

Ultimate Frisbee: The impact of the 'Spirit of the Game' concept

Kangzhe Xiong

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Abstract

This study explores, through a leadership lens, how the spirit of the game (SOTG) and the role of the spirit captain in ultimate frisbee (UF) influences the on and off-field behaviours and ethical development of UF athletes. SOTG is the moral cornerstone of UF, advocating fairness, self-refereeing and mutual respect among athletes. This study used mixed methods, combining quantitative survey data from 56 UF athletes in New Zealand with qualitative interviews with two UF organization leaders and two UF athletes to explore three objectives: the purpose of SOTG and the role of the spirit captain, their influence on athletes' engagement in UF, and their influences on athletes' behaviour in other sports and daily life.

Quantitative research results show that athletes' behavioural performance in adhering to the SOTG principle has significantly improved, especially in terms of rule knowledge and use, positive attitude and self-control, and fouls and body contact. At the same time, there is also a positive trend in respectful communication and fair-mindedness. Qualitative data indicates that SOTG helps cultivate athletes' self-leadership, emotional regulation and moral reflection ability, while the spirit captain supports ethical conversation and shared responsibility. The athletes also said that they would apply behaviours based on SOTG, such as fairness, empathy and honesty, to other sports and daily life situations. These results confirm that SOTG is not only a rules-based ethical system but also a framework for promoting leadership and moral growth.

This study expands previous research by providing empirical evidence from the UF community in New Zealand and linking SOTG with theories of ethics, shared leadership and self-leadership. The research results are of great significance for the future development of sports management, athlete education, and elite and Olympic-level self-refereeing sports.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed:

Name: Kangzhe Xiong

Date: 15 Nov 2025

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Chapter One: Introduction

Ultimate frisbee (UF) is a seven-a-side competitive team sport that was first created in 1968 in New Jersey (World Flying Disc Federation [WFDF], n.d.-a). UF is unique in competitive team sports in that it relies on 'self-refereeing' with athletes applying the 'spirit of the game' (SOTG), a philosophy that emphasizes self-governance, fair play, and mutual respect. Players are responsible for following and monitoring the rules, a sportspersonship tradition that places the responsibility for fair play on players rather than referees (New Zealand Ultimate [NZU], n.d.-a). SOTG is a practice of caution adopted by UF athletes worldwide before, during and after a competition (WFDF, n.d.-d). It includes attitudes and skills such as good knowledge and application of the rules; fairness; safe play and space awareness; clear and calm communication; and a positive and respectful attitude towards teammates, fans and opponents in working together to protect the essential joy of the game (WFDF, n.d.-d). SOTG has the potential to be an opportunity for other sports to develop and achieve better sportspersonship.

Given ongoing critiques of the value of sport (Stewart & Smith, 2025), UF and SOTG concepts may be able to provide some solutions. In recent times, sports have experienced many adverse events, and the mass media presents too many unfavourable news articles and information related to sports events (Özlü et al., 2020). Sportspersonship (or lack thereof) involves not only athletes, management, and coaches, but also spectators and supporters (Özlü et al., 2020). Incidents that violate sports ethics are not uncommon, including athletes engaged in doping, coaches committing fraud and abuse, teams engaging in bribery and illegal profit-making, and audiences and supporters engaging in racist discrimination and abuse, etc. (Özlü et al., 2020). All of these run counter to the basic moral values of sports. In contrast, SOTG emphasizes fair play and sportspersonship (WFDF, n.d.-c). Therefore, SOTG concepts may be able to help athletes achieve better self-control and thereby regulate their moral behaviour on and off the field in other sports as well.

Despite the increase in UF participants worldwide, there is still limited research on how SOTG affects the behaviour of UF players on and off the field. Crocket

(2015) asserts that SOTG requires players to exercise self-control. The purpose of this study is to confirm the purpose of the 'spirit' concept and captain within the sport of UF and explore the impact (in New Zealand) of SOTG and the 'spirit captain' on player behaviour in UF, in other sports and in their daily lives. The balance of this chapter introduces the background and context of UF and SOTG, outlines the research rationale, aim and design, and provides an overview of the thesis structure, concluding with a statement of the study's significance.

1.1 Context—Ultimate Frisbee

In 1968, Joel Silver first introduced the concept of UF to the student council of Columbia High School in Maplewood, New Jersey, USA, and the sport began to spread (WFDF, n.d.-a). Today, UF is actively played at a competitive level in 103 countries and around 7 million people worldwide participate in UF sport (Eisenhood, 2022; USA Ultimate, n.d.). Internationally, UF is governed by the WFDF. The WFDF is a federation composed of 126 member associations, representing the flying disc sport and its athletes from more than 122 countries (WFDF, n.d.-b). It is responsible for the world's flying disc (frisbee) sports, including ultimate, beach ultimate, disc golf, freestyle, disc guts and individual events (WFDF, n.d.-b). The NZU is the official governing body of UF sport in New Zealand, with a committee composed of volunteers from the UF community (NZU, n.d.-b). In the UF community of New Zealand, tournaments or leagues and athletes are mainly divided into three categories: world-class (elite), competitive and social.

UF is played using the flying disc in a rectangular field 37 metres wide and 100 metres long, with an end zone at each end (WFDF, 2021). Each team aims to score points by having one player catch a pass in the end zone of their attack; the thrower must not run with the disc but may pass it in any direction to any teammate (WFDF, 2021). If the pass is not successful, a turnover will occur and the other team will gain possession of the disc and try to score in the other end zone; usually the game ends when one team has scored 15 goals or after 100 minutes (WFDF, 2021). Informal competitions can also adjust the field size and the number of participants. However, UF has always been a competitive sport

focused on self-management and non-physical contact, and SOTG instructs players on how to referee the game and manage their behaviour on the field (WFDF, 2021).

SOTG is a unique characteristic of UF and is one of the core elements, similar to fair play and sportpersonship, which UF emphasizes, and which requires skills related to leadership of self and others. (WFDF, n.d.-c). As UF is a non-contact and self-refereeing sport, it is vital to maintain a good spirit of play and the responsibility for fair play falls on every player, both those players playing on and those off the field (WFDF, 2021, n.d.-c). As a self-refereed sport, UF players themselves are responsible for resolving disputes during games. As such, players must understand the rules, act with fairness and honesty, communicate clearly and respectfully, and ensure all voices are heard in any on-field arbitration (WFDF, 2021, n.d.-c). This aligns with one of the sport's core principles: "Competitive play is encouraged, but never at the expense of respect between players, adherence to the rules, and the basic joy of play" (WFDF, 2020, p. 2).

To support and measure this unique approach, the "spirit scoring" system was introduced (WFDF, n.d.-c). Especially useful in leagues and major tournaments, it allows teams to rate both themselves and their opponents after a game based on five key principles: rules knowledge and use; fouls and body contact; fair-mindedness; positive attitude and self-control; and communication (WFDF, 2020). Rules knowledge and use refers to players demonstrating an appropriate understanding and application of the rules, avoiding deliberate misinterpretation, and showing a willingness to learn when uncertain. Fouls and body contact emphasize players' responsibility to actively avoid dangerous or reckless play and to minimize unnecessary physical contact; fair-mindedness reflects the expectation that players make honest and consistent calls, respect opponents' perspectives, and retract calls when appropriate; positive attitude and self-control highlights the importance of maintaining respect, composure, and encouragement, even during moments of high pressure; communication relates to players engaging in clear, respectful, and efficient discussions, listening to others, and resolving issues constructively (WFDF, 2025-a).

In addition to SOTG, the spirit captain is a very special and unique character and concept in the sport of UF. Usually, the captain and the spirit captain positions are held by different players, and the role and responsibilities of the spirit captain are also different from those of the captain. Since SOTG is one of the core elements of UF, the role of spirit captain is also one of the important factors influencing UF competition (WFDF, n.d.-c). A spirit captain's duties include both on and off the field. Before the start of the game, they meet with the opposing team's spirit captain to introduce themselves, represent their team, and discuss any relevant issues from previous games (WFDF, 2020). This meeting helps foster mutual understanding and a friendly atmosphere that promotes good sportspersonship and respect between teams.

While the game is in progress, the spirit captain is responsible for maintaining composure and encouraging their teammates to do the same, especially during intense moments (WFDF, 2020). If a spirit-related issue arises, they should promptly communicate with the other team's spirit captain to address it (WFDF, 2020). In more serious cases, the spirit captain may call a 'spirit time-out,' during which players from both teams form a 'spirit circle' on the field (WFDF, 2020). The spirit captains lead a discussion to resolve the issue, and once both teams agree on a resolution, the game continues (WFDF, 2020).

At the end of the match, the spirit captain will lead the players to rate the SOTG of the opposing team according to the five principles (WFDF, 2020). If any serious spirit issues have occurred, the spirit captain is also responsible for summarizing them and reporting to the event organizers (WFDF, 2020). Finally, the spirit captain organizes the post-game spirit circle, where both teams reflect on the match, share feedback, and recognise players for their contributions to SOTG (WFDF, 2020).

The WFDF and USA Ultimate have ambitions to promote UF as an Olympic sport (Eisenhood, 2022). The WFDF president has stated that UF sports have achieved gender equality and the SOTG concept in UF sports is highly consistent with the sports spirit of the Olympic Games (James, 2024). However, an important question arises: Can and should UF retain its unique self-refereeing model at the Olympic level? Although the International Olympic Committee (IOC) usually requires the use of professional referees, imposing

this standard on UF may undermine the core concepts of this sport. Any mandatory use of traditional referees would not only undermine the integrity of this model but may also encourage the excessive competition and violations that are common in many traditional sports.

UF leaders, as part of their participation in interviews as part of this study, have expressed their goal for any Olympic bid to not be “just for the sake of the Olympics” (WFDF President) but to showcase UF as “a low risk, a gender equal youth-oriented fun to watch game [with] the idea of the spirit of the game [being] the ideal of the Olympic Games, right?” (WFDF President). The importance of the UF subculture, and key features including SOTG, spirit captains and self-officiating was emphasized “because the Olympics have these dreams and these values of fairness and playing within the rules... And I think UF fits the Olympic model... so well” (NZU CEO). By maintaining the SOTG framework and developing the spirit captain role, UF can maintain its core values while adapting to new stages such as the Olympics. UF does not need to sacrifice its own characteristics to conform to past norms, but has the potential to influence global perceptions on how to integrate fairness, leadership and ethical behaviour into elite sports performance.

This study, therefore, has the potential to contribute academic understanding and practical development in the field of sports ethics and leadership. The research findings may provide valuable insights for other sports seeking to address issues such as fairness, misconduct and sportspersonship.

Furthermore, as UF continues to advocate for entry into the Olympics, this study provides timely evidence to support the feasibility and value of maintaining self-refereeing based on SOTG in elite events.

1.2 Research Rationale & Aim

Amoroso et al. (2024) stated that SOTG is a tool for regulating the moral behaviour of UF players to encourage them to achieve and improve good sportspersonship. Amoroso et al. (2024) also suggested that longitudinal studies examining the applicability of SOTG and self-refereeing in other sports and tracking athlete development could fill the academic gap regarding the link between SOTG and UF players. Importantly, there are no known studies

directly exploring the extent to which SOTG may impact UF player behaviours in other sports and in life in general. Understanding whether SOTG has an impact on the on-field behaviour of UF players, and whether these effects carry over into the daily lives of UF players and the other sports they play (in New Zealand), can provide valuable insights into the applicability of SOTG and self-refereeing in other sports and the development of athletes as 'good sports' (in New Zealand and globally). The findings of such research may help promote and develop the sport of UF (including any Olympic aspirations) and validate the extent to which UF participation may develop SOTG behaviours in its athletes. With these remarks in mind, the thesis aim and research objectives are presented in the following section.

1.3 Research Design

This study sits within the pragmatic paradigm (Feilzer, 2010), taking a descriptive-interpretive approach (Smythe, 2012) to a mixed-method data collection and analysis design combining quantitative and qualitative research (Doyle et al., 2020). Three research objectives were created to support this exploration of the purpose of SOTG and the spirit captain, and their impact on UF players behaviour within a New Zealand context. The objectives are:

Research objective one (RO1): To confirm what was/is the purpose of the spirit concept and captain in the sport of UF.

Research objective two (RO2): To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in the sport and with their team (in New Zealand).

Research objective three (RO3): To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in other sports and areas of their lives (in New Zealand).

The data collection methods employed to achieve the research objectives include interviews, secondary data and a survey with closed questions (with results examined using both descriptive and inferential analyses) and open questions (with findings analysed using an interpretivist approach). For RO1, public organizational records, existing documents, rules, research articles and

published interviews were used to gather data. Further insight was obtained through key informant interviews with two UF leaders providing in-depth knowledge of the UF sport globally (WFDF President) and in New Zealand (NZU CEO).

For RO2 and RO3, survey participants (approximately n=610) were approached from groups of UF players at three different levels (elite, competitive and social) of the sport in New Zealand. Follow-up interviews were conducted with two UF players (one from the elite level and one from the social level). Template analysis (Brooks et al., 2015) was applied to the player interviews, secondary data and open-text survey responses; descriptive statistical analysis (Alabi & Bukola, 2023) and inferential statistical analysis (Allua & Thompson, 2009) were applied to the survey (closed questions). The analysis was guided by the theoretical perspectives of sportspersonship (Keating, 1964), self-leadership (Stewart et al., 2011), ethical leadership (Shakeel et al., 2019), shared leadership (Zhu et al., 2018) and collective leadership (Wan Mustapa et al., 2024) in exploring the impact of the SOTG concept and the spirit captain in UF, especially how these elements shape players' participation in the sport and their off-field behaviour.

1.4 Structure

The structure of the study is as follows. The present chapter, Chapter One gives a brief introduction to UF and SOTG, and discusses the research rationale, aim and design. Chapter Two reviews the previous academic literature. It includes the following major themes: UF sport, self-leadership, sportspersonship, and ethical, collective and shared leadership. Chapter Three explains the design of the research project, the research paradigm, methodology, the methods of data collection and analysis, and ethical and quality considerations. Chapter Four presents the findings in relation to RO1 (secondary data and UF leader interviews), RO2 and RO3 (UF player survey and interviews). Chapter Five provides a discussion on the findings with associated insights, both novel findings and those obtained through the theoretical lenses. Chapter Six summarises this research, reviews the research results, elaborates on its

academic and practical implications, acknowledges limitations, and proposes directions for future research.

1.5 Summary

Although UF is becoming increasingly popular worldwide, academic research on how SOTG affects athlete behaviour remains limited, especially in terms of its impact beyond the UF field. There is a significant gap in understanding the extent to which the roles of SOTG and the spirit captain affect athletes' ethical behaviour, team engagement, and behaviour in other sports and in their daily lives. This study aims to bridge this gap by confirming the fundamental purposes of SOTG and the spirit captain, and exploring their impacts on athletes both within and outside sports, especially in New Zealand. By doing so, it contributes to the continuing discussion on sports ethics and leadership. Furthermore, this study offers timely insights into the feasibility of maintaining self-refereeing at the Olympic level, providing a compelling reason for the IOC to embrace UF's innovative self-officiating model. Finally, these findings do not only support the WFDF's aspiration to bring UF into the Olympics, but also help UF athletes and the broader sports community better understand how the spirit-concept-based framework shapes ethical behaviour, promotes athlete development and promotes positive sportspersonship.

Chapter Two: Literature Review

2.1 Introduction

This chapter lays the foundation for the theoretical understanding upon which this leadership-focused thesis is based. The role of Spirit of the Game (SOTG) and the spirit captain in influencing the on-field and off-field behaviour of Ultimate Frisbee (UF) players is explored through a critical review of existing academic literature on UF, but also on leadership in sport. These theoretical perspectives may operate at different levels to influence the on-field and off-field behaviours of UF athletes, while SOTG may shape the way these concepts are developed and applied. Sportspersonship and moral intelligence, self-leadership, and ethical leadership primarily focus on an athletes' individual behaviours. Shared and collective leadership, however, extend beyond the individual level and may influence team dynamics, team culture, and, in the case of UF, the role of the spirit captain.

