34% win over 1000 INR in one game, on an average. Additionally, 14% of users have winnings in the range of 1 to 100 INR, and 12% report winnings between 101 to 500 INR in one game, on an average. This indicates that while many users experience financial success, the largest share of winnings lies in the mid to higher ranges.

Chapter 4
Analysis and Findings

4.1 Engaging with Fantasy Cricket

The first regression in **Table 4.1** includes the vector of demographics as well as monthly budget to account for basic characteristic differences of the sample. The only significant effect in this model comes from gender, with males as a base category. Being a woman reduces the probability of participating in fantasy cricket by 21.7 percentage points. There could be several factors that account for this discrepancy. It could be because of cricket being "a gentleman's game" despite having a significant female viewership, and it could also be because of the aggressive advertising of fantasy cricket that targets men while bringing about themes that are more relatable to them. This effect is significant at the 1% level of significance. Apart from gender, no other demographic factor seems to influence participation. There is also no additional effect of being a working professional as compared to being a student.

The second model includes the potential benefits. For this, while most results stay consistent with the first model, it can be noted that gender no longer has an influence. Under locations, with Delhi as the base category, it is seen that people belonging to Noida are 7 percentage points more likely to engage in fantasy cricket than those from Delhi. This result is significant at the 5% level of significance. Thrill of competition is considered a contributing element as those who consider it to be a high factor are 22.8 percentage points more likely to engage than those who don't consider it as a factor, significant at 5% level. Knowledge is also an important factor as those who considering gaining or imparting cricket information as a high or medium factor are 49 percentage points, significant at 1% level, and 62 percentage points, significant at 1% level, respectively than those who don't consider it as a factor at all. Winning money also influences participation as those who see it as a high or medium factor are 30.2 percentage points, significant at 1% level, and 20.3 percentage points, significant at 5% level, more likely to play fantasy cricket than those who do not see it as one. This model introduces the potential benefits and enables us to imply that while there can be several drivers of user engagement, people tend to engage with fantasy cricket for thrill of competition, transfer of knowledge, as well as making money through this engagement in fantasy cricket. Connecting with fans does not seem to be an important factor.

In the third model, the variable of correlation between gambling and fantasy cricket is included. The results for demographics are homogenous with the second model, with only a slight change in magnitude. While age, gender, employment, and monthly budget have no effect, those belonging to Noida are 8.3 percentage points more likely to play fantasy cricket than those from Delhi, the result being significant at 5% level of significance. This regional variation could be due to peer influence. It is less likely for this difference to exist due to cultural variation as the two areas border each other and are very similar in terms of cultural, economic, and social influences. For benefits, those who consider thrill of competition as a high or medium factor are 26.3 percentage points and 16.4 percentage more likely to engage than those who don't consider this thrill as a factor. These results are significant at 1% and 5% levels respectively. Transfer of knowledge, too, is an important factor as those considering knowledge as a high or medium factor are 45.9 percentage points and 61.3 percentage points more likely to engage in fantasy cricket, both results significant at 1% level. Winning money is a significant potential benefit as well, as those who consider money a high or medium factor are 32.3 percentage points (significant at 1%) and 21.5 percentage points (significant at 5% level) more likely to play fantasy cricket respectively. Respondents who believe there exists a high or moderate relation between gambling and fantasy sports are 17.4 percentage points and 16.4 percentage respectively, both results significant at 5% level, less likely

to use fantasy cricket as compared to those who do not consider there to be a relation. This suggests that while people may engage in fantasy cricket for its competitive outlook, potential for knowledge transform, or the possibility of winning money, believing that fantasy cricket is very closely or even moderately related to traditional gambling tends to impede this engagement. This could be due to the awareness of the dark side of gambling or because a lot of cultures consider gambling to be a sin.

The final model includes all the aforementioned factors as well as basic financial patters like setting and tracking budgets. The results stay in line with the previous models, with only a slight change in magnitude as it is seen that people from Noida are 8.6 percentage points (significant at 5%) more likely to play fantasy cricket than those from Delhi. Respondents considering thrill of competition to be a high factor are 23.9 percentage points more likely to engage in fantasy cricket, and those considering competition a medium level factor have a 14.1 percentage point higher probability of participation, the results being significant at 5%. level. As for transfer of knowledge, for those who consider knowledge to be a high factor, the probability of playing fantasy cricket increases by 48.4 percentage points, and for those who consider knowledge to be a medium level factor, the probability of engagement increases by 63.9 percentage points, both results significant at 1% level. Regarding winning money as a high level factor increases the chances of participation in fantasy cricket by 33.6 percentage points, significant at 1% level, and labelling winning money as a medium level benefit increases the chances of participation by 21.6 percentage points, significant at 5% level. Connecting with fans continues to not be an important benefit. Those who consider fantasy sports and gambling to be related (highly or moderately) are 17.8 percentage points (significant at 5%) and 17.2 percentage points (significant at 1%) less likely to participate than those who don't think fantasy sports and gambling are related. People who set a budget are 7 percentage points less likely to engage with fantasy cricket, suggesting the willingness to stick with budget. However, tracking spendings increases their probability of participation by 7.7 pp. Both results are significant at 10% level of significance. The number of observations is 204 with a high R-squared of 0.91. The models make use of robust standard errors to account for heteroscedasticity.