2.2 Ultimate Frisbee and Spirit of the Game

UF is one of the fastest growing sports in the world (Krustrup & Mohr, 2015), and there are numerous studies on UF. Current general research on UF has focused on the physiology and physical aspects of UF players. For example, Fajardo Pulido and Lystad (2020) and Hess et al. (2020) discussed injury patterns and injury rates in UF sports. Ryman et al. (2024) and Portillo et al. (2022) studied the physical fitness on sports performance of adolescents (13.9 – 15.7 years old) participating in UF sports. Krustrup and Mohr (2015) revealed the physical requirements of UF players participating in UF competitions, while Palmer et al. (2022) analysed the physical requirements of elite female UF players in more detail.

However, the principles of SOTG, as one of the core features of the UF movement (WFDF, n.d.-c), have been studied very little. This project focusses on the impact of SOTG on athlete behaviour, and the research of Amoroso Valente-dos-Santos et al., (2022), Amoroso, Antunes et al., (2022), Amoroso et al. (2023, 2024) and Crocket (2015) provide useful references for this project

with themes of ethical behaviour/responsibility framework and self-regulation/refereeing, and with some challenges having been explored.

2.2.1 SOTG as a Framework for Ethics

Amoroso et al. (2024) saw SOTG as a tool to improve, monitor and evaluate ethical behaviour on the field. To maintain SOTG, players must understand and follow the rules, avoid physical contact, behave fairly, maintain a positive attitude, and communicate respectfully (Crocket, 2015; WFDF, 2020). In this sense, SOTG is not just a principle, but a framework for ethical sports participation.

2.2.2 Self-regulation and SOTG

To avoid low SOTG scores or achieve higher SOTG scores, players and teams self-regulate their physical behaviour through conscious self-restraint and by promoting fairness (Amoroso et al., 2024). The SOTG system actively encourages this self-awareness and serves as a measurement and reinforcement tool for ethical behaviour (Amoroso et al., 2024). Amoroso et al. (2024) showed that high SOTG scores generally reflect strong sportspersonship, with players generally scoring lower on knowledge of the rules, but high on positive attitude and self-control. Achieving high levels of self-control and positive attitudes requires self-regulation (Amoroso et al., 2024), which is defined as the ability to consciously manage impulses, emotions, and behaviours (Hagger et al., 2010). Amoroso et al. (2023) also highlighted self-discipline as a core value embedded in the foundation of UF.

Crocket (2015) further explained that UF athletes adopt moderation, honesty, and tolerance as self-abstinence practices, tools that can counter the hyper-competitiveness seen in other sports. In Crocket's (2015) theory, moderation refers to the various ways in which UF players restrain their play to abide by the rules and develop a spirit of respect and friendship. However, players, teams and cultures have different understandings of the moderation and their abilities to control the game according to their own will, and there are significant differences in players' expectations of what they should control (Crocket, 2015). Tolerance refers to how players respond to their opponents' behaviours, while

honesty refers to the practice of arbitrating disputes without deception (Crocket, 2015).

2.2.3 Challenges in Interpreting SOTG

Although SOTG and its rules are constantly being improved, spirit issues and excessive competition still present at many UF games. Crocket (2015) argued that often the problem is not outright immoderation, but different interpretations of moderation (Crocket, 2015). Amoroso, Valente-dos-Santos et al. (2022) also showed that UF players' interpretations of SOTG vary greatly depending on the level of play, player experience, and team history. In Amoroso, Valente-dos-Santos et al.'s (2022) research, the players at the highest level obtained lower SOTG classifications and SOTG scores than those at the lowest level. Crocket's (2015) research showed that elite level players may engage in more physical contact, but they also exhibit greater communication and decision-making skills. As a result, players of different levels competing together can blur the boundaries of SOTG, increasing the risk of conflict or misunderstanding, and to address this, UF players must negotiate the level of restraint through communication in real time (Amoroso, Valente-dos-Santos et al., 2022; Crocket, 2015).

2.2.4 Self-refereeing and Ethical Responsibility

Another notable feature of UF is its self-refereeing system, which allows the player to play the dual role of player and referee simultaneously (Amoroso et al., 2024). Unlike traditional sports, where discipline is enforced by external referees, UF's self-refereeing creates an environment in which players are directly responsible for upholding the rules (Amoroso et al., 2023). This set-up reduces the attempts to circumvent the rules to gain an advantage that often occur in referee-driven sports (Amoroso et al., 2023). Self-adjudication raises moral expectations by empowering players to resolve conflicts and enforce rules through mutual consent and respect (Amoroso et al., 2023). According to Amoroso et al. (2024), self-refereeing effectively promotes sportspersonship across age groups and levels of play, making it a powerful tool for instilling and maintaining sportspersonship behaviour.

2.3 Sportspersonship & Moral Intelligence

Attacks and violence by athletes against their opponents, competing while injured, abusing competition officials and referees, and various forms of deception both on and off the field occur frequently in today's sports competitions (Crocket, 2015). These behaviours have led the contemporary sports world to embody an idea of winning at all costs, while basic moral behaviours and attitudes as well as sportspersonship are gradually losing their importance (Çetinkaya, 2024; Crocket, 2015).

The concept of sportspersonship is obscure; sportspersonship can be the pinnacle of moral perfection, or it can be regarded as the minimum requirement of morality (Keating, 1964). Keating (1964) believed that sportspersonship is the behaviour that athletes should have, while Çetinkaya (2024) described sportspersonship as the attitude and behaviour that men and women should have in any case, whether they are athletes or not. The different understandings of sportspersonship between people and scholars mainly lies in the essential difference between sports and competitive sports (Keating, 1964). In essence, sport is a pastime whose first and immediate aim is fun, pleasure, and delight, and which is governed by a spirit of moderation and generosity, whereas competitive sport is essentially a competitive activity whose aim is victory in competition which is characterized by a spirit of dedication, sacrifice, and concentration (Keating, 1964). However, it is clear that sportspersonship is a concept valued in today's sports activities that refers to basic moral qualities or moral values (Çetinkaya, 2024; Jong, 2012; Turan et al., 2022).

Bandura (1999) stated that there are two aspects of morality: proactive and refrain. Proactive morality is expressed in the ability to act humanely, while refrain morality is expressed in the ability to avoid inhumane behaviour (Bandura, 1999). Ethical behaviour in sports can be understood as less frequent participation in negative social behaviour or unfair play (Chow et al., 2009). In the study by Constandt et al. (2018), moral behaviour in sports is similar to Bandura's theory in that it also contains two dimensions, namely the inhibitory dimension (avoiding unsocial and immoral behaviours) and the prosocial dimension (acting in a socially moral way). The research of Kavussanu and Al-Yaaribi (2021) shows that teammate behaviours have a significant impact on

athletes' prosocial and antisocial behaviours. In recent years, scholars' understanding of the factors that lead to (or prevent) prosocial and antisocial behaviours in sports has deepened significantly (Kavussanu & Al-Yaaribi, 2021). However, academic research testing the causal relationship between different variables and athletes' moral behaviours, and examining the moral aspects of sports experiences in the real world, is still scarce (Kavussanu & Al-Yaaribi, 2021).

The concept of moral intelligence has also begun to gain popularity in many studies. Moral intelligence is a prerequisite for performing moral behaviour, and scientists and scholars have studied moral intelligence from many sub-dimensions (Turan et al., 2022). In the study of moral intelligence, empathy, conscience, self-control, respect, and kindness are regarded as common concepts by scientists (Turan et al., 2022). Turan et al. (2022) showed that self-efficacy, empathy, kindness and self-control have significant effects on athletes' sportspersonship behaviour. Empathy and kindness enable athletes to oppose harmful behaviours and influence the way athletes compete by expressing their opposition to harmful behaviours and by expressing a gentler tendency toward other athletes (Turan et al., 2022). People with high self-efficacy and confidence in their cognition of their abilities have the ability to control and manage their emotions and thus control their behaviour (Turan et al., 2022). This is roughly consistent with the results of Çetinkaya's (2024) study that found sportspersonship and self-efficacy show a high positive correlation.

In addition to the study of the two dimensions of sportspersonship behaviour, there are different variables that affect sportspersonship. Çetinkaya's (2024) study showed that the total score of sportsmanship of national-level athletes is significantly higher than that of non-national-level athletes. Meanwhile, athletes with four to five years of participation reported the highest levels of sportsmanship and positive view of the game, while those with six to nine years showed a notable decline, with a partial recovery among players with more than 10 years of experience (Çetinkaya, 2024). The author speculated that the variables with significant differences may be related to the sports culture in which the athletes live (Çetinkaya, 2024). Çetinkaya (2024) also stated that the gender of the participants and type of sports participants play were not

significantly associated with sportspersonship behaviour, which is inconsistent with other studies. The work of Kusan (2024, as cited in Çetinkaya, 2024) and Tsai and Fung (2005, as cited in Çetinkaya, 2024) pointed out that sportspersonship is higher among women than men, whereas the work of Sabırlı (2024, as cited in Çetinkaya, 2024) and McLaughlin (2020, as cited in Çetinkaya, 2024) showed that sportspersonship orientation was higher in men than in women. Therefore, the literature on the influence of different variables on sportspersonship behaviour is still inconsistent, and future studies need to be conducted in different cultures and local areas, with different populations, and among different participating masses (Çetinkaya, 2024).

2.4 Self-leadership

Manz (1986) first proposed that self-leadership is a force that is ultimately controlled by internal rather than external factors, although behaviour is usually supported by external forces such as leaders. Manz (1986) explained self-leadership was “conceptualized as a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating” (p. 589). Later, with the deepening of more studies on self-leadership, the concept of self-leadership has expanded from the individual level to the level of group (or team) analysis (Stewart et al., 2011).

First, on an individual level, the concepts of self-control and self-leadership can be confused. Self-control is discipline-oriented, applying self-influencing strategies that focus primarily on behaviour to reduce or eliminate undesirable behaviours and increase other desirable behaviours; self-influencing strategies include self-observation, self-cue management, self-goal setting, self-reward/criticism, and rehearsal (Stewart et al., 2011). However, Manz (1986) stated that the concept of self-leadership differs from these related ideas such as self-control. Self-leadership allows for higher standards of self-influence, incorporates intrinsic motivation more fully, and offers broader strategies for managing oneself (Manz, 1986). The introduction of the concept of self-leadership thus distinguishes between different levels of self-influence and provides a broader and more holistic perspective that includes but goes beyond

self-management processes that are primarily based on discipline and behaviour (Stewart et al., 2011).

Second, at the team level, self-led teams differ from traditionally managed teams, where members have little self-sovereignty and limited decision-making power, whereas employees in self-managed or self-led teams are empowered with workflow and allowed to regulate their own behaviour (Stewart et al., 2011). The difference between self-led teams and self-managed teams lies in how much self-influence members of the organization are actually allowed to exert (Manz, 1990, 1991, 1992, as cited in Stewart et al., 2011).

The self-leadership research literature has also expanded from focusing on behavioural considerations and external processes to studying internal forces at the individual level (Stewart et al., 2011). Self-leadership strategies generally fall into three broad categories, namely: behaviour-focused strategies, natural reward strategies, and constructive thought pattern strategies (Neck & Houghton, 2006). Behaviour-focused strategies can increase an individual's self-awareness to facilitate behaviour management, such as self-goal setting, self-reward, self-punishment, self-observation, and self-prompting (Neck & Houghton, 2006). Natural reward strategies aim to create an environment in which people are motivated or rewarded for the inherently pleasurable aspects of a task or activity (Neck & Houghton, 2006). Finally, constructive thought pattern strategies aim to promote the formation of constructive thinking patterns and then influence performance in positive ways, such as self-talk and imagining successful performance (Neck & Houghton, 2006).

Neck and Houghton (2006) also indicated that other variables that can affect self-leadership include commitment, independence, creativity/innovation, trust, potential, positive emotion, job satisfaction, psychological empowerment and self-efficacy. For example, Megheirkouni (2018) showed that if individuals can experience self-confidence through stronger self-control, self-efficacy will be enhanced, and the main goal of all self-leadership strategies is to enhance self-efficacy, so as to obtain better performance results.

Specifically for athletes, Türköz et al. (2013) found that self-leadership perception has a significant impact on athletes' performance. The three self-

leadership strategies of self-goal setting, self-talk and psychological connection are frequently mentioned in sports psychology (Allen, 2007; Türköz et al., 2013). Methods such as relaxation, visualization, goal setting, self-talk, and concentration, which are collectively referred to as mental skills in sports psychology, have also been shown to help athletes achieve better performance (Howland, 2007). Research also shows that athletes who participate in any team use self-leadership strategies much more frequently than athletes who do not participate in any team role, and athletes with a long history of sports have a higher perception of self-leadership than new athletes (Türköz et al., 2013).

In addition to the influence of internal forces on individual self-leadership, external forces also affect individual self-leadership practices, including self-leadership training, empowering leadership, shared leadership, and cultural influence (Stewart et al., 2011). The influence of external forces on self-led teams is mainly reflected in external leadership, performance evaluation/reward systems, organizational structure and culture (Stewart et al., 2011).

Overall, at the individual level, improvements in self-leadership have been shown to correspond with better emotional responses and better performance (Howland, 2007; Neck & Houghton, 2006; Stewart et al., 2011; Türköz et al., 2013). However, at the team level, research results are inconsistent, and the relationship between self-leadership and emotion and performance outcomes at the team level is influenced by environmental factors (Stewart et al., 2011). Ethical leadership and ethical climate can also affect the ethical behaviour of athletes, and these two concepts attract significant scholarly attention (Mayer, 2014).

2.5 Ethical Leadership

Brown et al. (2005) regarded ethical leadership as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (p.120). Shakeel et al. (2019) held that Brown et al.’s (2005) initial concept of ethical leadership was flawed. Shakeel et al. (2019) stated that it is important to view ethical leadership as a process and relate it to other leadership styles, and to view ethical

leadership as a distinguishable leadership style would greatly weaken the role that ethics plays in all leadership theories and styles.

Therefore, Shakeel et al. (2019) made improvements and advancements based on Van Wart's research published in 2014. First, Van Wart (2014) classified ethical leadership into a variety of constituent styles and presented ethical leadership as a process with different developmental steps. Van Wart (2014) listed six leadership styles as theories of moral leadership: virtuous leader; authentic and positive leader; moral manager; professionally grounded leader; socially responsible leader; transformational leader. Shakeel et al. (2019) believed that the composite leadership style of Van Wart (2014) can be placed on a timeline, reflecting a process in which each subsequent style depends on the completion of the previous one. The process by which leaders' extraversion increases and how leaders move from one form of ethical leadership to another on the timeline depends on the specific steps they take, which are: developing individual ethics; setting a bench mark for ethics and welcoming feedback; guiding followers based on rules; developing principles/inspiring followers; offering service to others; implementing change together with all stakeholders (Shakeel et al., 2019).

Ethics studies, especially ethical leadership studies, have attempted to conceptualize ethical leadership in different ways (Shakeel et al., 2019). Although Brown et al. (2005) and Shakeel et al. (2019) have different understandings of ethical leadership, both mentioned that ethical leadership involves two levels: the individual and interpersonal relationships. Shakeel et al. (2019) summarised it by describing how the influence of moral leaders in a team is mainly divided into two roles, moral person and moral manager. The role of moral person usually refers to the leader's own moral values, such as optimism, positivity, etc., while the role of moral manager refers to the activities that the leader undertakes to instil these moral values in his followers (Shakeel et al., 2019). Constandt et al. (2020) captured a third role, that of moral entrepreneur, where the leader strives to "innovate, by implementing new ethical norms when current norms are insufficient to tackle occurring challenges" (p. 385).