Table 4.1: Determinants of FC Engagement

VARIABLE	(1)	(2)	(3)	(4)
Demographics				
Age	0.002	0.001	-0.001	-0.002
	(0.174)	(0.007)	(0.007)	(0.006)
Gender	-0.217***	0.031	0.017	0.017
	(0.066)	(0.026)	(0.026)	(0.027)
Location				
Gurgaon	-0.091	0.009	0.037	0.055
	(0.142)	(0.023)	(0.034)	(0.04)
Noida	0.018	0.070**	0.083**	0.086**
	(0.074)	(0.033)	(0.035)	(0.034)
Ghaziabad	0.023	-0.011	0.013	0.015
	(0.109)	(0.013)	(0.021)	(0.023)
Faridabad	0.142	0.071	0.083	0.085
	(0.157)	(0.092)	(0.085)	(0.086)
Others	0.061	-0.029	0.004	0.009
	(0.187)	(0.028)	(0.028)	(0.028)
Employment Status	0.016	0.0019	0.013	0.025
	(0.130)	(0.059)	(0.054)	(0.053)
Monthly Budget	2.66×10^{-6}	8.36×10^{-7}	-1.05×10^{-6}	-1.28×10^{-6}
	(3.16×10^{-6})	(1.30×10^{-6})	(1.17×10^{-6})	(1.16×-10^{-6})
Potential Benefits				
Thrill of competition				
- *High factor*		0.228**	0.263***	0.239**
		(0.104)	(0.101)	(0.098)
- *Medium factor*		0.122	0.164**	0.141**
		(0.078)	(0.080)	(0.083)
Knowledge				
- *High factor*		0.491***	0.459***	0.484***
		(0.170)	(0.176)	(0.171)
- *Medium factor*		0.620***	0.613***	0.639***
		(0.138)	(0.146)	(0.145)
Connecting with fans				
- *High factor*		0.029	0.004	-0.002
		(0.081)	(0.085)	(0.083)
- *Medium factor*		0.001	-0.043	-0.054
		(0.068)	(0.076)	(0.078)
Win Money				
- *High factor*		0.302***	0.323***	0.336***
		(0.102)	(0.102)	(0.096)
- *Medium Factor*		0.203**	0.215**	0.216**
		(0.091)	(0.093)	(0.085)
Gambling and FS				
High Relation			-0.174**	-0.178**
			(0.072)	(0.073)
Moderate Relation			-0.164**	-0.172***
			(0.065)	(0.065)
Financial Patterns				
Set Budget				-0.069*
				(0.039)
Track Budget				0.077*
				(0.043)
Constant	0.316	-0.006	-0.159	0.167
	(0.353)	(0.143)	(0.135)	(0.133)
R2	0.07	0.85	0.87	0.87
N	204	204	204	204

Note: *Robust standard errors in parentheses; *,**,*** suggesting 10%, 5%, and 1% levels of significance respectively; Male=base category for gender; Delhi=base category for location; Student=base category for employment status (only 2 categories: student and employed); No factor=base category for all benefits; No relation=base category for gambling and fantasy cricket*

Source: Own survey data, 2024

4.2 Effect of Fantasy Cricket

This section discusses the second objective, pertaining to the effects of engagement in fantasy cricket on the people who play it. It has further been divided into four sub-sections, each dealing with a specific effect.

4.2.1 Day to Day Functioning

The first Column in Table 4.2 deals with the effect on reported efficiency in day-to-day functioning of the respondents We look at the contribution of various factors in influencing this efficiency. From the Table, we see that engaging with Fantasy sports decreases the chances of a respondent belonging to 'very high levels of daily functioning' (5) by 15 percentage points, significant at 5% level; decreases the chances of being in 'high levels of daily functioning' (4) by about 11 percentage points, significant at 5% level; increases the chances of falling in the 'low levels of daily functioning' (2) category by 11.7 percentage points, significant at 5% level; increases the chances of being a part of 'poor daily functioning' (1) by 16.8 percentage points, significant at 5% level. It can, therefore, be asserted that user engagement in fantasy cricket tends to negatively influence their daily functioning as the responses are more likely to fall under the 'poor daily functioning' category. While engaging in fantasy cricket tends to improve cognitive functioning as highlighted by the literature, this involvement also showcases its negative impacts on those engaging. Players tend to get engrossed in making and managing teams, often losing sight of basic daily activities. Due to money being involved, losing money or the captivating idea of winning more money can cause the players to undergo financial constraints, thus affecting their daily functioning.

The results make it evident that demographics, in no way, affect the daily functioning. Under cricket viewing patterns it can be noted that people who watch cricket are 7.6 percentage points less likely to report their efficiency in day-to-day functioning 'very high' and 5.5 percentage points less likely to report the functioning 'high' on the efficiency Likert scale. They are, however, 11.7 percentage points more likely to report a 'low' and 16.8 percentage points more likely to report 'poor' as their level of efficiency in day-to-day functioning. All these results are significant at 1% level of significance. This suggests that watching cricket has a negative effect on day-to-day functioning. This could be due to heavy engagement with viewing the sport that tends to reduce the importance given to other activities or being affected by the outcomes of the game that it becomes difficult to focus on regular tasks. Nevertheless, it can also be seen that having a team preference positively influences the day-to-day functioning as it increases the probability of reporting 'very high' on the efficiency scale by 8.4 percentage points and that of reporting 'high' by 4.3 percentage points, while also reducing the probability of reporting 'low' by 4.6 percentage points, and that of 'poor' by 6.5 percentage points on the efficiency in daily functioning Likert scale. These results are significant at the 1% level of significance. The pattern of these results could be such because having a team preference has the ability to make the viewers closer to the sport. A good day for the team often results in a good day for the fan, as they attain a sense of second-hand accomplishment.

The result for engaging with online or offline gambling is in line with that of fantasy sports engagement, as it has a negative effect on day-to-day functioning. Using online gambling platforms reduces the probability of the respondent reporting 'very high' by 11.1 percentage points, and that of reporting 'high' by 8.1 percentage points. It increases the probability of reporting 'low' by 8.8 percentage points and that of 'poor efficiency' by 12.4 percentage points. People using offline gambling platforms are 15.3 percentage points less likely to report their level of efficiency in daily functioning as 'very high'; 11.3 percentage points less likely to report 'high'; 12.1 percentage points more likely to report 'low'; and 17.1 percentage points more likely to report 'poor' on the day-to-day efficiency 5-point Likert scale. All these results are significant at the 5% level of significance.

The reasoning to this could be in line with the one presented for fantasy cricket, where involvement, often leading to addiction, makes player lose sight of other important activities.

Table 4.2 Effects of FC on daily functioning: Marginal effects from an ordered probit model

Variable	Daily Functioning				
	1	2	3	4	5
Demographics					
Age	0.003	0.002	0.000	-0.002	-0.003
	(0.010)	(0.007)	(0.002)	(0.006)	(0.009)
Gender					
Female	-0.010	-0.007	0.002	0.006	0.009
	(0.033)	(0.024)	(0.006)	(0.022)	(0.029)
Location					
Gurgaon	0.004	0.003	0.000	-0.003	-0.004
	(0.078)	(0.059)	(0.005)	(0.054)	(0.079)
Noida	0.026	0.018	-0.004	-0.017	-0.023
	(0.037)	(0.026)	(0.008)	(0.024)	(0.034)
Ghaziabad	0.000	0.000	0.000	0.000	0.001
	(0.049)	(0.038)	(0.000)	(0.035)	(0.052)
Faridabad	0.074	0.045	-0.024	-0.043	-0.052
	(0.078)	(0.039)	(0.039)	(0.039)	(0.044)
Others	-0.029	-0.025	-0.006	0.022	0.038
	(0.056)	(0.052)	(0.026)	(0.045)	(0.086)
Employment Status	0.021	0.014	-0.003	-0.013	-0.018
	(0.062)	(0.044)	(0.009)	(0.040)	(0.056)
Monthly Budget	-2.71×10^{-7}	-1.90×10^{-7}	4.19×10^{-8}	1.77×10^{-7}	-2.42×10^{-7}
	(1.64×10^{-6})	(1.15×10^{-6})	(2.53×10^{-7})	(1.07×10^{-6})	(1.47×10^{-6})
FC Engagement					
Participation	0.168**	0.117**	-0.026	-0.109**	-0.150**
	(0.073)	(0.057)	(0.031)	(0.05)	(0.067)
Winnings	-0.094	-0.065	0.014	0.061	0.084
	(0.077)	(0.055)	(0.021)	(0.050)	(0.069)
Cricket viewing patterns					
Watch Cricket	0.084*	0.060*	-0.013	-0.055*	-0.076*
	(0.047)	(0.034)	(0.017)	(0.032)	(0.041)
Team Preference	-0.065*	-0.046*	0.010	0.043*	0.058*
	(0.034)	(0.028)	(0.012)	(0.025)	(0.032)
Gambling					
Online					
Aware	-0.044	-0.031	0.007	0.029	0.040
	(0.038)	(0.027)	(0.010)	(0.026)	(0.034)
Used	0.124**	0.088**	-0.019	-0.081**	-0.111**
	(0.054)	(0.041)	(0.023)	(0.038)	(0.047)
Offline					
Aware	0.013	0.009	-0.002	-0.008	-0.011
	(0.032)	(0.023)	(0.006)	(0.212)	(0.029)
Used	0.171**	0.121**	-0.027	-0.113**	-0.153**
	(0.072)	(0.051)	(0.032)	(0.049)	(0.062)
Awareness of pros and cons					
High	-0.075	-0.053	0.012	0.049	0.067
	(0.046)	(0.032)	(0.015)	(0.030)	(0.041)
Neutral	-0.040	-0.028	0.001	0.026	0.036
	(0.045)	(0.032)	(0.011)	(0.030)	(0.040)
Controls			Y		
N			204		

Note**: Robust standard errors in parentheses; *,**, suggesting 10%, 5%, and 1% levels of significance respectively; Male=base category for gender; Delhi=base category for location; Student=base category for employment status (only 2 categories: student and employed); Y=Yes; N: No. of observations*

Source: Own survey data, 2024

4.2.2 Coping with Stress and Anxiety

Engaging with fantasy cricket tends to worsen the existing ability to cope with stress and anxiety in people. The results in **Table 4.3** suggest that people playing fantasy cricket are 12.9 percentage points less likely to score their ability to cope with stress and anxiety 'very high' (5), significant at 5% level; 19.1 percentage points less likely to score it 'high' (4), significant at 1% level; 14.2 percentage points more likely to score it 'low' (2), significant at 5% level; and 19.2 percentage points more likely to score their ability to cope with stress and anxiety 'poor' (1), significant at 1% level of significance. As people spend a lot of time creating and managing their teams, the teams wins or losses are often seen as the player's own. This often takes a toll on stress and anxiety patterns. As fantasy cricket also incorporates the aspect of money, this becomes another aspect to affect the mental well-being of the user playing the game.

It can also be noted that while most demographics do not show any effect, people belonging to Faridabad possess a better ability to cope with mental stress as compared to those belonging to Delhi as they are 12 percentage points more likely to report 'high', significant at 5% level, 9.6 percentage points less likely to report 'low', significant at 10% level, and 10 percentage points less likely to report 'poor' on the Likert scale, significant at 5% level of significance. While it is difficult to pinpoint a single, most important cause of this variation, it could also be because the difference in employment opportunity or different social networks.

Engaging with cricket asserts no effect, but engaging in online gambling platforms has a negative effect, reducing the probability of reporting the ability to cope with stress and anxiety as 'very high' by 5.1 percentage points. The result is significant at the 10% level. Online gambling also increases the probability of reporting the ability as 'low' or 'poor' by 5.7 percentage points and 7.7 percentage points respectively. These results are also significant at the 10% level of significance. The reasoning behind this is along the lines of that for fantasy cricket, where not just the wins and losses on the platform tend to exert significant effect on the mental well-being of gamblers, but also mere engagement with the platform.

High levels of awareness of the pros and cons of gambling among people has a positive effect on their mental wellbeing as it increases the probability of them reporting their ability to cope with stress and anxiety 'very high' by 6.9 percentage points, and that of reporting 'high' by 10.2 percentage points. It reduces the probability of them rating their ability to cope as 'low' by 7.6 percentage points and of reporting the ability to cope with stress and anxiety 'poor' by 10.3 percentage points on a 5-point Likert scale. All these results are significant at the 5% level of significance. Awareness of the positives and downsides of activities that often pose a risk on participation often leads to people making smarter choices and being better at coping with mental distress.

Table 4.3: Effects of FC on coping with stress and anxiety: Marginal effects from an ordered probit model