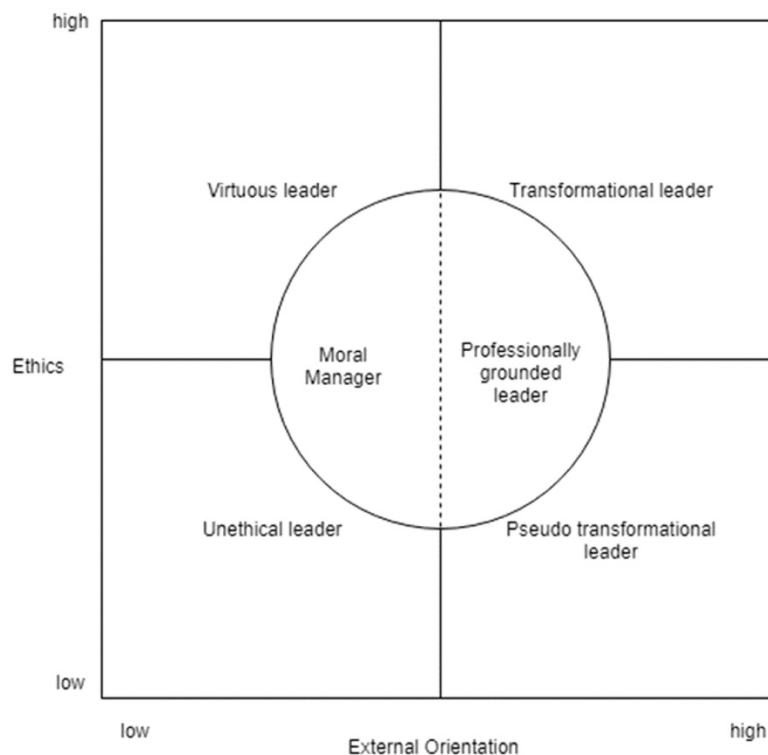
In addition to the roles that ethical leaders need to play, it is also certain that ethical leadership plays a very important role in both the inhibition and prosocial aspects of moral behaviours on the sports field (Constandt et al., 2018). When coaches, teammates, or spectators engage in or may engage in bad sports behaviour, athletes may also engage in similar bad sports behaviour or unethical daily behaviour, and this relationship is called the “ethical climate” of the team (Kavussanu, 2008; Shields et al., 2007).

The ethical climate is a shared view within a team of what is morally correct behaviour and how ethical issues should be handled, and although the concept of the ethical climate represents the perception of behaviour rather than the actual behaviour, the ethical climate is still closely related to moral behaviour (Constandt et al., 2018). The ethical climate represents the inhibitory dimension of moral behaviour, which can prevent the occurrence of unethical behaviour and provide moral guidance to the members of the team (Constandt et al., 2018). Because leaders have greater influence, they can promote an ethical climate within a team by acting in a morally appropriate manner (Constandt et al., 2018). Therefore, moral leaders first need to possess their own basic moral qualities and promote the moral atmosphere of the team through their actions (as the ‘moral person’), then improve the moral behaviour of other members of the team (as the ‘moral manager’), and finally strive for innovation and implement new ethical norms when existing ones are insufficient to address emerging challenges (as the ‘moral entrepreneur’).

However, not all leaders are ethical leaders, and ethical leadership may also have negative impacts (Shakeel et al., 2019). Figure 1 shows the ethical leadership quadrants proposed by Shakeel et al. (2019).

Figure 1

Ethical Leadership Quadrants



Note. Reprinted from “Ethical leadership as process: A conceptual proposition,” by F. Shakeel, P. M. Kruiyen, and S. Van Thiel, 2019, *Public Integrity*, 21(6), p. 621, <https://doi.org/10.1080/10999922.2019.1606544>. CC BY license.

The lower left quadrant depicts narcissistic unethical leaders who do not value morality and only serve their own interests (Shakeel et al., 2019). The upper left quadrant points to ethical leaders who follow the moral discourse themselves but do not care about the external environment or their followers (Shakeel et al., 2019). The upper right quadrant depicts ethically transformative leaders who do not simply limit themselves to follower guidance, but also take on the need to implement a broader discussion of ethical causes (Shakeel et al., 2019). The lower right quadrant points to unethical pseudo-transformational leaders who use both internal and external actors in the organisation to implement a broader agenda to achieve selfish plans (Shakeel et al., 2019).

2.6 Shared Leadership

The academic search for a comprehensive definition of shared leadership has been difficult to achieve (Kocolowski, 2010). Carson et al. (2007) defined

“shared leadership as an emergent team property that results from the distribution of leadership influence across multiple team members” (p. 1218). Conger and Pearce (2003) explained shared leadership in more detail as the process of dynamic, interactive influence between individuals in a team whose goal is to lead each other to achieve group or organizational goals, or both. Also, this influence process usually involves peer or horizontal influence, and sometimes involves upward or downward hierarchical influence (Conger & Pearce, 2003).

Zhu et al. (2018) summarised the definitions of most of the relevant academic literature and found three key commonalities: shared leadership involves horizontal influence among colleagues; shared leadership is an emerging team phenomenon; and leadership roles and influence are dispersed among team members. First, the influence among horizontal team members is the source of shared team leadership (Zhu et al., 2018). Compared with traditional vertical leadership, shared leadership focuses on the horizontal influence of team members (Zhu et al., 2018). The second feature is that shared leadership does not exist in formal leaders or individual team members but is shared by members at the group level (Zhu et al., 2018), as a kind of group property (Carson et al., 2007). Third, the influence of shared leadership is widely distributed among team members, that is, leadership is dispersed in extensive contacts among team members (Carson et al., 2007; Zhu et al., 2018). These three characteristics are also preconditions for the development of shared leadership, which is a team attribute that disperses leadership among team members and causes them to influence each other (Carson et al., 2007).

There are many benefits that shared leadership can bring to the team, such as the synergy and expertise brought by the shared model in which leaders can utilise their respective strengths, and organisations can benefit from the diversity of ideas in decision-making (Kocolowski, 2010). A strong shared leadership system can reduce the burden and pressure on any individual leader (Pearce, 2007). However, shared leadership also has its inherent limitations, such as resistance to the shared model making implementation extremely difficult (because influence is spread among team members), greater difficulty in making unified decisions, and obvious conflicting factors between a single

leadership structure and a team structure (Kocolowski, 2010). Therefore, whether the team can apply the shared leadership model needs to be carefully considered and analysed.

Therefore, there are many dimensions and factors that can affect shared leadership. Carson et al. (2007) believed that shared leadership is promoted by the whole team environment, which consists of three dimensions, shared purpose, social support and voice, while the internal team environment and external guidance work together to promote team performance. Zhu et al.'s (2018) research showed that other types of leadership, such as vertical leadership, team leadership, empowered leadership and participative leadership, also influence the shared leadership model to a certain extent, and these authors believed that empowered leadership and participative leadership are the key enablers of shared leadership. However, Zhu et al. (2018) added that shared leadership cannot replace vertical leadership; instead, both sources of team leadership are important. In teams with formal team leaders, vertical leadership and shared leadership can coexist, and shared leadership can complement the leadership function provided by vertical leadership (Zhu et al., 2018).

At the sports level in particular, leadership has been shown to be a fundamental factor in the performance of sports teams (Cotterill et al., 2022). Athlete leadership has also become one of the important focuses of managers, coaches, sports psychologists and scholars (Cotterill et al., 2022). Various studies have shown that leadership in sports teams is usually distributed in the team through a shared leadership structure (Leo et al., 2019, as cited in Cotterill et al., 2022), and the most effective way to meet various leadership needs in a team is to adopt a "shared" approach to athlete leadership (Cotterill et al., 2022). Athlete leadership is specifically defined as a situation in which an athlete takes on a formal or informal role within a team and influences a group of team members to achieve a common goal (Loughead et al., 2006).

Cotterill et al. (2022) indicated that a minimal shared leadership structure (two team members) has little effect on a team in relation to solving the overload problem (Turner, 2002, as cited in Cotterill et al., 2022). On the other hand, having all team members assume leadership roles makes it difficult to

coordinate information and increases the likelihood of confusion and miscommunication (Eys et al., 2007, as cited in Cotterill et al., 2022). So, specifically, mid-level shared leadership is better and, in this regard, working with a leadership team can address the need to steer a middle path, that is, a combination of vertical and shared leadership with appropriately broad distribution of formal leadership responsibilities within the team (Cotterill et al., 2022). This is similar to the research theory of Koccolowski (2010) and Zhu et al. (2018) in which shared leadership has a two-way impact on teams, different teams need to adapt different shared leadership structures, and sometimes the traditional vertical leadership can be combined with shared leadership to achieve better team outcomes.

2.7 Collective Leadership

In recent years, there has been a lot of momentum in collective leadership research, with various aspects of collective leadership being studied around the world (Wan Mustapa et al., 2024). To date, research on collective leadership has focused on shared and distributed leadership, how collective leadership differs from other seemingly similar leadership styles, and how collective leadership affects follower outcomes (Wan Mustapa et al., 2024).

In Spiller et al.'s (2020) study of Māori ecosystems and culture, collective leadership is the relationship between living and non-living entities distributed across generations. The fundamental implication is that all leaders, Indigenous and non-Indigenous, actively take on the role of stewards and caretakers of their communities and ecology in the service of the well-being of others, including the environment (Spiller et al., 2020). Kjellström et al. (2020) argued that collective leadership refers to a form of leadership that involves multiple individuals, such as groups, teams, networks, or entire organizations, working together to generate direction, coordination, and commitment.

Collective leadership is a polysemic concept, and recent literature often uses different terms interchangeably (Wan Mustapa et al., 2024). Because definitions often overlap and the same words are often used interchangeably (such as shared and distributed leadership), this has led to multiple attempts to clearly define different views of collective leadership (Wan Mustapa et al., 2024).

Furthermore, the blurred boundary between collective leadership and shared leadership, as well as the positive bias in collective leadership research, have led to this conceptual uncertainty (Fairhurst et al., 2020). Fairhurst et al. (2020) held that a major challenge in the study of collective leadership is the lack of a clear definition, and the existence of multiple forms and interpretations exacerbates this issue. This has led to the blurring of the boundaries of power, responsibility and decision-making in collective leadership study (Fairhurst et al., 2020).

Therefore, Ospina et al. (2020) drew a domain map of collective leadership (see Table 1) in order to integrate different schools of collective leadership and promote research cooperation within the field.

Table 1

Domain Map of Collective Approaches to Leadership

		View of collectivity	
		Collective leadership as type	Collective leadership as lens
Locus of leadership	Leadership residing in the group	Cell 1: 'Collective' refers to plural forms of leadership and leadership resides in interpersonal relationships Dual/co-leadership Shared leadership Social network leadership Team leadership	Cell 3: 'Collective' refers to a theoretical lens and leadership resides in interpersonal relationships Practice theory studies (including leadership-as-practice) Relational leadership
	Leadership residing in the system	Cell 2: 'Collective' refers to plural forms of leadership and leadership resides in systemic dynamics Multiteam systems leadership Distributed leadership Network leadership Collective leadership practices Complexity leadership	Cell 4: 'Collective' refers to a theoretical lens and leadership resides in systemic dynamics Collective constructionist leadership Discursive/communicative leadership (some) Critical leadership studies

Note. Reprinted from "Collective dimensions of leadership: Connecting theory and method," by S. M. Ospina, E. G. Foldy, G. T. Fairhurst, and B. Jackson, 2020, *Human Relations*, 73(4), p. 443, <https://doi.org/10.1177/0018726719899714>. Copyright 2020 by Sage Publications.

As seen in Table 1, Ospina et al. (2020) divided the research on collective leadership into two dimensions: locus of leadership and view of collectivity. Locus of leadership refers to the source of leadership. Some researchers believe that leadership exists in interpersonal relationships, and its root lies in

the interpersonal domain between leaders and followers or co-leaders (Ospina et al., 2020). Other researchers believe that leadership exists in the configuration of a broader relationship system composed of teams, communities, organizations, etc. People are not the source of leadership; leadership is an attribute of the system itself (Ospina et al., 2020).

“View of collectivity” in Table 1 represents the different views of researchers on collective leadership (Ospina et al., 2020). For some researchers, collective leadership represents an empirical reality that can be distinguished from other types of leadership (Ospina et al., 2020). For other researchers, collective leadership is a theoretical tool that can be used to understand single and multiple forms of leadership. It is more like a brand-new perspective for understanding leadership rather than a type (Ospina et al., 2020). Therefore, Ospina et al. (2020) held that when researchers study or explore collective leadership, they should clarify the meaning of “collective” and formulate reasonable research directions.

Although the concept and understanding of collective leadership is rather complex, it is known that collective leadership can be viewed as a collective including multiple individuals who share leadership responsibilities, and that it is practiced by a team rather than a single specific or formal leader (Fairhurst et al., 2020; Kjellström et al., 2020; Spiller et al., 2020; Wan Mustapa et al., 2024). Also, collective leadership can have a significant impact on various outcomes within an organisation, such as enhancing collective effectiveness, promoting innovation, creativity and adaptability within the organisation, etc. (Wan Mustapa et al., 2024).

For the purposes of this project, shared leadership, in the sporting context, is conceptualised as a combination of vertical and shared leadership with an appropriately broad distribution of formal leadership responsibilities within the team (Cotterill et al., 2022), with collective leadership encompassing more collaborative “work to create a leaderful environment” (Ospina, 2017, p. 278) and outcomes.

2.8 Summary

This chapter has reviewed academic literature related to UF and SOTG. First, it explored how SOTG, as an ethical framework and self-management mechanism, shapes players' behaviour through the principles of fairness, honesty, tolerance, and respectful communication (Amoroso et al., 2024; Crocket, 2015; WFDF, 2020). These values connect directly to broader discussions of sportspersonship, which has been theorised as encompassing both the inhibition of unsporting behaviour and the promotion of prosocial conduct (Constandt et al., 2018).

The literature on moral intelligence further reinforces the influence and importance of leaders displaying personality traits such as empathy, self-control, and respect as the basis of sports behaviour (Turan et al., 2022). At both the individual and team levels, self-leadership also contributes to enhanced performance, emotional regulation, and empowerment, while also being shaped by external forces such as leadership style and organizational culture (Stewart et al., 2011). Manz's (1986) original theory of self-influence was reviewed alongside more recent studies, one of which distinguished between behaviour-focused, natural reward, and constructive thought strategies (Neck & Houghton, 2006).

The review of ethical leadership revealed that leadership is both an individual's moral stance and a process of interpersonal relationships (Brown et al. 2005; Shakeel et al., 2019). The roles of moral person, moral manager, and moral entrepreneur illustrate how leaders set ethical norms, guide team members, and innovate new standards when existing ones are insufficient (Constandt et al., 2020; Shakeel et al., 2019). Closely related to this, the concepts of shared leadership and collective leadership emphasize the dispersion of leadership influence among team members. Shared leadership is defined as a symbiotic phenomenon resulting from horizontal influence and mutual responsibility (Carson et al., 2007; Conger & Pearce, 2003; Zhu et al., 2018), while collective leadership embodies a broader leadership-oriented concept in which responsibility, decision-making, and innovation are decentralized and shared within teams or systems (Fairhurst et al., 2020; Ospina et al., 2020; Wan Mustapa et al., 2024).

The connections between SOTG, sportpersonship, self-leadership and ethical leadership are particularly important for this study because they provide a theoretical perspective. The theoretical perspective would help explain how athletes develop self-regulation, ethical behaviour, self-control, and moral responsibility through SOTG. It also can be used to explore how athletes regulate their own and others' behaviours in a self-refereeing competition environment (Amoroso et al., 2023; Crocket, 2015). Similarly, the intersection of ethical leadership, shared leadership, and collective leadership also provides this research with a framework for understanding the role of spirit captain from the perspective of a broader team leadership ecosystem, rather than regarding it as a single authoritative role (Cotterill et al., 2022; Ospina et al., 2020; Shakeel et al., 2019).