Variable	Coping with Stress/Anxiety				
	1	2	3	4	5
Demographics					
Age	0.007	0.005	-0.001	-0.007	-0.005
	(0.008)	(0.0059)	(0.001)	(0.008)	(0.005)
Gender					
Female	0.021	0.015	-0.002	-0.021	-0.014
	(0.031)	(0.024)	(0.004)	(0.032)	(0.022)
Location					
Gurgaon	0.071	0.034	-0.029	-0.052	-0.025
	(0.094)	(0.039)	(0.048)	(0.059)	(0.028)
Noida	-0.029	-0.02	0.004	0.027	0.017
	(0.040)	(0.027)	(0.007)	(0.037)	(0.024)
Ghaziabad	-0.049	-0.037	0.002	0.049	0.035
	(0.048)	(0.038)	(0.012)	(0.051)	(0.039)
Faridabad	-0.100**	-0.096*	-0.045	0.120**	0.0121
	(0.046)	(0.052)	(0.064)	(0.058)	(0.096)
Others	0.021	0.012	-0.006	-0.017	-0.009
	(0.075)	(0.041)	(0.026)	(0.059)	(0.031)
Employment Status	0.031	0.023	-0.002	-0.031	-0.021
	(0.055)	(0.041)	(0.006)	(0.055)	(0.037)
Monthly Budget	-8.78×10^{-7}	-6.47×10^{-7}	6.58×10^{-7}	8.72×10^{-7}	5.88×10^{-7}
	(1.38×10^{-7})	(1.03×10^{-6})	(1.72×10^{-7})	(1.37×10^{-6})	(9.43×10^{-7})
FC Engagement					
Participation	0.192***	0.142**	-0.014	-0.191***	-0.129**
	(0.0730	(0.061)	(0.031)	(0.074)	(0.054)
Winnings	-0.047	-0.035	0.004	0.047	0.031
	(0.076)	(0.057)	(0.009)	(0.076)	(0.052)
Cricket viewing patterns					
Watch Cricket	-0.047	-0.034	0.003	0.046	0.031
	(0.050)	(0.037)	(0.008)	(0.050)	(0.034)
Team Preference	-0.023	-0.017	0.002	0.022	0.015
	(0.036)	(0.027)	(0.005)	(0.035)	(0.024)
Gambling					
Online					
Aware	0.007	0.005	-0.001	-0.007	-0.005
	(0.039)	(0.029)	(0.003)	(0.039)	(0.026)
Used	0.077*	0.057*	-0.006	-0.076	-0.051*
	(0.046)	(0.034)	(0.012)	(0.047)	(0.051)
Offline					
Aware	-0.002	-0.001	0.000	0.002	0.001
	(0.034)	(0.025)	(0.003)	(0.034)	(0.022)
Used	-0.036	-0.027	0.003	0.036	0.024
	(0.083)	(0.061)	(0.009)	(0.083)	(0.055)
Awareness of pros and cons					
High	-0.103**	-0.076**	0.008	0.102**	0.069**
	(0.046)	(0.033)	(0.017)	(0.045)	(0.030)
Neutral	-0.027	-0.02	0.002	0.027	0.018
	(0.047)	(0.035)	(0.006)	(0.047)	(0.031)
Controls			Y		
N			204		

Note**: Robust standard errors in parentheses; *,**, suggesting 10%, 5%, and 1% levels of significance respectively; Male=base category for gender; Delhi=base category for location; Student=base category for employment status (only 2 categories: student and employed); Y=Yes; N: No. of observations*

Source: Own survey data, 2024

4.2.3 Phone Updates

On a scale of 1 to 5, to understand the level of control the respondents have on their phone checks, **Table 4.4** suggests that engagement in fantasy cricket reduces a probability of reporting 5 'very high control' by 22.2 percentage points, significant at 1% level; 4 'high control' by 12.5 percentage points, significant at 1% level; and increases the probability of reporting 2 'low control' by 14.7 percentage points, significant at 1% level; and that of reporting 1 'poor control' by 22.5 percentage points, significant at 1% level. The probable reasoning for this is the captivating and dynamic nature of fantasy cricket where people try and stay updated with player statistics, line-ups, and recent news and well as the scores of ongoing matches to evaluate the team position on leader boards. This increases the frequency with which they check their phones.

Certain demographics can also be seen at play here. One year increase in age reduces the probability of reporting 'very high' control by 1.6 percentage points, significant at 10% level, and that of reporting 'high control' by approximately 1 percentage point, significant at 1% level, while increasing the probability of reporting 'low control' by 1 percentage point, significant at 1% level, and that reporting 'poor control' by 1.6 percentage points. This could be because of increasing digital communication as age increases, as well as changing social needs. In their educational or professional lives, as age increases, the reliance on technology increases too. All this affects the frequency with which people check their phones for notifications and updates. While the magnitude is small, the effect is significant.

It can also be seen that people from Gurgaon, Ghaziabad, and outside Delhi NCR have a greater control over their phone checking patterns as compared to those from Delhi. For Gurgaon, people are 12.5 percentage points more likely to report 'very high control' (significant at 10% level), 7.9 percentage points less likely to report 'low control' (significant at 10% level), and 11.9 percentage points less likely to report 'poor control' (significant at 5% level) over checking phones for updates and notifications, as compared to those from Delhi. People from Ghaziabad are 16.2 percentage points more likely to report 'very high control' (significant at 10%), 7.6 percentage points more likely to report 'high control' (significant at 5%), 9.8 percentage points less likely to report 'low control' (significant at 5%), and 12.5 percentage points less likely to report 'poor control' (significant at 1%) as compared to the people from Delhi. People residing outside Delhi NCR, though responsible for a very small proportion of sample, show similar results as they are 30.9 percentage points more likely to report 'very high control' (significant at 5%), 9.1 percentage points more likely report 'high control' (significant at 1%), 15.5 percentage points less likely to report 'low control' (significant at 1%), and 17.4 percentage points less likely to report 'poor control' (significant at 1%).

People who are aware of the pros and cons of gambling tend to showcase some control over their phone usage habits as high awareness increases their chances of reporting 'very high control' by 19 percentage points, reporting 'high control' by 10.7 percentage points, and reduces the likelihood of reporting 'low control' by 12.6 percentage points and 'poor control' by 19.2 percentage points. These results are significant at 1% level. Neutral awareness also shows similar results, increasing the odds of reporting 'very high control' and 'high control' by 15.6 percentage points and 8.8 percentage points, and decreasing the odds of reporting 'low control' or 'poor control' by 10.3 percentage points and 15.8 percentage points respectively on a control over checking phones for updates and notifications 5-point Likert scale. These results are significant at 1% level of significance. Awareness is likely to increase the control exerted over checking phones as people start understanding behavioural triggers and addiction risks. While they learn these for gambling, there can be a tendency to apply these learnings in other aspects as well.

Table 4.4: Effects of FC on phone updates: Marginal effects from an ordered probit model

Variable	Phone Updates				
	1	2	3	4	5
Demographics					
Age	0.016*	0.011*	-0.002	-0.009*	-0.016*
	(0.009)	(0.006)	(0.002)	(0.005)	(0.008)
Gender					
Female	-0.012	-0.008	0.001	0.007	0.012
	(0.036)	(0.023)	(0.004)	(0.02)	(0.035)
Location					
Gurgaon	-0.119**	-0.079*	0.007	0.065	0.125*
	(0.053)	(0.042)	(0.024)	(0.033)	(0.072)
Noida	-0.060	-0.031	0.015	0.030	0.045
	(0.048)	(0.025)	(0.015)	(0.025)	(0.036)
Ghaziabad	-0.125***	-0.098**	-0.005	0.076**	0.162*
	(0.049)	(0.047)	(0.032)	(0.031)	(0.083)
Faridabad	-0.057	-0.029	0.015	0.029	0.043
	(0.078)	(0.046)	(0.017)	(0.042)	(0.068)
Others	-0.174***	-0.155***	-0.072	0.091***	0.309**
	(0.044)	(0.054)	(0.082)	(0.027)	(0.151)
Employment Status	0.039	0.026	-0.004	-0.022	-0.039
	(0.054)	(0.037)	(0.008)	(0.031)	(0.054)
Monthly Budget	-8.66×10^{-7}	-5.66×10^{-7}	9.23×10^{-8}	4.83×10^{-7}	8.56×10^{-7}
	(1.26×10^{-6})	(8.49×10^{-7})	(1.73×10^{-7})	(7.21×10^{-7})	(1.25×10^{-6})
FC Engagement					
Participation	0.225***	0.147***	-0.024	-0.125***	-0.222***
	(0.068)	(0.051)	(0.029)	(0.044)	(0.070)
Winnings	-0.035	0.004	0.004	0.019	0.034
	(0.075)	(0.009)	(0.009)	(0.042)	(0.074)
Cricket viewing patterns					
Watch Cricket	-0.099	-0.065	0.011	0.055	0.098
	(0.067)	(0.042)	(0.014)	(0.038)	(0.065)
Team Preference	-0.004	-0.003	0.000	0.002	0.004
	(0.039)	(0.026)	(0.043)	(0.022)	(0.039)
Gambling					
Online					
Aware	0.065	0.043	-0.007	-0.036	-0.064
	(0.043)	(0.027)	(0.009)	(0.024)	(0.042)
Used	-0.020	-0.013	0.002	0.011	0.020
	(0.058)	(0.038)	(0.006)	(0.032)	(0.057)
Offline					
Aware	-0.036	-0.024	0.004	0.020	0.036
	(0.038)	(0.026)	(0.006)	(0.022)	(0.039)
Used	0.029	0.019	-0.003	-0.016	-0.028
	(0.919)	(0.061)	(0.010)	(0.052)	(0.091)
Awareness of pros and cons					
High	-0.192***	-0.126***	0.021	0.107***	0.190***
	(0.057)	(0.039)	(0.026)	(0.036)	(0.051)
Neutral	-0.158***	-0.103***	0.017	0.088***	0.156***
	(0.057)	(0.039)	(0.022)	(0.034)	(0.051)
Controls			Y		
N			204		

*Note: Robust standard errors in parentheses; *,**,*** suggesting 10%, 5%, and 1% levels of significance respectively; Male=base category for gender; Delhi=base category for location; Student=base category for employment status (only 2 categories: student and employed); Y=Yes; N: No. of observations*

Source: Own survey data, 2024

4.2.4 Handling Personal Relations

The results in **Table 4.5** suggest that people who engage in fantasy cricket find it a bit difficult to handle personal relationships than those who don't play fantasy cricket as this engagement reduces the chances of reporting their ability to handle personal relationships 'very high' by 12.8 percentage points, significant at 1%; reporting the ability 'high' by 14.2 percentage points, significant at 1% level; and reporting it 'neutral' by 8.2 percentage points, significant at 5%. It also increases the chances of reporting the ability to handle personal relationships 'low' by 6.8 percentage points, significant at 5%, and 'poor' by a high chance of 30.6 percentage points, significant at 1% level of significance. In ways that fantasy cricket engagement affects the factors discussed above, it also alters the ability to handle personal relationships as a lot of time goes in creating and managing teams and staying updated on recent statistics. The mental wellbeing of people is affected and many a times financial stability is affected too. A lot of people find it hard to cope with the dark sides that often come with getting involved in platforms like fantasy cricket and resort to unfortunate ways of reacting.

Winning in fantasy cricket seems to have the opposite effect on handling personal relations as it increases the chances of reporting the ability to handle personal relations 'very high' by 13 percentage points (significant at 5% level), reporting it 'high' by 12.5 percentage points (significant at 5% level), and that of reporting the ability 'neutral' by 7.3 percentage points. Winnings in fantasy cricket also reduce the odds of reporting the ability as 'low' by 5.9 percentage points (significant at 5% level) and that of reporting it 'poor' by 26.9 percentage points (significant at 1% level).

On comparing the ability to handle personal relationships of students and working professional, the latter find it more difficult as they are 10 percentage points less likely to score it 'very high', significant at 5%; 9.6 percentage points less likely to score it 'high', significant at 10%; 56 percentage points less likely to score it 'neutral', significant at 10%; 4.6 percentage points more likely to score is 'low', significant at 10%; and 20.6 percentage points more likely to rate it 'poor', significant at 5% level. This can be a result of changing responsibilities and lifestyle of the respondents as being in a professional environment quite often has an effect on priorities.

Awareness of pros and cons of gambling shows the opposite effect as those who have a high awareness of these pros and cons are 11.8 percentage points more likely to report 'very high', significant at 1%; 11.3 percentage points more likely to report 'high', significant at 1%; and 6.7 percentage points more likely to report 'neutral', significant at 10%. Aware people are also 5.4 percentage points less likely to report 'low', significant at 1%; and 24.5 percentage points less likely to report 'poor', significant at 1%. People with neutral levels of awareness also show similar trends as their probability of reporting 'very high' increases by 10.8 percentage points, significant at 1%; 'high' increases by 9.2 percentage points, significant at 5%; and 'neutral' increases by 5.7 percentage points, significant at 10%. The odds of reporting 'low' fall by 4.7 percentage points, significant at 5%; and 'poor' fall by 21.1 percentage points on the ability to handle personal relationships 5-point Likert scale. This awareness could result in more careful behaviour among people while making decisions, keeping them away from gambling and addictive behavioural patterns. This in turn affects the behaviour exhibited in their personal relations.