The connection between the spirit captain and ethical leadership may explain how spirit captains can influence the attitudes and behaviours of others through ethical example, communication, and guidance. At the team levels, shared leadership and collective leadership provide insights into how responsibility, leadership influence, and decision-making may be distributed among multiple team members rather than concentrated in a single formal leader. Together, these theoretical perspectives provide an integrated framework for understanding the influence of SOTG and the spirit captain on athlete behaviours within UF.

Taken together, the literature reviewed in this chapter suggests that SOTG may influence athletes' behaviour through the interconnection of processes associated with sportpersonship, self-leadership, ethical leadership, shared leadership and collective leadership. These theoretical perspectives provide the concept foundation for this study and inform the interpretation of the research findings and discussion. Building on this framework, Chapter Three outlines the research design, methodology and methods employed to confirm the purpose, and explore the influence of SOTG and the spirit captain within the New Zealand UF community.

Chapter Three: Research Design

3.1 Introduction

This chapter outlines the research design that guided this study, which explored the impact of Spirit of the Game (SOTG) in Ultimate Frisbee (UF) in New Zealand. First, the chapter introduces the research paradigm that formed the philosophical basis of the study and then details the methods selected to address the research objectives. The chapter describes the data collection methods, as well as the data analysis procedures, including document analysis of secondary data, template analysis of qualitative interviews, and descriptive and inferential statistical analysis of the quantitative survey data. Finally, the chapter elaborates on the steps taken to ensure the quality and ethical integrity of the study.

3.2 Research Paradigm

A research paradigm is “a basic belief system and theoretical framework with assumptions about 1) ontology, 2) epistemology, 3) methodology and 4) methods” (Rehman & Alharthi, 2016, p. 51). In other words, paradigms are ways of understanding and studying the reality of the world (Rehman & Alharthi, 2016). Siddiqui (2019) lists three main research paradigms: positivism, interpretivism and pragmatism, as summarised in Table 2, below.

Table 2

Three Research Paradigms

Paradigms	Author	Year	Theory
Positivism	Park et al.	2020	The existence of a single tangible reality that can be understood, identified and measured.
Interpretivism	Yong et al.	2021	Truth is a particular belief system in a specific context.
Pragmatism	Elgeddawy & Abouraia	2024	Knowledge is changing, dynamic, developing, and acquired through activities that occur between people and the environment.

In addition to these three research paradigms, there are other paradigms commonly claimed by researchers, such as critical realism, which posits the existence of three layers of reality (real, actual and empirical) and focusing on causality (Wynn Jr & Williams, 2012).

This research is situated in the pragmatic paradigm commonly applied to mixed methods. Feilzer (2010) summarises pragmatism as an alternative paradigm that philosophically recognises the existence of single or multiple realities in empirical research. Pragmatism does not expect to find unchanging causal relationships or truths but is committed to using the most appropriate research methods to explore specific problems, theories or phenomena (Feilzer, 2010).

Pragmatism supports the use of different research methods and analysis models (Feilzer, 2010), which is consistent with the use of mixed methods in this study. The pragmatic paradigm emphasizes the direct practicability of research design and other issues (Morgan, 2014), and can view phenomena from different perspectives and provide rich understanding (Feilzer, 2010). Therefore, this paradigm can help in completing the design and analysis of this research more effectively.

3.3 Methodology

This study uses a mixed-methods approach (Johnson et al., 2007), combining quantitative and qualitative methods to achieve the following three ROs, with a descriptive–interpretivist lens (Smythe, 2012).

RO1: To confirm what was/is the purpose of the spirit concept and captain in the sport of UF.

RO2: To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in the sport and with their team (in New Zealand).

RO3: To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in other sports and areas of their lives (in New Zealand).

Mixed methods are generally considered to be a combination of quantitative and qualitative methods in a single study (Johnson et al., 2007; van der Roest et al., 2015). However, Johnson et al. (2007) pointed out that the definition of mixed methods has not been clear, and differences in the mixing stage and in mixing methods contribute to this problem. Therefore, Johnson et al. (2007) gave a general definition of the mixed-methods approach:

mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration. (p. 123)

This study used qualitative methods to achieve RO1, taking a descriptive—as opposed to an interpretivist—approach (Smythe, 2012). Thus, RO1 is achieved through descriptive summaries of the secondary data and semi-structured interviews with two UF organisation leaders. The approach to achieving RO2 and RO3 used both qualitative and quantitative methods. Ghanad (2023) stated that quantitative research aims to quantify the data and summarise the findings obtained from the study sample from different perspectives. Quantitative research results can reveal the views of a large number of people on an issue, as well as the diversity of those views (Ghanad, 2023). RO2 and RO3 are addressed with different layers of evidence through the answers to the closed questions of the survey, which can be presented more concisely in the form of tables and figures. Subsequently, the open-ended questions (qualitative insights) in the survey and UF player interviews supplemented the quantitative data collected, thereby increasing the depth and richness of the results.

Mixed methods enable researchers to explore diverse perspectives through different exploratory approaches (Shorten & Smith, 2017). The data collected through the player interviews helped this study to provide more solid evidence and a deeper understanding of the data collected through the survey. This is consistent with the conclusion of Johnson et al. (2007) that one of the main purposes of mixed-methods research is to corroborate. Therefore, mixed methods are the most appropriate methodology to achieve the research objectives and, hopefully, integrate the conclusions obtained in response to RO1, RO2 and RO3.

3.4 Data Collection

Data collection methods include secondary data, interviews and a survey. Data collection was subject to approval by the AUT Ethics Committee (AUTEC) (see letters of approval dated 12/2/2025 and 21/5/2025 attached as Appendix A and Appendix B respectively).

3.4.1 Secondary Data Collection

To support the context of this study, a range of secondary data was collected and analysed to achieve RO1: To confirm what was/is the purpose of the spirit concept and captain in the sport of UF. These sources included official documents, scholarly articles, and website content related to SOTG, the role of spirit captains, and the broader structures and values of UF. The secondary data helped to establish a theoretical and historical foundation for understanding the concepts and meanings of SOTG and the spirit captain. These materials also informed the design of the survey and interview questions. Table 3 below summarises the secondary data sources used in this study.

Table 3

Secondary Data

No.	Type of Data	Title/Description	Source/Author, Year	Link/URLs
1	Official Document	Spirit Captain Role	WFDF, 2020	https://wdf.sport/wp-content/uploads/2020/08/PROVISIONAL-WFDF-Spirit-Captain-Role.pdf
2	Official Document	WFDF Rules of Ultimate 2025-2028	WFDF, 2025-b	https://rules.wdf.sport/wp-content/uploads/2024/12/WFDF-Rules-of-Ultimate-2025-2028.pdf
3	Website Content	Spirit of the Game	WFDF, n.d.-c	https://wdf.sport/spirit-of-the-game/
4	Website Content	History	WFDF, n.d.-a	https://wdf.sport/history/
5	Official Document	5 th Edition Official Rules of Ultimate Frisbee	Denburg et al., 1975	https://www.alanhoyle.com/ult-rules/5th_Edition.pdf

6	Official Document	6 th Edition Ultimate Frisbee Official Rule	International Frisbee Association (IFA), 1976	https://www.alanhoyle.com/ult-rules/6th_Edition.pdf
7	Official Document	7 th Edition Ultimate Frisbee Official Rule	IFA, n.d.	https://www.alanhoyle.com/ult-rules/7th_Edition.pdf
8	Official Document	8 th Edition The Rules of Ultimate	Ultimate Players Association (UPA), 1982	https://www.alanhoyle.com/ult-rules/8th_Edition.pdf
9	Official Document	Spirit Captain Guide	USA Ultimate, 2020	https://usultimate.org/wp-content/uploads/2020/11/Spirit-Captain-Guide-FINAL-VERSION.pdf

3.4.2 Interview Data Collection

The interview data was sourced from four semi-structured interviews with UF leaders (n = 2) and UF players (n = 2). Semi-structured interviews permit the interviews to be focused while still granting investigators autonomy to explore relevant ideas that may arise during the interview process (Adeoye-Olatunde & Olenik, 2021). Also, it can be employed to enhance the depth of quantitative data, as in a mixed-methods approach (Adeoye-Olatunde & Olenik, 2021).

Ultimate Frisbee Leader Interviews

To provide important context for the study and explore RO1, “To confirm what was/is the purpose of the spirit concept and captain in the sport of UF”, two semi-structured interviews were conducted with key stakeholders in two UF organizations. Two participants were the CEO of NZU and the president of the WFDF. Adams (2015) stated that semi-structured interviews are suitable for exploring the individual thoughts of the participants. These two participants were chosen because they have a deep and authoritative understanding of the sport of UF, especially SOTG, the role of the spirit captain, and the historical evolution of both. The president of the WFDF could provide a global perspective on the significance of UF, SOTG, and the spirit captain, while the CEO of NZU could provide insights specific to the New Zealand context, which is consistent with the focus of this study on the UF community in New Zealand.

The researcher contacted participants via email using the publicly available email addresses on the NZU and WFDF websites. Each potential participant received an invitation email with an information sheet attached (see Appendix C). After they agreed to participate, the researcher sent them a consent form and a set of indicative interview questions (see Appendices D and E respectively). The interview guide included questions about the history and evolution of SOTG and the spirit captain role, their meaning and purpose, and the broader development of UF. After the participants signed and returned the consent form, the researcher scheduled and conducted the interview online via Microsoft Teams. The interview with the NZU CEO was conducted in April 2025 and lasted 27 minutes, while the interview with the WFDF president was conducted in May 2025 and lasted 55 minutes. Both interviews were recorded using the built-in recording and automatic transcription of Microsoft Teams. Both participants agreed to be identified by their organisational role and affiliation in this study.

Ultimate Frisbee Player Interviews

To achieve RO2, “To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players’ behaviours in the sport and with their team (in New Zealand)”, and RO3, “To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players’ behaviours in other sports and areas of their lives (in New Zealand)”, the researcher conducted follow-up interviews with UF athletes. Adams (2015) stated that semi-structured interviews are applicable when, after drafting a survey, it is found that the research requires more open-ended questions and in-depth studies to address some important issues. After collecting the data from the survey participants responses to four open-ended questions about SOTG and the spirit captain, further information was needed to better achieve RO2 and RO3. Therefore, ethics approval was sought to conduct semi-structured interviews with UF athletes who have held leadership positions to obtain more multi-faceted data.

These interviews were designed to gain a deeper understanding of how SOTG and the spirit captain role impacted athletes’ experiences within and outside of UF, and the role leadership plays in these dynamics. With support from NZU,

interview invitations with an information sheet (see Appendix F) were sent to the same group of athletes (approximately $n=610$) who had previously received the survey invitation. However, the interview invitation specifically requested that participants have experience in a leadership role (team captain or spirit captain) and included direct contact information of the researcher to allow interested participants to make contact.

The initial aim was to recruit six participants, one male and one female from each of the three levels (elite, competitive, and social). If more players were interested, random selection would be used. However, despite extensive outreach, only two players agreed to participate. After confirming availability to participate, the researcher sent each participant a consent form and a list of indicative interview questions (see Appendices G and H respectively). Both interviews were conducted via Microsoft Teams in June 2025. One interview lasted approximately 30 minutes and the other lasted 47 minutes. The researcher used the built-in recording and automatic transcription of Microsoft Teams to capture the data. The interview guide contained 15 questions focusing on the perceived impact of SOTG on UF participation, the role of spirit captains, and how these concepts influence behaviours in other sports and everyday life. These interviews were designed to supplement the open-ended text responses in the survey and provide richer qualitative data to achieve RO2 and RO3. Participants were informed that their identities would remain anonymous throughout the study.

3.4.3 Survey Data Collection

To achieve RO2 and RO3, the researcher designed an online survey (see Appendix I). The survey consisted of six multiple-choice questions that collected demographic and background information to enable subgroup comparisons, and six matrix questions using a five-point Likert scale to measure players' behaviours across the contexts of SOTG, other sports, and daily life, thereby allowing quantitative comparison of changes over time. Two further open-ended questions were included to elicit richer qualitative reflections on how SOTG had shaped participants' behaviours and experiences in UF, other sports and daily life. Finally, one multiple-choice question on the perceived influence of the spirit

captain was followed by an open-ended question inviting participants to provide concrete examples.

Matrix questions can efficiently group the questions that would originally need to be presented in pages (Liu, 2017). The matrix format helps improve the clarity and targeting of the survey by grouping related questions. The use of Likert scale surveys allows for the rapid collection of data that may be examined through multiple methodological approaches, with the quantitative results enabling meaningful comparison and integration with qualitative data (Nemoto & Beglar, 2014). Likert scale items allow for precise measurement of perceived influence, producing quantitative data that can be systematically compared and analysed. This format contributes to our understanding of the impact of SOTG and the spirit captain role on athletes' personal behaviour.

The first part of the survey used multiple-choice questions to divide the participants into broad categories (Fisher & Marshall, 2009). The survey first asked six demographic and background questions to divide participants into different groups, see Table 4 below.

Table 4

Demographic & UF Background Categories

Age	Gender	How long you have been playing Ultimate Frisbee?	In 2024, what is the highest level you played?	In the competition level you identified in the previous question, what was your team role?	Do you play any other competitive sports than ultimate frisbee?
20-30	Male	Less than 1 year	New Zealand National team	Captain	No
31-40	Female	1-5 Years	New Zealand Mixed National Division 2	Spirit Captain	Yes
41-50	Non-binary / third gender	More than 5 years	2024 ulMi4TES League	General Player	
Above 50	Prefer not to say				

The researcher then explored the impact of SOTG on participants through six items with a matrix presentation (Liu, 2017) using a five-point Likert scale, which are ordinal measurements (Fisher & Marshall, 2009) that rank participants' scores into a hierarchically arranged scale. The five-point Likert scale used was: poor, not good, good, very good and excellent, based on the Amoroso et al.'s (2024) study on SOTG. The questions covered three key dimensions: SOTG, behaviours in other sports and behaviours in daily life.

To study the impact of participating in UF on players' SOTG, the items asked participants to score themselves in the five categories, both when they first encountered UF and now (as at survey completion), on the five-point Likert scale. The categories were taken from the five basic principles of the SOTG scoring system set by WFDF (2020) with both the categories and Likert scale previously used by Amoroso et al. (2024) (as set out in Table 5).

Table 5

Items 8 and 9 with Categories and Likert Scale

Item 8	Please rate your own Spirit of the Game aspects as at the time you first played Ultimate Frisbee
Item 9	Please rate your own Spirit of the Game aspects now
Categories	Likert Scale
1. Rules Knowledge and Use	Poor, Not Good, Good, Very Good, Excellent
2. Positive Attitude and Self-control	Poor, Not Good, Good, Very Good, Excellent
3. Respectful Communication	Poor, Not Good, Good, Very Good, Excellent
4. Fair-mindedness	Poor, Not Good, Good, Very Good, Excellent
5. Fouls and Body Contact	Poor, Not Good, Good, Very Good, Excellent

To investigate the impact of UF participation and SOTG exposure on players' behaviours in other sports and daily life, participants were asked to score their behaviour on the five-point Likert scale in six categories, both when they first encountered UF and now (as at survey completion). The first three categories were the SOTG principles of Positive Attitude and Self-control, Respectful Communication, and Fair-mindedness, after removing the two SOTG principles more relevant to UF sports—Rules Knowledge and Use and Fouls and Body

Contact. The last three categories were derived from Crocket's (2015) study, in which the author used Moderation, Tolerance, and Honesty as the attributes that athletes should demonstrate when participating in UF. The researcher believed that positive attitude and self-control overlapped with moderation, so self-control was incorporated into the moderation category (as set out in Table 6).