Table 4.5: Effects of handling personal relations: Marginal effects from an ordered probit model

Variable	Handling Personal Relations				
	1	2	3	4	5
Demographics					
Age	-0.001	0.000	0.000	0.000	0.001
	(0.014)	(0.003)	(0.004)	(0.007)	(0.007)
Gender					
Female	0.029	0.006	-0.008	-0.013	-0.014
	(0.05)	(0.011)	(0.013)	(0.023)	(0.025)
Location					
Gurgaon	0.077	0.013	-0.028	-0.032	-0.030
	(0.110)	(0.017)	(0.045)	(0.044)	(0.039)
Noida	0.017	0.004	-0.005	-0.008	-0.008
	(0.063)	(0.014)	(0.018)	(0.029)	(0.030)
Ghaziabad	-0.079	-0.023	0.008	0.041	0.053
	(0.068)	(0.021)	(0.014)	(0.036)	(0.050)
Faridabad	0.029	0.006	-0.009	-0.013	-0.132
	(0.129)	(0.025)	(0.043)	(0.057)	(0.054)
Others	0.049	0.009	-0.021	-0.021	0.021
	(0.179)	(0.029)	(0.074)	(0.074)	(0.067)
Employment Status	0.206**	0.046*	-0.56*	-0.096*	-0.100**
	(0.098)	(0.025)	(0.032)	(0.049)	(0.051)
Monthly Budget	-3.45×10^{-6}	-7.62×10^{-7}	9.39×10^{-7}	1.60×10^{-6}	1.67×10^{-6}
	(2.44×10^{-6})	(5.87×10^{-7})	(6.90×10^{-7})	(1.17×10^{-6})	(1.27×10^{-6})
FC Engagement					
Participation	0.306***	0.068**	-0.083**	-0.142***	-0.128***
	(0.081)	(0.028)	(0.035)	(0.047)	(0.048)
Winnings	-0.269***	-0.059**	0.073**	0.125**	0.130**
	(0.098)	(0.028)	(0.036)	(0.052)	(0.052)
Cricket viewing patterns					
Watch Cricket	-0.097	-0.022	0.027	0.045	0.047
	(0.081)	(0.019)	(0.024)	(0.038)	(0.040)
Team Preference	-0.008	-0.002	0.002	0.003	0.004
	(0.055)	(0.012)	(0.015)	(0.026)	(0.027)
Gambling					
Online					
Aware	-0.033	-0.007	0.009	0.015	0.016
	(0.058)	(0.012)	(0.016)	(0.027)	(0.029)
Used	0.054	0.012	-0.015	-0.025	-0.026
	(0.107)	(0.024)	(0.029)	(0.049)	(0.052)
Offline					
Aware	-0.067	-0.015	0.018	0.031	0.032
	(0.054)	(0.012)	(0.016)	(0.026)	(0.026)
Used	-0.139	-0.031	0.038	0.065	0.067
	(0.157)	(0.035)	(0.045)	(0.073)	(0.077)
Awareness of pros and cons					
High	-0.245***	-0.054***	0.067*	0.113***	0.118***
	(0.074)	(0.021)	(0.034)	(0.390)	(0.035)
Neutral	-0.211**	-0.047**	0.057*	0.098**	0.102***
	(0.083)	(0.022)	(0.034)	(0.041)	(0.039)
Controls			Y		
N			204		

*Note: Robust standard errors in parentheses; *,**,*** suggesting 10%, 5%, and 1% levels of significance respectively; Male=base category for gender; Delhi=base category for location; Student=base category for employment status (only 2 categories: student and employed); Y=Yes; N: No. of observations*

Source: Own survey data, 2024

Chapter 5
Conclusion

This study set out to explore the factors contributing to the growing engagement of Fantasy Cricket in India as it goes on to become a billion-dollar industry. Over the years, India has seen many platforms set foot and hold their base in the fantasy sports market like Dream11, Fantasy Akhada, My11Cricle, etc. It has also been seen that the major segment of Indians involved in fantasy sports is constituted by people under the age of 25, with cricket being the sport gaining maximum traction (IMARC Group, 2023). The growth of fantasy cricket in India is owed to the Indian Premier League (IPL) as it was after IPL was introduced did fantasy sports in India pick pace. With the massive viewership that IPL attracts, it now sees heavy engagement of fantasy sports' companies all through the season. The biggest fantasy sports company of India, Dream11, was seen as title sponsor for IPL in 2020 (IPL Media Advisory, 2020), and My11Circle, another big fantasy sports company in India is an official partner in IPL from 2023-2028 (IPL Media Advisory, 2024). While the growth of fantasy sports may have started through IPL in India, it is not limited to this one league. Along with the sponsor of many IPL teams, Dream11 is also the lead sponsor for the Indian Cricket Team, having their logo printed in front of the men's, women's, and under-19 players' jerseys from 2023-2026 (Farooqui, 2023). All these facts point us towards the visibility of fantasy sports, particularly cricket in India as all those who engage with the crowd favourite sport called 'cricket' tend to engage with fantasy sports not as players but as viewers, at the very least.

The study also tried to examine the factors contributing to user engagement in fantasy cricket (where engagement refers to playing), and the psychological impact of engaging in fantasy cricket, while focusing on youth (18-25 years) as they tend to be more vulnerable to changes in their behavioural and decision-making patterns caused by new experiences and digital interactions. They are also seen as the early adopters of new technology and make up the majority of the population engaging with fantasy sports across the globe.

Through primary data collection and rigorous analysis, it can be inferred that for the given sample, demographics tend to be insignificant in driving people to play fantasy cricket. Although, it can be seen that people belonging to Noida are more likely to engage with fantasy cricket as compared to those from Delhi, peer influence being the probably reasoning behind this pattern. The analysis also highlights the potential benefits and the importance that people attach to these benefits, while looking at what drives users to play fantasy cricket. Thrill of competition, transfer of knowledge, and the possibility of winning money are seen as key factors. Socialising and connecting with fans did not make the cut, opposing what the literature suggests. People who consider gambling and fantasy sports to be related are less likely to engage with fantasy cricket. This could be because gambling is always seen in a bad light and is considered a sin in many cultures. While many fall prey to the addictions, many people try and avoid it to the highest possible extent. The perception of their existing a certain degree of correlation between gambling and fantasy sports might hinder people from engaging with the latter. People who set a budget are less likely to engage with fantasy cricket, but on the contrary, those who track their spending are more likely to play fantasy cricket. A suitable reasoning for those who set a budget can be that they do not what to overshoot their budget and are cautious. People who track their spendings could have a pre-allocated part for fantasy sports or leisure. It could also be to test financial awareness, analytical skill, or just the idea of playing with risk.

The paper goes on to deal with the behavioural impacts of fantasy cricket and utilises four basic youth-behaviours to understand this. The first trait is efficiency in daily functioning. The results have suggested that engagement in fantasy cricket tends to negatively impact the level of

efficiency in day to day functioning. This trait is also affected by engaging with online or offline gambling platforms. suggest that user engagement in fantasy cricket negatively impacts people's day to day functioning. This trait is also negatively affected by using online and/or offline gambling platforms. Along with this, while watching cricket shows a negative effect, having a team preference shows a positive influence on daily functioning. The second trait that has been dealt with is the ability to cope with stress and anxiety. This highlights the mental repercussions of engaging with fantasy cricket as it reduces the existing ability to cope with stress. Using online gambling platforms also shows similar results, while awareness of the pros and cons of gambling causes a positive impact on how to cope with stress and anxiety. The third trait is control over checking phones for updates and notifications. It is seen that those who engage with fantasy cricket exhibit low levels of control than those who don't engage with fantasy cricket. People aware of the pros and cons of gambling show high level of control over checking phones for notifications and updates. The fourth trait is the ability to cope with personal relationships. Those involved in fantasy cricket tend to perform poorly on this scale. However, winning in fantasy cricket can have a positive impact on the ability to handle personal relationships. People aware of the pros and cons of gambling perform well on the scale as they show more efficiency in handling their personal relationships. While all of these are usual behavioural traits, the impact fantasy cricket has on all of them is negative and significant. Though literature highlights the positive spill overs of fantasy cricket in cognitive patterns, this paper provides empirical proof to the negative spill overs of the game. The captivating and extremely well designed user interface of the platforms often take people in and makes room for a lot of problems, which are worsened with increased usage of the platform. The engagement in then not limited to creating and managing a team of eleven players, but also staying updated and immersing yourself in the world that is present at the junction of technology and sports.

The scope and aim of the paper were to highlight the factors that contribute to user engagement as well as report the effects that this engagement has on behavioural traits. The results seem to be in line with the existing literature, deviating only a little.

As this paper comes to a close, it is not an unknown fact that fantasy cricket causes a certain level of negative impacts to its users. It is also a tricky line to walk as the legality of fantasy cricket continues to be a grey area. It is, therefore, essential to move towards a stronger regulatory framework when it comes to fantasy sports, as a whole, and promote campaigns that try to raise awareness about their risks and among youth. Being one of the most vulnerable groups of the society, it is important that such platforms tend to move towards positive engagement and minimise the risks associated with them. The platforms could also be diversified to induce further positive engagement by incorporating strategy guides, player profiles, etc.

Due to time constraints, this study could not capture the long-term impact of fantasy cricket among youth. It comes as a recommendation to future research to explore the impacts in the long run and see if this engagement later shows gambling tendencies. The dark side of gambling has ruined many lives in the past and continues to do so. It, therefore, becomes essential to identify and regulate the possible concerns that industry of fantasy sports poses to youth at an early stage.

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APPENDIX 1

Dear Participant

My name is **Anahita Sawhney**, and I am pursuing my master's at the **International Institute of Social Studies, Erasmus University Rotterdam**. For the completion of my final thesis, titled "**Beyond the Boundary: A deep dive into the impact of Fantasy Cricket on youth in India**", I am conducting a survey to understand the rise of Fantasy Cricket in India and its influence on the behavior of the youth. The completion of the survey is expected to take not more than 10 minutes.

Participation in this survey is **completely voluntary** and can be terminated at any time before the completion without providing a reason. Over the course of the survey, you will be required to answer certain demographic-based, perception-based, and behavior-based questions. **All questions require an answer**. The survey remains **anonymous** and cannot be traced back to you. The data collected is only for the sole purpose of this research and will remain strictly confidential.

By clicking "yes" you:

- Consent to participating in the research.
- Consent to collection of your personal data.
- Acknowledge the terms presented above.
- Understand your right to withdraw from the survey at any time.

Yes ☐

No ☐

In case of any queries, concerns, or doubts, please feel free to contact the undersigned:

Name: Anahita Sawhney

Email: 695301as@eur.nl

Thank you!

APPENDIX 2

1. Demographics

1.1 Age: _____

1.2 Location:
a. North Delhi
b. South Delhi
c. East Delhi
d. West Delhi
e. Central Delhi
f. Gurgaon
g. Noida
h. Ghaziabad
i. Faridabad
j. Others; please specify: _____

1.3 Highest level of education attained.
a. High School
b. Bachelor's degree
c. Master's degree
d. Other; please specify: _____

1.4 Gender
a. Male
b. Female
c. Non-binary/Third gender
d. Prefer not say

1.5 Employment status (select all that apply)
a. Student
b. Self-employed
c. Freelancer
d. Part-time job
e. Private Firm
f. Public Firm
g. Other; please specify: _____

1.6 Annual Income: _____

1.7 If student/currently not working, please mention the monthly spending budget you have: _____

1.8 Marital Status: _____

2. Sports Viewing behavior

2.1 Which of the following sports do you play? (select all that apply)

a. Cricket
b. Football
c. Hockey
d. Basketball
e. Golf
f. Kabaddi
g. Badminton
h. Tennis
i. Others (please specify)

2.2 Which of the following sports do you watch? (kindly select all that apply)

a. Cricket
b. Football
c. Hockey
d. Basketball
e. Golf
f. Kabaddi
g. Badminton
h. Tennis
i. Others (please specify)

2.3 What is the frequency with which you watch cricket?

a. Regularly (all series, all matches)
b. Often (most matches)
c. Occasionally (only important matches)
d. Rarely (very few matches)
e. Never

2.4 How confident are you in your understanding of cricket?

a. Very confident
b. Somewhat confident
c. Neutral
d. Somewhat unsure
e. No understanding

2.5 How confident are you in your awareness towards cricket?

a. Very confident
b. Somewhat confident
c. Neutral
d. Somewhat unsure
e. No awareness

2.6 Do you watch/follow the Indian Premier League (IPL)?

a. Yes
b. No

2.7 Are you inclined towards a specific team?

a. Yes
b. No
c. Not applicable (select only if 'no' selected in the previous question)

2.8 How often do you watch IPL?

a. Regularly (all matches)
b. Often (most matches)
c. Occasionally (only important matches, mostly of the preferred team)
d. Rarely (very few matches)
e. Never

2.9 What is the frequency with which you watch other sports?

a. Regularly
b. Often
c. Occasionally
d. Rarely
e. Never

2.10 What platforms do you use to watch cricket? (select all that apply)

a. TV Channels
b. HotStar
c. Jio Cinema
d. Sony Liv
e. Others (please specify)

2.11 What platforms do you use to watch other sports?

a. TV Channels
b. HotStar
c. Jio Cinema
d. Sony Liv
e. Others (please specify)