Table 6

Items 10 – 13 with Categories and Likert Scale

Item 10	Please rate your behaviour when you were playing other sports in the following areas (before you played Ultimate Frisbee).
Item 11	Please rate your behaviour when you are playing other sports in the following areas (now).
Item 12	Please rate your behaviour in life in the following areas (before playing Ultimate Frisbee).
Item 13	Please rate your behaviour in life in the following areas (now).
Categories	Likert Scale
1. Fair-mindedness	Poor, Not Good, Good, Very Good, Excellent
2. Positive Attitude	Poor, Not Good, Good, Very Good, Excellent
3. Respectful Communication	Poor, Not Good, Good, Very Good, Excellent
4. Moderation (control of own behaviour)	Poor, Not Good, Good, Very Good, Excellent
5. Tolerance (reaction to other's behaviour)	Poor, Not Good, Good, Very Good, Excellent
6. Honesty	Poor, Not Good, Good, Very Good, Excellent

The participants were then invited to answer two open-ended questions to share some reflections or stories about how SOTG influences their behaviour in other sports and in daily life. At the end of survey, participants were invited to answer a multiple-choice question about the degree of influence of the spirit

captain and an open-ended question to share examples of how spirit captaining affected their behaviour.

The survey was distributed through NZU to three groups of athletes. The athletes were selected through purposive sampling: all New Zealand UF athletes participating in the 2024 World Ultimate Frisbee Championship (n = 62), all participants participating in the 2024 New Zealand Mixed Ultimate Frisbee Championship (approximate n = 300), and athletes participating in the 2024 Auckland Ultimate Frisbee Association-hosted *ultiM4TES* Summer League (approximate n = 250). Participants had to be 20 years of age or older. Purposive sampling (Rai & Thapa, 2015) ensured representation of elite, competitive, and social sectors, allowing for a broader and more comprehensive data set. Participation was voluntary and all survey responses were anonymous to protect the privacy of participants.

3.5 Data Analysis

This study involved the collection of both quantitative and qualitative data, so different data analysis methods were required.

3.5.1 Secondary Data Analysis

In this study, official documents, academic articles, and website content provided a foundational understanding of the history and development of SOTG and the spirit captain role within UF. This study used document analysis as the primary method for analysing this secondary data. Document analysis is a systematic process for reviewing or evaluating documents (both print and electronic), including books, scholarly journal articles, organizational reports, and official websites (Morgan, 2022). This approach enables researchers to develop empirical knowledge from existing texts. A major advantage of using document analysis is that it extracts stable, publicly accessible data, thereby minimizing potential bias that may arise from researchers' direct interactions with participants (Morgan, 2022).

3.5.2 Interview and Survey Open Text Data Analysis

The qualitative data collected through interviews and open-ended survey questions were analysed using template analysis. Template analysis is a kind of thematic analysis method that emphasises the use of hierarchical coding but employs a relatively high degree of structuring in the process of analysing text data (Brooks et al., 2015). Template analysis can be more flexibly adjusted according to the requirements of specific research and its philosophical basis (Brooks et al., 2015). As seen in Table 7, Brooks et al. (2015) divided template analysis into six different stages.

Table 7

Phases of Template Analysis

Phase	Description of the process
1. Become familiar with the accounts to be analysed.	Read through the dataset or record a part of it.
2. Carry out preliminary coding of the data.	Researchers can tentatively set the topic and start with some pre-determined topics that might be helpful for the analysis.
3. Organize the emerging themes into meaningful clusters and begin to define how they relate to each other within and between these groupings.	This will include hierarchical relationships, that is, narrower topics are nested within broader topics. It may also include horizontal relationships across clusters. Themes that run through multiple different clusters are sometimes referred to as 'integration themes'.
4. Define an initial coding template.	Develop the initial version of the coding template based on the data subset.
5. Apply the initial template to further data and modify as necessary.	Researchers will examine the new data. If they find any materials that may be relevant to the research, they will consider whether any of the topics defined in the initial template can be used to represent them. If the existing topic cannot be easily 'adapted' to the new data, a new topic can be inserted, the existing topic can be redefined, and seemingly redundant topics can even be deleted. Researchers can first study multiple records and document possible modifications and then build a new version of the template.
6. Finalize the template and apply it to the full data set.	Researchers need to determine whether the template meets the requirements of their current project based on the existing resources. If there is still a large amount of data clearly related to the research question that cannot be encoded into the template, then the development of the template cannot be

regarded as sufficient. Generally, choosing as diverse an initial account as possible for analysis can facilitate this. If further analysis is needed, the template can always be re-examined.
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Phases one, two and three were carried out by reading and re-reading the hard copy texts, applying colour-coding, making hand-written notes and creating initial codes and clusters. A copy of the preliminary codes is attached as Appendix J. Phases four, five and six of the template analysis were supported by the use of NVivo 14 software. The final NVivo coding template is attached as Appendix K.

3.5.3 Quantitative Data Analysis

To analyse the quantitative data collected from the closed survey questions, this study used SPSS v30.0 software to conduct descriptive and inferential statistical analyses. Descriptive statistics are used to summarise and simplify complex data sets, allowing researchers to identify patterns and trends in participants' responses; these statistics also support the creation of visual presentations such as tables and charts to effectively communicate the findings (Alabi & Bukola, 2023). The researcher calculated counts and percentages in each response category, especially within the five-point Likert scale. This method allowed the researchers to deliver a detailed presentation of the distribution of perceived behavioural changes and the SOTG framework before and after participating in UF sport.

To assess the statistical significance of differences in the data, chi-square tests were used. The chi-square test series is one of the most commonly used statistical analysis methods to answer questions about associations or differences between categorical variables (Franke et al., 2012). The chi-square test is appropriate for examining group differences when the dependent variable is categorical, and it can be applied to both dichotomous variables and studies involving multiple comparison groups (McHugh, 2013). This test can help determine whether observed differences in categorical responses, such as differences in self-rated behaviour or differences between different groups of players (e.g., captain vs. spirit captain vs. general player or elite player vs.

competitive player vs. social player), are statistically significant. This approach allowed the researcher to explore the extent to which the concepts of SOTG and the spirit captain role influence players' engagement in the sport, as well as their behaviours in other sports and daily life. All quantitative analyses were conducted using SPSS to ensure that the results were accurate and reliable.

3.6 Quality and Ethics

Research quality refers to the extent to which a study meets the criteria of relevance. It is a multi-dimensional and context-dependent concept that covers attributes such as originality, reliability, and value (Margherita et al., 2022). In quantitative research, quality criteria usually include internal validity, external validity, reliability, and objectivity; while in qualitative research, quality criteria include credibility, transferability, dependability, and confirmability (Frambach et al., 2013). Swanborn (1996) summarised the basic elements of research quality in both research methods into three main criteria: controllability, reliability, and validity. The researcher has chosen the three key dimensions proposed by Swanborn (1996) to examine the quality of the current research.

Research should also follow the principles of objectivity and honesty, especially when involving animals or humans (Dahlquist, 2006). When presenting and interpreting research results, researchers must be honest and objective, treat their peers fairly and impartially, and be honest to society (Dahlquist, 2006). Therefore, ethical considerations are another important aspect of research, ensuring that participants are treated with respect and that the research process is conducted with integrity and responsibility.

The following sections outline how this study adhered firstly to ethical principles, then, importantly, to quality criteria.

3.6.1 Ethics

This study recruited human participants through interviews and online surveys. Therefore, strict ethical standards were followed throughout the study. The project was reviewed and approved by AUTECH. The approval process included the submission of a participant information sheet, informed consent form,

interview and questionnaire guide, and all materials were reviewed to ensure compliance with ethical standards. Informed consent was obtained from the participants before any data was collected, and all participants had the right to withdraw at any stage of the study.

Interviews with UF Leaders

Interviews with UF leaders were conducted with participants who volunteered to participate in the study. Prior to participation, each participant received an information sheet and indicative interview questions outlining the purpose of the study, expected participation, and participant rights. Informed consent was signed prior to the interview, and participants were asked at the beginning of the recording if they were willing to be recorded. Participants were also informed that their roles and organizations would be identified in the final study. They had the opportunity to review the data and decide what quotes could be used in the final analysis before the project was completed.

Interviews with UF players

Interviews with UF players were conducted on a voluntary basis, with participants contacting the researcher directly via an invitation email sent by NZU. The identities of the participants were kept confidential during the study and were known only to the researcher; to ensure they remain unidentifiable in the thesis, they are only referred to as Player A, Player B. Participants received an information sheet and indicative interview questions prior to each interview. Informed consent was obtained via a signed consent form and again at the start of the interview to verbally confirm the recording. Players were reminded that they could withdraw at any time and could review the quotes to be included in the final thesis. Interview transcripts were sent to each participant so that they could add, modify or delete any content.

Online Survey

The online survey was distributed through NZU and accompanied by an invitation letter, with the first page of the survey serving as a participant information sheet (see Appendix L). To ensure responses were collected only from adults, the information sheet clearly stated that the survey was for people

aged 20 years and over. In addition, the first question on the survey asking about age also reminded participants under 20 years old not to proceed. Participation was completely voluntary and anonymous. Respondents could withdraw from the survey at any time without penalty. Although some participants left their email addresses to enter a prize draw, the data was stored separately to ensure that any individual responses could not be linked to an identity by the researcher or others.

3.6.2 Quality

Ensuring the quality of research is essential to maintaining the credibility, rigour, and impact of research. This study adopts the framework proposed by Swanborn (1996), which identifies controllability, reliability, and validity as the three basic dimensions of quality applicable to both qualitative and quantitative research methods. To further consolidate the framework, this study also adopts the definition of Swanborn (1996) to clarify the operational significance of each criterion at the methodological and philosophical levels.

According to Swanborn (1996), controllability requires that the research results and procedures are open, the conclusions are expressed in precise language, and the results are testable. In this study, controllability was achieved by fully documenting the research steps (from the development of interviews and surveys to the data analysis procedures). The data collection process (collection of secondary data, development of interviews and surveys) and the data analysis procedures (document analysis, template analysis, and SPSS analysis) were systematically recorded to ensure the transparency and replicability of the research. Ethical approval, participant information sheets, informed consent forms, and analysis notes are all included in the Appendices and referenced throughout the thesis, which further enhances the transparency of the research process.

Swanborn (1996) interpreted reliability as the degree to which research results are independent of individual researchers, research time, or tools used. This study maintained reliability by using standardized tools such as indicative interview guides and structured survey questions. In the qualitative part of the study, the researcher conducted template analysis and adopted participant

checking and peer (supervisor) review to reduce researcher bias. In the quantitative part, the researcher used SPSS to process data to ensure consistency in processing and interpretation. In maintaining the stability and repeatability of the procedures, the aim for this study was to produce credible and reliable research results.

In a broad sense, validity refers to the accuracy of a research report's description and interpretation of the empirical world; in a narrow sense, validity refers to the absence of random errors and systematic errors in the research (Swanborn, 1996). In this study internal validity was enhanced by integrating the data collection instrument with the conceptual and research frameworks, especially with respect to concepts such as SOTG and leadership. The variety of data sources—secondary literature, interviews with UF leaders and players, and surveys of UF players—ensured multiple perspectives on the same phenomenon, thereby enhancing construct validity. In addition, efforts were made to maintain external validity by sampling diverse participants and clearly situating the findings within the New Zealand UF community.

The commitment to methodological rigour and integrity in this study was demonstrated by exploring the principles of controllability, reliability, and validity as outlined by Swanborn (1996). These principles guided each stage of the research process, from design to reporting, ensuring that the conclusions drawn were well-founded and trustworthy.

3.7 Summary

This chapter has provided an overview of the design of this research, which aims to explore the concept of SOTG in New Zealand UF community and its manifestation in competitions, as well as the role of spirit captain. The pragmatic paradigm was adopted in the research, to support the integration of multiple research methods and allow for the flexible selection of the research method that is most suitable for each research objective. The research methods adopted mixed methods, combined with the descriptive–interpretivist lens, and used qualitative and quantitative methods to achieve the three research objectives.

This chapter has described the data collection methods in detail: analysing secondary data (academic and industry) to confirm the historical background and significance of SOTG and spirit captain; conducting semi-structured interviews with the leaders and athletes of UF to gain a deeper understanding of their viewpoints and feelings; and designing a survey that includes Likert-scale and open-ended questions to explore the experiences and behaviours of athletes. Furthermore, this chapter has also outlined the data analysis process, including document analysis, qualitative data template analysis, and descriptive and inferential statistics analysis (chi-square tests) of the survey. Finally, this chapter has introduced measures to ensure the quality and ethical standards of research, including obtaining approval from AUTECH, ensuring the transparency of the research process, and adhering to principles such as controllability, reliability, and validity.

These elements together form a rigorous, systematic and research goal-oriented research design, laying the foundation for reliable research conclusions. The next chapter presents the findings of this study. It first introduces the secondary data related to RO1 and the interview results with UF organisation leaders and then presents the survey and athlete interview data related to RO2 and RO3.

Chapter Four: Findings

4.1 Introduction

This chapter contains the research findings addressing the three research objectives that guide this study. In this introduction the research objectives are re-stated with a summary of the data collection methods, response rates and initial analysis. Subsequent sections then provide further detail organised under separate headings for each research objective.

To better understand the “purpose of the spirit concept and captain in the sport of Ultimate Frisbee (UF)” (RO1), qualitative data were derived from interviews with UF leaders and several secondary documents. To achieve the objectives “To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain the on players’ behaviours in the sport and with their team” (RO2) and “To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players’ behaviours in other sports and areas of their lives (in New Zealand).” (RO3), the data was collected through an online survey and semi-structured interviews with UF athletes.

NZU distributed the online survey to those who participated in the 2024 New Zealand Mixed Ultimate Championships (approximately 300 competitive athletes) and the 2024 ulTiM4TES Summer League (approximately 250 social athletes), plus the 62 (elite) athletes who represented New Zealand in the World Ultimate Championship 2024. A total of 108 athletes responded to this survey. After excluding respondents under the age of 20 and those who did not complete the survey in full, 56 valid responses were retained for analysis (elite n=30, competitive n=24, social n=2).

Statistical analysis, using the chi-square test, was employed to examine the changing trends and differences between categorical groups, and to evaluate the statistical significance of the observed patterns. The findings are presented first using general comparisons between the participants’ self-rating as at the time of their first UF experiences (‘before’ their UF playing experience) and then as at the time of their completion of the survey (‘after’ their UF experience).

Further findings based on categorical (age, gender, playing time, role and level) group comparisons are then presented. For the UF leader interviews, a simple descriptive analysis was undertaken. For the UF player interviews (n=2) and survey open text data (n=56), template analysis was applied to the data resulting in the final coding template (Figure 2).