2.12 Do you often use subscription-based OTT (over-the-top) platforms for cricket?

a. Yes
b. No
c. Not applicable

2.13 Do you often use subscription-based OTT (over-the-top) platforms for other sports?

a. Yes
b. No
c. Not applicable

2.14 Have you ever watched a cricket match live?

a. Yes
b. No
c. Not applicable

2.15 Have you ever travelled to a different city/country to watch a live cricket match?

a. Yes
b. No
c. Not applicable

2.16 Have you ever visited a cricket fan park during a match?

a. Yes
b. No
c. Not applicable

2.17 Have you ever hosted/attended a cricket match screening?

a. Yes
b. No
c. Not applicable

2.18 Have you ever engaged in fantasy sports like Dream11, My11Circle, ESPN FS, etc.?

a. Yes
b. No
c. Not applicable

3. Fantasy Sports

3.1 For which of the following do you play fantasy sports? (select all that apply)

a. Cricket
b. Football
c. Hockey
d. Basketball
e. Golf
f. Kabaddi
g. Badminton
h. Tennis
i. Others (please specify)

3.2 How often do you engage in fantasy cricket?

a. Regularly
b. Often
c. Occasionally
d. Rarely
e. Never

3.3 How would you describe your overall level of interest in fantasy cricket?

a. **Very interested**
b. **Somewhat interested**
c. **Neutral**
d. **Somewhat uninterested**
e. **Not interested**

3.4 How confident are you of your understanding of Fantasy Cricket rules?

a. Very confident
b. Somewhat confident
c. Neutral
d. Somewhat unsure
e. No understanding

3.5 On an average, how much money do you typically spend in a single fantasy cricket contest?

a. ₹0 (Free leagues only)
b. ₹1-₹100
c. ₹101-₹500
d. ₹501-₹1000
e. More than ₹1000

3.6 Have you ever won any money playing fantasy sports?

a. Yes
b. No
c. Not applicable

3.7 If yes, approximately how much do you win playing fantasy cricket, on average?

a. ₹1-₹100
b. ₹101-₹500
c. ₹501-₹1000
d. More than ₹1000

3.8 Do you feel a change in emotional state while playing fantasy cricket?

a. Yes
b. No
c. Not applicable

3.9 How far do you agree with the following statements? Please rate the following on a scale of 1-5 (1 being the complete disagreement and 5 being complete agreement).

	1	2	3	4	5
My day-to-day functioning is efficient					
I can easily cope with stress and anxiety					
I do not constantly check my phones for updates					
I am able to handle my personal relationships					
FC can negatively impact personal relationships					

3.10 How would you rate your mental health on a regular basis?

a. Excellent
b. Good
c. Average
d. Fair
e. Poor

3.11 After considering all factors, what do you think is the overall impact of fantasy cricket on people, and why?

a. **Positive Impact:**
b. **Negative Impact:**
c. **Neutral Impact:**

3.12 Do you believe in using player statistics and analytics to make better fantasy cricket decisions?

a. Strongly agree
b. Somewhat agree
c. Neutral
d. Somewhat disagree
e. Strongly disagree

3.13 Where do you go to find information and insights for making fantasy cricket decisions? (select all that apply)

a. Fantasy cricket platform's expert advice
b. Cricket news websites/apps
c. Social media groups/communities
d. Player performance statistics websites
e. Other (Please specify): _____

3.14 Have you ever felt pressured to spend more money on fantasy cricket contests than you intended?

a. Yes
b. No

3.15 To what extent do the following factors influence your engagement in Fantasy Cricket, on a scale of 1 to 5 (with 1 being the lowest and 5 being the highest)?

	1	2	3	4	5
For the thrill of competition and winning					
To test your cricket knowledge and skills					
To connect with other cricket fans					
To potentially win money					
Other factors; please specify					

4. Financial behaviour

4.1 Do you set a monthly budget?

a. Yes
b. No
c. Not applicable

4.2 Do you track your spendings?

a. Yes
b. No
c. Not applicable

If yes, how? _____

4.3 Do you set a monthly budget?

a. Yes
b. No
c. Not applicable

If yes, what is your monthly budget?

4.4 How often do you exceed your monthly budget for fantasy sports?

a. Frequently
b. Occasionally
c. Rarely
d. Never
e. Not applicable

4.5 Do you participate in any other online games or activities where you can potentially win money? (online poker, Stake.com, sports betting etc.)

a. Yes; please mention: _____
b. No

4.6 If yes, how much money are you likely to spend on these platforms in one sitting, on average?

a. ₹0 (Free leagues only)
b. ₹1-₹100
c. ₹101-₹500
d. ₹501-₹1000
e. More than ₹1000

4.7 How often do you use these platforms?

a. Regularly
b. Often
c. Occasionally
d. Rarely
e. Never

4.8 Does having a hot hand/winning streak encourage you to spend more?

a. Yes
b. No
c. Not applicable

4.9 How often do you win on these platforms?

a. Regularly
b. Often
c. Occasionally
d. Rarely
e. Never

4.10 How much do you win, on an average?

a. ₹0
b. ₹1-₹100
c. ₹101-₹500
d. ₹501-₹1000
e. More than ₹1000

5. Gambling Perception

5.1 Have you ever heard of online gambling platforms?

a. Yes
b. No
c. Not sure

Can you name some? _____

5.2 Have you ever used an online gambling platform?

a. Yes
b. No
c. Not sure

Which one? _____

5.3 Have you ever heard of the offline gambling circuits?

a. Yes
b. No
c. Not sure

5.4 Have you ever engaged in an offline gambling circuit?

a. Yes
b. No
c. Not sure

5.5 On a scale of 1 to 5 (1 being complete disagreement to 5 being complete agreement), how much do you agree with the following statements?

	1	2	3	4	5
I am aware of the pros and cons of gambling					
Gambling is a form of entertainment					
Gambling is just a harmless pastime					
Gambling is a potential way to make money					
Gambling is a potential addiction					
Gambling is a problem					
Others view gambling as a problem					
It is essential to take measures to reduce gambling					
Gambling and Fantasy Sports is closely related					

6. Risk-taking behaviour

6.1 **Imagine receiving 5000 INR. How would you invest this money?**

a. Keep it in a savings account
b. Invest in stocks
c. Invest in bonds
d. Spend it
e. Other (Please specify): _____

6.2 How comfortable are you with the idea of losing money in the short run?

a. Very comfortable
b. Somewhat comfortable
c. Neutral
d. Somewhat uncomfortable
e. Very uncomfortable

6.3 If I told that an investment could gain 20%, how much of this money would you invest?_____

6.4 Would you invest in a high-risk, high-reward opportunity?

a. Yes
b. No

6.5 Would you invest in an opportunity with unknown risks?

a. Yes
b. No

We thank you for contributing to this research. Your insights are invaluable to us and will significantly add to a better understanding of the topic. Thank you once again for your participation.