Figure 2

Ultimate Frisbee—Final Coding Template (Player Interviews and Open Text Survey)

1	Understanding and Culture Difference	3	SOTG		
				hip in other sports	3.5.3.6 Impact Deliberate in life
1.1	Understanding	3.1	Team culture and SOTG		
1.2	Culture	3.2	SOTG, self-officiation and UF	3.5.2.2 Impact Rules knowledge and use in other sports	3.5.3.7 Impact Communication in life
2	Spirit Captain	3.2.1	Tension between officiation and SOTG		
		3.2.2	SOTG as an attractive part	3.5.2.3 Impact Positive attitude in other sports	3.6 Little or none impact form SOTG
2.1	SC Style	3.2.3	SOTG as a unique part	3.5.2.4 Impact Moderation in other sports	3.6.1 Little or none impact on life
2.1.1	SC Style up front	3.3	SOTG and Own ethics		3.6.2 Little or none impact on other sports
2.1.2	SC Style lack of confidence	3.4	SOTG and competitiveness	3.5.2.5 Impact Deliberate in other sports	3.7 Elements affect SOTG's influence
2.2	Impact of SC	3.4.1	Tension	3.5.2.6 Impact Communication in other sports	
2.2.1	SC has little or none impact	3.4.2	Balance		
2.2.2	Positive impact of SC	3.5	Positive impact of SOTG		
2.3	Elements affect SC's influence	3.5.1	Impact on UF		
2.3.1	SC's involvement based on game	3.5.1.1	Impact Tolerance in UF		
2.3.2	SC's influence depends on players' behavior	3.5.1.2	Impact Rules knowledge and use in UF	3.5.3 Impact on life	
2.3.3	SC's influence depends on own behavior	3.5.1.3	Impact Positive attitude and self-control in UF	3.5.3.1 Impact Tolerance in life	
2.3.4	Moral person easy to be a moral leader	3.5.1.4	Impact Accommodating in UF	3.5.3.2 Impact Positive attitude in life	
2.3.5	Easy to be bad SC, hard to be good SC			3.5.3.3 Impact Moderation in life	
2.3.6	Coach shared function of SC	3.5.2	Impact on other sports	3.5.3.4 Impact Honesty in life	
		3.5.2.1	Impact Sportspersons-	3.5.3.5 Impact Empathy in life	
					4 Collective responsibility for UF
					4.1 SOTG and responsibility for others
					4.2 Collective responsibility

Drawing from the coding template and the literature review, the key 'theoretical' themes of sportspersonship (vs. competitiveness), self- and ethical leadership, and/or shared/collective leadership were then explored with an additional 'understanding and cultural difference' theme. The key findings from the data sets are now summarised below under the three research objective headings.

4.2 Purpose of the Spirit Concept and Spirit Captain in UF (RO1)

According to the definition of WFDF, "Spirit of the Game (SOTG) is one of the core elements in flying disc sports. It is similar to fair play and sportsmanship, but there is a much higher emphasis put on it in Ultimate" (WFDF, n.d.-c), and

“all players are responsible for administering and adhering to the rules. Ultimate relies upon a Spirit of the Game that places the responsibility for fair play on every player” (WFDF, n.d.-c). Early rule versions indicate that SOTG has always been a consistent feature of UF, despite its continuous development and evolution. In the fifth edition of the rules, the spirit concept was formally mentioned for the first time: “Primary among these is the spirit of sportsmanship which enables the honor system to be effective” (Denburg et al., 1975), and “if no referee is used, the two teams play on an honor system” (Denburg et al., 1975). The sixth edition of the rules did not expand the description of the spirit concept, it merely made the competition rules more complete.

It was not until the seventh edition of the rules that the content about the spirit concept was expanded. The phrase “Spirit of the game” appeared in the rules for the first time and described the expectations regarding SOTG in more detail:

Highly competitive play is encouraged but never at the expense of the bond of mutual respect between players or the basic joy of play. Protection of these vital elements eliminates some behaviour from the Ultimate field. Such actions as taunting of opposition players, dangerous aggression, intentional fouling or other ‘win at all costs’ behaviours are fouls against the spirit of the game and should be discouraged by all players. (IFA, n.d.)

This principle has also been carried forward by the UF sport to the present day, becoming the core idea of SOTG and recorded in many current official documents of WFDF. By the eighth edition (1982), launched by the Ultimate Players Association (UPA), although the content covering the spirit concept did not increase, SOTG now had a separate section for emphasis in the official rules.

Over time, the emergence of the spirit scoring system gradually evolved SOTG into a structured framework which is clearly expounded by five principles: rules knowledge and use, fouls and body contact, fair-mindedness, positive attitude and self-control, and communication (WFDF, 2021). The current *WFDF Rules of Ultimate 2025-28* (WFDF, 2025-b) divides all the rules into 20 chapters. The first chapter is SOTG, which describes the responsibilities of SOTG, the penalty

mechanism in UF sport, and how players and teams should act to maintain SOTG; it also provides some actual cases of good examples and violations of SOTG. These official documents reflect how SOTG has gradually evolved from a concept into a set of clear and (self-) enforceable behavioural standards.

Interviews with the president of the WFDF and the CEO of NZU confirmed that SOTG is not merely an additional concept of UF, but rather a core principle defining the structure and culture of UF. According to the recollection of the WFDF president, from the very beginning, the UF was designed to be “played without referees”, and SOTG became the “basic of the game when it first started”, the fundamental framework to ensure fairness through self-refereeing. He explained that the concept of emphasizing autonomy and mutual respect has existed since the origin of this sport and has been continuously strengthened. He confirmed that rule versions began to include provisions that emphasize mutual respect, fair competition and the joy of participation. As evidenced in the documents, he recalled that these principles were advanced and completed and eventually penned into the rules in the eighth edition of the rules in 1982. Although only a short paragraph, it was important that this version of the rules was the first to incorporate SOTG into the rules and also the first rule released by an official institution. Over time, SOTG gradually evolved from a vague concept into a clear, structured and institutionalized system of rules and values. According to the president of the WFDF, SOTG represents the “defining element of the subculture of Ultimate”, setting it apart from other sports that rely on external refereeing and punishment systems.

The CEO of NZU also emphasized that SOTG is a “social contract” among all players. He explained that it enables athletes to always prioritize respect, fairness and communication during competitive matches. Without the mutual understanding brought by SOTG, the game would need external referees, and this would undermine one of UF’s most unique and valuable features: “self-officiation”. In his words, “if we don’t have Spirit of the Game, then we need to have referees”, and that would fundamentally change the nature of the sport. In his view, the main function of SOTG is to achieve self-refereeing by ensuring that all participants agree to follow the rules and respect each other. Athletes not only need to understand the rules but also cooperate to enforce them, even

in high-level competitions. He cited cases in the New Zealand National Championship where athletes “retracted calls or accepted calls to their detriment”, demonstrating that SOTG and self-officiation remain effective under high pressure or intense competition. He also pointed out that although the expression of SOTG (such as positive communication and high fiving) may vary between the social level and the elite level, its fundamental purpose is to “uphold the fairness of the sport”.

Finally, both leaders acknowledged that SOTG has undergone significant changes over time. The president of the WFDF believes that the institutionalisation of SOTG, including the introduction of “a scoring system”, “spirit time-outs” and “feedback to teams over the course of a week”, is essential to ensuring its relevance and consistency in international competitions. These mechanisms help athletes and teams maintain a sense of responsibility, especially in “diverse and highly competitive environments” where understanding and expectations of behaviour may vary. For an example, he explained that “if teams’ spirit scores are out of line, we go have a conversation with them”, and that the spirit ranking system provides a structured way to track and address spirit issues during events. These measures indicate that SOTG has become a formal and enforceable aspect of the management of UF sport, ensuring that the core values of this sport are maintained even in the highest-level international competitions.

Turning to the purpose of the spirit captain, as defined by USA Ultimate,

a spirit captain is a team member who is eligible to participate in the game and has been designated to address, discuss and resolve spirit issues at any point throughout the competition with opponents, teammates, coaches and game or event officials. (USA Ultimate, 2020)

This position emerged with the formalisation of SOTG in international competitions, aiming to make communication smoother under high pressure. The spirit captain acts as a liaison between teams, coordinating mental pauses and guiding the team’s behaviour to comply with SOTG (WFDF, 2020).

According to the CEO of NZU, the role of spirit captain “has only emerged in the past 10 years”. Initially, the UF team did not have spirit captain, and the responsibility of maintaining SOTG “was shared by all the players”. He expressed some reservations about the introduction of this role, noted that “every time you bring in a person who’s going to be in charge of the aspect, it lessens the responsibility on all other players.” However, he also acknowledged the “practical benefits” of this role: spirit captain helps promote direct communication within and between teams in tense situations and provides a single point of contact for checking the spirit during or after the competition. He said that, without a spirit captain, “it’s very hard for 20 people to talk to 20 people”, whereas having one designated person enables more manageable and structured conversations. The WFDF president also described the spirit captain as one of several tools developed to “institutionalise Spirit of the Game” and support ethical behaviour, especially in high-level international competitions.

In summary, both interviews confirmed that the roles of SOTG and spirit captain are designed to uphold the ethical foundation of UF, achieve effective self-refereeing, and foster a culture of mutual respect and fair competition among athletes. The president of WFDF believes that although some critics question whether self-refereeing can work in elite-level competitions, UF has demonstrated that structured spirit systems, including spirit scoring, spirit time-outs and captain-led discussions, can operate effectively in elite-level competitions and tournaments. The spirit captain and SOTG represent a values-driven model of competition, which UF seeks to retain and which also has the potential to provide an ethical framework for other sports around the world.

4.3 The Impact of Spirit Concept/Captain on UF Players’ Behaviours in UF and with their Team (RO2)

4.3.1 Quantitative Data: Impact of SOTG in UF

RO2 focussed on the impact of SOTG and the spirit captain within UF. Table 8 reveals notable differences across all five SOTG principles, many of which are statistically significant. The chi-square test was used to examine changes in

players' self-rated behaviour between their first time playing UF ('before') and their current stage ('after'), and also to determine whether these distributional changes were statistically significant. This section discusses the key results shown below.

Table 8*Changes in SOTG Self-Ratings (Before and After)*

SOTG	Period	Poor (1)	Not Good (2)	Good (3)	Very Good (4)	Excellent (5)	χ^2
Rules Knowledge and Use	Before	58.9%	35.7%	5.4%	0%	0%	0.04*
	After	0%	7.1%	74%	0%	17.9%	
Positive Attitude and Self-control	Before	0%	7.1%	44.6%	35.7%	12.5%	0.01*
	After	0%	3.6%	21.4%	48.2%	26.8%	
Respectful Communication	Before	0%	12.5%	51.8%	26.8%	8.9%	0.13
	After	0%	1.8%	23.2%	48.2%	26.8%	
Fair-mindedness	Before	0%	5.4%	51.8%	26.8%	16.1%	0.32
	After	0%	0%	23.2%	44.6%	32.1%	
Fouls and Body Contact	Before	3.6%	28.6%	44.6%	16.1%	7.1%	0.01*
	After	0%	0%	37.5%	42.9%	19.6%	

Note. Percentages may not total 100% due to rounding. *Statistically significant, $p < .05$.

The chi-square results show significant improvements in three of the five SOTG principles (rules knowledge and use, positive attitude and self-control, and fouls and body contact) with observable though non-significant positive trends in other two principles (respectful communication and fair-mindedness).

Survey participants' behaviour with regard to **Rules knowledge and use** showed a statistically significant improvement ($\chi^2 = 0.04$, $p < .05$). When first participating in UF, 58.9% of participants rated themselves as "poor," and only 5.4% rated themselves as "good" or higher. Currently 91.9% of participants rated themselves as "good" or "excellent" and none rated themselves as "poor." These results suggest that participation in SOTG and the self-refereeing system enhances players' understanding and application of the rules, which is a fundamental requirement for engagement in UF.

The **Positive attitude and self-control** dimension of survey participants also demonstrated a statistically significant improvement ($\chi^2 = 0.01$, $p < .05$). The proportion of players who rated themselves as "very good" or "excellent" rose from 48.2% to 75.0% while those who rated themselves as "good" or "not good" declined. This shift indicates that players' emotional regulation, composure, and sportpersonship developed positively over time, reflecting the influence of SOTG on behaviour management during competitive play.

The category of **fouls and body contact** similarly showed a statistically significant change ($\chi^2 = 0.01$, $p < .05$). The proportion of participants who rated themselves as "very good" or higher increased from 23.2% to 62.5% and while those who rated themselves as "poor" and "not good" decreased from 32.2% to none. This suggests that players became more aware of body contact and made stronger efforts to avoid unnecessary physical play, reflecting UF's emphasis on safety and mutual respect.

In contrast, **respectful communication** did not show a statistically significant change ($\chi^2 = 0.13$). Although the numerical distribution of ratings did not differ enough to reach significance, the researcher observed a positive trend: more players currently rate themselves in the higher categories ("very good" or "excellent"). This pattern suggests a gradual improvement in players' ability to communicate respectfully, and possibly reflects the impact of SOTG or the spirit

captain role-modelling the calm resolution of conflicts and engaging in positive conversation, which are at the core of UF's culture.

Similarly, **fair-mindedness** did not demonstrate a statistically significant difference ($\chi^2 = 0.32$). The data suggest that while category proportions did not shift markedly, players generally displayed a stable or slightly improved sense of fairness. The researcher observed that players' self-assessments remained consistently high, implying that fair-mindedness may already be deeply embedded within UF culture and therefore less subject to dramatic statistical change.

These findings indicate that the SOTG framework plays a central role in promoting ethical, safe, and emotionally balanced participation in UF. By requiring players to initiate self-control, communicate clearly and reflect on their own behaviour, SOTG has the potential to not only cultivate individual ethical conduct but also enhance team responsibility. Topics for discussion (Chapter 5) include whether the support mechanisms surrounding SOTG, including the presence of a spirit captain, may reinforce these achievements and help create a more cohesive, ethical and value-oriented competition environment.

4.3.2 Quantitative Data: SOTG Category Comparisons

In addition to comparing each dimension of the participants' SOTG 'before' and 'after', the researcher also conducted further analysis to examine whether there were differences in the changes among different demographic groups (such as age, gender, playing time, playing level and role). The chi-square test was used to evaluate the significance of these changes. Three categories (age, gender and level) showed directional improvement (see Appendices M, N, O respectively). However, only two categories (playing time and role) exhibited statistically significant differences ($p < .05$) (see Appendices P and Q respectively). The results and insights in relation to the statistically significant differences for playing time (less than one year, one to five years, more than five years) and role (player, captain, spirit captain) are presented in this section.

Playing Time: Less than 1 year, 1-5 years and 5+ years (see Appendix P)

Table 9 records the findings in the playing time category. As the survey did not have responses from athletes who had participated in UF sports for less than one year, subsequent observations focus on athletes with one to five years of experience and those with more than five years of experience.

Table 9*Playing Time Comparisons*

SOTG	Playing Time	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Rules Knowledge and Use	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	76.9%	23.1%	0%	0%	0%	0.63
		After	0%	23.1%	76.9%	0%	0%	
	More than 5 Years	Before	53.5%	39.5%	7.0%	0%	0%	<.01*
		After	0%	2.3%	74.4%	0%	23.3%	
Positive Attitude and Self-control	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	53.8%	30.8%	15.4%	0.01*
		After	0%	0%	15.4%	69.2%	15.4%	
	More than 5 Years	Before	0%	9.3%	41.9%	37.2%	11.6%	0.18
		After	0%	4.7%	23.3%	41.9%	30.2%	
Respectful Communication	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	61.5%	23.1%	7.7%	<.01*
		After	0%	0%	15.4%	76.9%	7.7%	
	More than 5 Years	Before	0%	14.0%	48.8%	27.9%	9.3%	0.18
		After	0%	2.4%	25.6%	39.5%	32.6%	

Table 9 (continued)*Playing Time Comparisons*

Fair-mindedness	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	38.5%	38.5%	15.4%	0.18
		After	0%	0%	15.4%	61.5%	23.1%	
	More than 5 Years	Before	0%	4.7%	55.8%	23.3%	16.3%	0.58
		After	0%	0%	25.6%	39.5%	34.9%	
Fouls and Body Contact	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	7.7%	30.8%	38.5%	15.4%	7.7%	0.01*
		After	0%	0%	38.5%	53.8%	7.7%	
	More than 5 Years	Before	2.3%	27.9%	46.5%	16.3%	7.0%	0.12
		After	0%	0%	37.2%	39.5%	23.3%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Unsurprisingly, the research found that there is a close relationship between the length of competition experience and the improvement of rule knowledge and use, especially among players with more than five years of competition experience. This group of players showed statistically significant improvement ($p < .01$). From their first time playing UF, the ratings were mainly “poor” and “not good”, but after their playing experiences, they focused on the rating range of “good” and “excellent”. This indicates that the longer one participates in the UF movement, the deeper one’s understanding and application of the rules become, which intensifies the cumulative effect of the self-refereeing system in UF.

Athletes with one to five years of experience also showed statistically significant improvements in positive attitude and self-control ($\chi^2 = 0.01$, $p < .05$) and respectful communication ($p < .01$). Although the changes in the most experienced groups are not statistically significant, the changes in newer players indicate that a relatively short UF participation time can also enhance athletes’ emotional regulation ability and sportspersonship, and SOTG can effectively implant the spirit of respectful communication from the early years of players’ participation.

Role: General player, captain and spirit captain

Table 10 records the findings in the ‘role’ category for general players, captains and spirit captain.

Table 10*Role Comparisons*

SOTG	Role	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Rules Knowledge and Use	General Player	Before	56.4%	38.5%	5.1%	0%	0%	0.10
		After	0%	10.3%	76.9%	0%	12.8%	
	Captain	Before	54.5%	45.5%	0%	0%	0%	0.62
		After	0%	0%	72.7%	0%	27.3%	
	Spirit Captain	Before	83.3%	0%	16.7%	0%	0%	0.12
		After	0%	0%	66.7%	0%	33.3%	
Positive Attitude and Self-control	General Player	Before	0%	5.1%	35.9%	46.2%	12.8%	<.01*
		After	0%	5.1%	17.9%	53.8%	23.1%	
	Captain	Before	0%	18.2%	63.6%	9.1%	9.1%	0.57
		After	0%	0%	27.3%	45.5%	27.3%	
	Spirit Captain	Before	0%	0%	66.7%	16.7%	16.7%	0.56
		After	0%	0%	33.3%	16.7%	50%	

Table 10 (continued)*Role Comparisons*

Respectful Communication	General Player	Before	0%	12.8%	48.7%	28.2%	10.3%	0.24
		After	0%	2.6%	17.9%	53.8%	25.6%	
	Captain	Before	0%	18.2%	54.5%	27.3%	0%	0.45
		After	0%	0%	54.5%	27.3%	18.2%	
	Spirit Captain	Before	0%	0%	66.7%	16.7%	16.7%	0.22
		After	0%	0%	0%	50%	50%	
Fair-mindedness	General Player	Before	0%	7.7%	38.5%	35.9%	17.9%	0.34
		After	0%	0%	17.9%	46.2%	35.9%	
	Captain	Before	0%	0%	90.9%	0%	9.1%	0.52
		After	0%	0%	45.5%	45.5%	9.1%	
	Spirit Captain	Before	0%	0%	66.7%	16.7%	16.7%	0.56
		After	0%	0%	16.7%	33.3%	50%	
Fouls and Body Contact	General Player	Before	5.1%	30.8%	41.0%	17.9%	5.1%	0.26
		After	0%	0%	35.9%	46.2%	17.9%	
	Captain	Before	0%	27.3%	54.5%	18.2%	0%	0.45
		After	0%	0%	45.5%	45.5%	9.1%	
	Spirit Captain	Before	0%	16.7%	50%	0%	33.3%	0.32
		After	0%	0%	33.3%	16.7%	50%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Among different team roles, general players showed significant changes in positive attitude and self-control ($p < 0.01$). Their ratings have clearly risen from a medium level to a higher level, indicating that, regardless of their leadership positions, most players have benefited from the SOTG framework. Interestingly, this significant change was not reflected in the captain or spirit captain findings, possibly because these individuals had already received high scores from a longer-standing involvement in the game, or due to the small number of reference samples ($n = 11$ and $n = 6$ respectively).

4.3.3 Quantitative Data: Impact of Spirit Captain

In addition to examining the differences among different demographic groups, at the end of the survey, participants were also asked about the influence of the spirit captain on them (divided into four degrees: none, low, moderate and high). The results from this question are shown in Table 11.

The researcher also calculated and conducted a cross-gender table (Table 12).

Table 11*Impact of Spirit Captain*

Level of Impact	None (1)	Low (2)	Moderate (3)	High (4)
Percentage	7.1%	35.7%	46.4%	10.7%

Note. Percentages may not total 100% due to rounding.

Table 12*Impact of Spirit Captain—Gender Comparison*

Gender	None	Low	Moderate	High
Male	10.3%	55.2%	27.6%	6.9%
Female	0%	16%	68%	16%
Non-binary or third gender	50%	0%	50%	0%
Prefer not to say	0%	0%	0%	0%

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Overall, most respondents indicated that the spirit captain had at least some influence on their game behaviour. The results indicate that the influence of the spirit captain on players' behaviour is often moderate. Most female respondents (68%) indicated that the spirit captain had a moderate influence, while male respondents' views were more scattered. Many male respondents (55.2%) said the influence was low, and a few (10.3%) said there was no influence at all. Due to the small number of non-binary or third-gender participants ($n = 2$), it is impossible to draw a definite conclusion about the pattern of this group. These results suggest that perceptions of the influence of the spirit captain may be influenced by gender experiences or, potentially, interpersonal relationships within the team, with the women in this sample more likely to acknowledge that the role has a moderate to high level of influence.

4.3.4 Qualitative Data: Impact of SOTG in UF

In the interviews and survey open-ended text responses, many players stated that SOTG is the core reason for their continuing participation in UF and that it is the pillar of the game's operation. Drawing from the coding template (refer to section 4.1) and literature review (Chapter Two), the data supports key 'theoretical' themes: sportpersonship (vs. competitiveness), self- and ethical leadership, and shared/collective leadership, with the addition of a researcher-derived theme concerning 'understanding and cultural difference'.

Sportpersonship vs. Competitiveness

The codes *Impact on UF*, *Tension and Balance* capture meaningful data exploring the impact of the spirit concept on sportpersonship and the extent to which it impacts competitiveness in UF. In particular, the participants described how SOTG positively shaped the players' attitudes and behaviours during the game.

One participant first mentioned the importance attached to the rules:

"I think that the, like, spirit definitely has a good impact on the sport and the sense that, you know, it's everyone's accountability to know the rules." (Player A)

Participants also emphasized the shaping of positive attitudes by SOTG:

“Have, like, positive relationships with the people you’re playing with and also against rather than just like competing just for the sake of beating someone.” (Player A)

“I’ll hop on the field. I’ll shake hands with whoever’s marking me. I’ll introduce myself. I’ll get their name. We’ll have a laugh.” (Player B)

“Even when I’m on the sideline I will always talk to the other team. I’m always interested in how they got into Ultimate and how they came together.” (Player B)

Participants also shared the spirit concept in promoting players’ behaviour to help and support others to enjoy the game:

“If we’re winning ... I’ll help them along ... giving little tips ... to raise the standard.” (Player B)

“Sometimes if we are winning and these less skilled players are subbed off, we’ll actually go down and ask the players if they want to have some throws.” (Player B)

“The player on the other team rolled his ankle so I borrowed a bike and headed off and got ice for him.” (Player B)

“I think it is important to let people know when they have done something well.” (Open text response Q15 #17)

However, the players also described the tension that occurs when the competitiveness of the UF game is combined with maintaining SOTG. One participant first mentioned that in a highly competitive environment, the boundaries between good and poor spirit would blur:

“I think as the sport has become like a lot more competitive the line between being well spirited and unspiritual as slightly blurred if that makes sense.” (Player A)

"I find that, like, if people are trying their hardest and frustrated with their own performance, then it might sometimes be viewed as that person being dispirited and not having ... good spirit." (Player A)

Meanwhile, some participants did not affirm that competitiveness and SOTG were completely opposed, but merely expressed their doubts:

"I think there is definitely an argument ... that the spirit of the game eventually reduces how competitive it can be." (Player A)

"It is definitely hard to keep spirit at a competitive level." (Player A)

"Maybe we do lose something we get into that more competitive level. Some players may tend to lose that." (Player B)

One participant directly expressed that SOTG reduced competitiveness and provided an example:

"I do think that SOTG reduces my competitiveness in Ultimate. For example, I might pull out of a contest in the air that I could have won cleanly in order to keep good spirit." (Open text response Q14 #9)

In addition to tension, the players also discussed the issue of finding a balance between sportspersonship and competitiveness. Although the standards for competitiveness may vary, some participants indicated that such a balance exists and is achievable:

"I think it is, like, a middle ground somewhere." (Player A)

"If we were down by five points, I'd still go for the intercept or whatever ... but I still wouldn't want to destroy the confidence of one player over there." (Player B)

"So you can still play hard. You can still be competitive. And you can still be nice about it." (Player B)

"Even when you have a really competitive game, and the opponents are in your face. Once the point ends, everyone is really positive and congratulatory." (Open text response Q17 #4)

“Teams reach a peak level of performance where they can be highly competitive without trying to bend rules to their own advantage in pursuit of their goals.” (Open text response Q17 #11)

The CEO of NZU also expressed the view that such a balance could be achieved:

“Both teams are trying to win, but we agree ... we will do our utmost to work within those rules.”

In conclusion, the data supports the potential of SOTG to enhance sportspersonship in multiple aspects of the game, but the players also admit that there is an inherent contradiction between these values and the drive to win. Therefore, finding the right balance is crucial for maintaining competitiveness and SOTG.

Self-leadership and Ethical leadership

One interesting finding relates to the engagement of ethical leadership in UF and players' self-leadership, promoted by the spirit concept, both of which change players' behaviour in the game. The codes *SC's influence depends on own behaviour*, *Moral person easy to be a moral leader* and *Impact positive attitude and self-control* in UF capture the relevant information. In particular, the data in these codes indicate that self-leadership involves the application of personal moral values, self-awareness and self-control to uphold the SOTG principles. The ethical leadership in the role of a spirit captain is reflected in the fairness, respect and commitment to spirit values that are always demonstrated when representing and guiding the team.

In terms of self-leadership, players described how the spirit concept prompts them to reflect on their own behaviours and attitudes, thereby influencing the way they deal with competition and interpersonal communication in the game:

“When I was younger ... my initial reaction ... was very heated ... but I've learnt via Frisbee that if you go consistently heated ... you're probably not gonna get the result you want.” (Player A)

“I think it’s really important to check in with yourself before you speak, especially if something’s gone wrong ... you’ve got to make sure you’re calm so you don’t escalate things.” (Player B)

“It makes me think about how I’m influencing others, and how they might be in an elevated state which keeps me from reacting as rashly.” (Open text response Q15 #7)

“I have to ensure that I am thorough with the rules, have good communication skills—in listening to others and being able to respond constructively, be more aware of my surroundings and what’s happening in the game.” (Open text response Q17 #31)

These examples indicate that the spirit concept not only encourages players to supervise their own behaviour, but also cultivates the habit of pausing, reflecting and consciously choosing their actions, thereby maintaining fairness in the competition and, potentially, easing conflicts and creating a positive game atmosphere.

In terms of ethical leadership, many players have stated that the spirit captain’s leadership can help individuals and teams maintain SOTG and bring other positive impacts:

“They can pass on key bits of feedback and act as the conscience for your behaviour.” (Open text response Q17 #7)

“Having a spirit captain who takes their role seriously (and takes seriously the importance of upholding spirit of the game on the field) makes me a better player, and lifts the whole team.” (Open text response Q17 #11)

“The spirit captain/s is a great trustworthy pillar within the team that supports everyone, in all spirit aspects.” (Open text response Q17 #20)

“On my journey developing my knowledge and skills around SOTG, spirit captains have often been the ones that have taught me new things.” (Open text response Q17 #23)

"I have had a spirit captain tell me to not come into calls 'hot' to say things like 'from my perspective' and 'I think that "rather than" this is what happened "and" you did this'." (Open text response Q17 #35)

At the same time, one participant emphasised the importance of the spirit captain leading by example:

"The spirit captain leads by example, brings up issues to hold the team accountable to playing fairly and honestly and help uphold the integrity of the rules." (Open text response Q17 #26)

One participant also indicated that a spirit captain with good values (a moral person) is more likely to have greater influence:

"If it's not part of your value set already then it will be a little bit more difficult for you. You might even not do as good a job because it doesn't come naturally." (Player B)

"So it's not essential that you have a moral compass that's aligned with spirit. But it's easier if you do." (Player B)

There are also some players who think that spirit captain has little or no influence on them:

"Being spirit captain honestly doesn't change anything for me, regardless of my role on the team I'm usually known as someone familiar with all the rules and how I conduct myself personally on the field never really changes." (Open text response Q17 #17)

"I am to play with a high level of spirit, regardless of what the spirit captain does." (Open text response Q17 #28)

"If a spirit captain is ... someone who isn't willing to challenge their teammates who isn't willing to like challenge the behaviour of their teammates. I can see why that would have like very little impact." (Player A)

"I think there're like spirit captains [who] don't necessarily have too big of a role within the game's going well." (Player A)

“I think, if the coach is doing a good job of doing a lot of work on the sideline, I think the captain’s role can be quite minimised.” (Player A)

Overall, players viewed spirit captains in different ways. Many saw them as role models (moral person and manager) who uphold SOTG, provide guidance, and reinforce fairness and integrity, especially when leading by example. Others felt the role had little impact, either because they already embodied SOTG or because the captain’s influence was shared by other leader roles.

Shared/Collective Leadership

Other findings contribute to the exploration of concepts relating to shared (role distribution) and/or collective (more organic assumption of responsibilities) leadership in UF. The codes *Collective responsibility* and *SOTG and responsibility for others* capture the relevant information. In particular, apart from the important promoting role of the spirit captain, the maintenance of the spirit requires the active participation and responsibility of all players.

Some players expressed the view that leadership is not limited to formal leadership roles, but can also exist or be dispersed among other team members with significant influence or responsible for specific functions:

“Some people will naturally become leaders or dominate the cultural space ... if they have a win at all costs [attitude], then ... it can pull a team away from a focus on spirit.” (Player B)

“Which anyone on the field can do but sometimes it’s nice to have a person on your team who you can rely on if needed.” (Open text response Q17 #12)

When the spirit captain does not demonstrate leadership, team members will share this part of the function:

“Not my role, but I thought our spirit captain’s not going to do that so I thought it would be nice to front-foot it. But would it be nice if everyone did that? That’s not necessarily the role of the spirit captain but as captain they should lead.” (Player B)

These insights demonstrate that although spirit captain is a formal leadership role, leadership can be shared among individual team members.

Meanwhile, some participants believed that they should be responsible for themselves or others maintaining SOTG, rather than concentrating this responsibility on the spirit captain:

“I think individuals (especially at a high level) should be able to behave appropriately without influence from the spirit captain.” (Open text response Q17 #14)

“And that’s where I think spirit of the game, we can have responsibility for engagement and enjoyment of the game by other players.” (Player B)

Some players further emphasized that maintaining SOTG should be the collective responsibility of all players, rather than relying on spirit captain:

“Everyone during the game has a duty as a referee and to ensure the game is played fairly.” (Open text response Q17 #36)

“It’s everyone’s accountability to know the rules. It’s everyone’s accountability to uphold them.” (Player A)

“It’s not just the spirit Cap’s job. Like, it’s that player’s responsibility.” (Player A)

These voices emphasize the concept of integrating the spirit into the entire team, with responsibilities distributed among all members rather than merely concentrating on a designated leader. They also echo the NZU CEO concerns that the spirit captain role risks “*lessen[ing] the responsibility on all other players*”.

Others cite practical examples of how the spirit captain and collective responsibility coordinate and function:

“One thing I do find useful is how the spirit captains will ask for feedback for the opposition at half time, summarise and share it with the opposition’s spirit captains and then take their feedback to the

rest of their team to work on the rest of the game.” (Open text response Q17 #33)

“But I think the spirit captain has influence on facilitating discussion between team members and opposition, something that’s difficult to do without a single point person identified to do that.” (Open text response Q17 #25)

These responses indicate that the responsibility for maintaining SOTG is distributed among all members, not just concentrated on the spirit captain. The spirit captain should play the role of coordinator or guide, and the implementation of the spirit concept depends on the active participation and recognition of the entire team.

Understanding and Cultural Difference

The code *Understanding and Cultural Difference* captures meaningful data to explore how people’s understanding and practice of SOTG vary in different contexts, and how cultural or competitive expectations influence people’s understanding of good spirit. In particular, the participants emphasised the contradiction between traditional spirit concepts (usually expressed through friendly gestures) and the requirements of high-level competition.

One participant has observed that certain external behaviours are often equated with a good spirit:

“A lot of people thinking that like giving a high 5 is a good spirit and if someone doesn’t give you a high five or doesn’t want to engage in conversation on the sideline that that’s unspirited.” (Player A)

“The view on spirit currently is that if you’re happy and you’re smiling, you’re well spirited. And if you high five the other team ... you’re well spirited, and I think there are a lot of other things get overlooked, like listening to the other team and having a good knowledge of the rules. (Player A)

However, Player A also reflected that personal ‘cultural’ expectations may lead to misunderstandings of the spirit concept:

“Be this happy. Positive like always. We’re best of friends. Even though we’re playing Frisbee. Whereas I think now if you’re a competitor and you wanna compete, it’s often viewed as somewhat unspirited.” (Player A)

“However, to me, I don’t personally want that interaction, and so I’ll politely decline and get told later on that that’s poor spirit because I didn’t want to high five people.” (Player A)

These descriptions indicate that a player’s personal boundaries and competitive focus are sometimes misunderstood as a lack of spirit, depending on different cultures or team norms.

Participants also discussed the differences among various countries and competition levels:

“Especially in New Zealand ... we’re used to just being happy to be playing ... but now when people are training a lot more and putting a lot more time into it ... people tend to sort of look at that as under-spirited sometimes.” (Player A)

“I think that New Zealand has a dated view of spirit and that people who want to compete at a high level and not compliment or high five them are viewed as unspirited.” (Open text response Q15 #24)

Player A also took the USA as an example to elaborate on a completely different approach:

“If you look at any American College Ultimate ... they have observers rather than game advisers ... and quite often ... the players actually don’t know the rules themselves ... they just ask the observer to make a call.” (Player A)

In conclusion, participants indicated that their understanding of UF could vary greatly, influenced by personal perspectives, cultural norms, and competition environments. Some people believe that spirit is equivalent to the friendly and positive aspects, while others think that deeper values such as knowledge of rules, fairness and respect are more important. These differences highlight the

challenge of applying a single 'spirit' standard in competitions between teams with different cultures and in competitions at different levels.

4.3.5 Summary of RO2: Impact of SOTG in UF

Overall, the findings indicate that SOTG significantly enhanced the spirit behaviour of players in UF. Quantitative data confirm that as players' participation in this sport deepened, notable improvements were found in rules knowledge and use, positive attitude and self-control, and fouls and body contact (all $p < .05$), while respectful communication and fair-mindedness showed positive but non-significant changes ($p > .05$). This reflects the continuous improvement of their understanding and application of the spirit concept. The comparison between early experiences and current ones indicates that spirit behaviour will improve over time, and players will be more consistent in demonstrating fairness, respect and positive behaviour. Meanwhile, the research findings also indicate that players' understanding of a good spirit may vary depending on the culture and the competition environment.

The role of spirit captain further highlights this phenomenon. Although the survey results show that players value the existence of the spirit captain, its influence varies depending on competition experience, team culture and individual commitment. Some players said that the spirit captain played a supportive role in promoting fairness and resolving disputes, while others emphasised that all team members should share the responsibility of maintaining SOTG.

Qualitative data provide richer insights into these patterns, clarifying how the spirit concept influences players' attitudes and behaviours during the game. The players talked about how to strike a balance between competition and respect, build positive relationships with opponents and support others in enjoying the sport. At the same time, they emphasized that SOTG cannot rely solely on designated roles but requires collective responsibility and joint leadership. The players' reflections also indicated that cultural expectations of the spirit concept sometimes led to misunderstandings—for instance, in some cases, friendliness or external positivity is equated with good spirit, while others emphasise deeper values such as fairness, respect and knowledge of rules.

In conclusion, the findings indicate that participation in SOTG is both individual and collective. Although the spirit captain role provides guidance, the broader team culture and the willingness of the players to jointly maintain SOTG are the keys to maintaining SOTG. Furthermore, the differences between cultural practices and competitive expectations highlight that although the spirit concept is widely recognised, its interpretation and application are not uniform at all levels or in all competition environments.

4.4 The Impact of Spirit Concept/Captain on UF Players' Behaviours in Other Sports and Life (RO3)

4.4.1 Quantitative Data: Impact of SOTG beyond UF

RO3 focused on the impact of SOTG and the spirit captain in other sports and life in general. Tables 13 and 14 summarise the chi-square test results measuring changes in players' self-rated behaviours in other sports and daily life between their first time playing UF ('before') and their current stage after UF playing experience ('after'), using the chi-square test to assess whether these distributional shifts were statistically significant. The findings in Table 13 (Other Sports) and Table 14 (Life) demonstrate clear behavioural improvements across all six dimensions: Fair-mindedness, Positive Attitude, Respectful Communication, Moderation, Tolerance, and Honesty.

Table 13*Changes of Behaviour in Other Sports (Before and After)*

Behaviour	Period	Poor (1)	Not Good (2)	Good (3)	Very Good (4)	Excellent (5)	χ^2
Fair-mindedness	Before	3.6%	18.2%	50.9%	16.4%	10.9%	<.01*
	After	0%	0%	35.2%	40.7%	24.1%	
Positive Attitude	Before	1.8%	14.5%	47.3%	23.6%	12.7%	<.01*
	After	0%	3.7%	27.8%	53.7%	14.8%	
Respectful Communication	Before	3.6%	23.6%	49.1%	16.4%	7.3%	<.01*
	After	0%	3.7%	24.1%	57.4%	14.8%	
Moderation (control of own behaviour)	Before	0%	10.9%	47.3%	30.9%	10.9%	<.01*
	After	0%	0%	38.9%	40.7%	20.4%	
Tolerance (reaction to other's behaviour)	Before	1.8%	30.9%	36.4%	18.2%	12.7%	<.01*
	After	0%	3.7%	37%	46.3%	13%	
Honesty	Before	1.8%	14.5%	49.1%	18.2%	16.4%	<.01*
	After	0%	0%	37%	33.3%	29.6%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Survey participants' performance of **fair-mindedness** in other sports has significantly improved. The proportion of athletes who self-rated as "very good" or "excellent" more than doubled from 27.3% before participating in UF to 64.8% afterwards ($p < .01$). This indicates that the principles of SOTG, such as accepting results and prioritising fairness, have been transferred to other sports. This shift suggests that UF athletes are more likely to respect their opponents, avoid making biased decisions, and prioritize fairness in competitive environments outside of UF.

The **positive attitude** dimension of survey participants has also shown significant changes. Before playing UF, only 36.3% of the players rated themselves as "very good" or "excellent". After participating in UF this proportion rose to 68.5% ($p < .01$). Athletes may demonstrate stronger optimism and emotional regulation abilities in other sport competitions, which might be influenced by SOTG's emphasis on positivity and its focus on "fun in the game" (WFDF, n.d.-d).

Under **respectful communication**, 23.7% of athletes initially rated themselves as "very good" or "excellent" but after participating in UF, this proportion tripled to 72.2% and all the "poor" and "not good" ratings disappeared ($p < .01$). This indicates SOTG's communication expectations, such as resolving decisions through conversation and maintaining respect in disputes, help athletes express themselves more effectively and respectfully in other sports.

Survey participants' **moderation (control of own behaviour)** has also improved. Before participating in UF, 41.8% of the athletes rated themselves as "very good" or "excellent", but after participating in UF this proportion rose to 61.1% ($p < .01$). This growth indicates that the self-control in SOTG and the self-refereeing mode in UF may encourage players to be more cautious and self-regulating, avoiding aggressive behaviour in other sports.

Tolerance (reaction to others' behaviour) also improved significantly. The scores of "very good" or "excellent" increased from 30.9% to 59.3% ($p < .01$). This suggests that UF players become more patient during other sport competitions and can accept differences or provocations. This is a core element

emphasized by SOTG, which requires empathy and composure to be maintained when interpreting fouls and differences.

Under **honesty**, before participating in UF, 34.6% of the players rated themselves as “very good” or “excellent”, this proportion rose to 62.9% ($p < .01$) after playing UF. This might reflect UF’s high regard for players’ self-refereeing and admitting their fouls, fostering the habit of transparency and integrity, which can be carried over to other sports environments where honesty may not be explicitly required.

Table 14*Changes of Behaviour in Life (Before and After)*

Behaviour	Period	Poor (1)	Not Good (2)	Good (3)	Very Good (4)	Excellent (5)	χ^2
Fair-mindedness	Before	1.8%	3.6%	60.7%	21.4%	12.5%	<.01*
	After	0%	0%	33.8%	46.4%	19.6%	
Positive Attitude	Before	1.8%	7.1%	60.7%	21.4%	8.9%	<.01*
	After	0%	1.8%	32.1%	48.2%	17.9%	
Respectful Communication	Before	0%	14.3%	42.9%	28.6%	14.3%	<.01*
	After	0%	0%	25%	53.6%	21.4%	
Moderation (control of own behaviour)	Before	0%	12.5%	44.6%	28.6%	14.3%	<.01*
	After	0%	0%	30.4%	55.5%	14.3%	
Tolerance (reaction to other's behaviour)	Before	1.8%	26.8%	35.7%	26.8%	8.9%	0.02*
	After	0%	3.6%	26.8%	53.6%	16.1%	
Honesty	Before	0%	1.8%	52.7%	29.1%	16.4%	<.01*
	After	0%	0%	28.6%	42.9%	28.6%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

The improvement in the **positive attitude** in life dimension is the most significant. The proportion of those within the “very good” or “excellent” range has doubled from 30.3% to 66.1% ($p < .01$). This might reflect the enhancement of emotional resilience and optimism in daily life, traits that are often strengthened in UF through mutual encouragement even in intense competition.

The improvement in the **fair-mindedness** dimension is significant. The proportion of participants who self-rated as “very good” or “excellent” increased from 36.9% to 66% ($p < .01$). This indicates that UF athletes are beginning to make fairer decisions in daily situations and consider the viewpoints of others, which is consistent with the strengthened value of fairness in UF sport.

In terms of **respectful communication**, before participating in UF, only 42.9% of the players rated themselves as “very good” or “excellent” but after playing UF this proportion rose to 75% ($p < .01$). This indicates that UF players are better at expressing themselves respectfully, listening actively and solving interpersonal relationship problems constructively in their daily lives.

In terms of **moderation (control of own behaviour)**, the proportion of “very good” or “excellent” scores rose from 42.9% to 69.8% ($p < .01$). These results suggest that UF players have become more self-disciplined and less impulsive in their daily lives, which might be due to the influence of the necessary self-regulation ability in UF sport.

Tolerance (reaction to others’ behaviour) in daily life also shows a similar pattern. The proportion of “very good” or “excellent” self-ratings rose from 35.7% to 69.7% ($\chi^2 = 0.02$, $p < .05$). This indicates that players’ patience, empathy, and ability to accept different viewpoints or behaviours are increasing in their daily lives, which may correspond to SOTG’s reflective and non-punitive culture.

In addition, the **honesty** dimension has also significantly improved. Before participating in UF, 45.5% of the players rated themselves as “very good” or “excellent” and currently this proportion has increased to 71.5% ($p < .01$). This indicates that the norms of admitting one’s own violations and avoiding deception in UF games have been extended to broader life behaviours,

potentially promoting more ethical conduct in work, interpersonal relationships, and/or social life.

Overall, the quantitative results indicate that participation in UF is associated with positive behavioural changes in other sports and daily life. Since the players began to participate in UF, statistically significant improvements are observed in all measurement areas, including fair-mindedness, positive attitude, respectful communication, moderation, tolerance and honesty. These changes indicate that the values contained in SOTG are not only reinforced during UF games but also applied in a wider range of scenarios. Although the degree of individual change varies, the overall trend indicates that the cultural and ethical framework of UF can go beyond the sport itself and influence players' behaviour and decision-making methods in various daily and sports settings.

4.4.2 Quantitative Data: Category Comparisons

In addition to comparing each dimension of the participants' behaviour ('before' and 'after' UF) in other sports and daily life, the researcher also conducted further analysis to examine whether there were differences in changes among different demographic groups (such as age, gender, playing time, playing level and role). The chi-square test was used to evaluate the significance of these changes. The comparisons (using age, gender, playing time, playing level and role) for other sports are attached as Appendices R, S, T, U and V respectively and for daily life are attached as Appendices W, X, Y, Z and AA respectively.

Although many categories demonstrated directional improvement across demographic and participation variables, only certain subgroups within specific categories exhibited statistically significant differences ($p < .05$). The insights presented in this section focus on the categories and subgroups where significant differences were identified.

For changes in other sports, statistically significant differences ($p < .05$) were recorded for playing level (elite, competitive, and social) and role (general player, captain, and spirit captain). These findings are summarised in the following section.

For changes in daily life, statistically significant differences ($p < .05$) were recorded for age (20-30, 31-40, 41-50, above 50), playing time (less than one year, one to five years, more than five years), and gender (male, female, non-binary, prefer not to say). These findings are summarised and interpreted in the sections that follow.

SOTG and Other Sports

Level: Elite, competitive and social

Table 15 records the findings in the 'playing level' category for elite, competitive and social UF players in relation to the impact on their behaviour in other sports.

Table 15*Play Level Comparisons*

Behaviour	Level	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Fair-mindedness	Elite	Before	0%	20.7%	55.2%	13.8%	10.3%	0.03*
		After	0%	0%	37.9%	37.9%	24.1%	
	Competitive	Before	8.7%	13.0%	52.2%	17.4%	8.7%	0.04*
		After	0%	0%	34.8%	43.5%	21.7%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Positive Attitude	Elite	Before	3.4%	6.9%	62.1%	17.2%	10.3%	<.01*
		After	0%	6.9%	31.0%	51.7%	10.3%	
	Competitive	Before	0%	21.7%	34.8%	30.4%	13.0%	0.12
		After	0%	0%	26.1%	56.5%	17.4%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Respectful Communication	Elite	Before	0%	20.7%	55.2%	20.7%	3.4%	0.10
		After	0%	3.4%	17.2%	65.5%	13.8%	
	Competitive	Before	4.3%	30.4%	43.5%	13.0%	8.7%	0.04*
		After	0%	4.3%	34.8%	47.8%	13.0%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	0%	50%	50%	

Table 15 (continued)*Play Level Comparisons*

Moderation	Elite	Before	0%	10.3%	48.3%	34.5%	6.9%	<.01*
		After	0%	0%	34.5%	48.3%	17.2%	
	Competitive	Before	0%	13.0%	43.5%	30.4%	13.0%	0.02*
		After	0%	0%	43.5%	34.8%	21.7%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
Tolerance	Elite	Before	0%	34.5%	37.9%	20.7%	6.9%	0.24
		After	0%	3.4%	34.5%	55.2%	6.9%	
	Competitive	Before	0%	30.4%	34.8%	17.4%	17.4%	<.01*
		After	0%	4.3%	43.5%	34.8%	17.4%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	0%	50%	50%	
Honesty	Elite	Before	0%	13.8%	58.6%	13.8%	13.8%	<.01*
		After	0%	0%	44.8%	27.6%	27.6%	
	Competitive	Before	4.3%	17.4%	39.1%	21.7%	17.4%	<.01*
		After	0%	0%	30.4%	39.1%	30.4%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Focusing on playing level, the behaviour of elite and competitive UF athletes in other sports significantly improved (Table 15). The fair-mindedness ($\chi^2=0.03$, $p < .05$), moderation ($p < .01$) and honesty ($p < .01$) exhibited by elite athletes in other sports events have improved significantly. Similarly, competitive players showed a significant improvement in fair-mindedness ($\chi^2 = 0.04$, $p < .05$) and respectful communication ($\chi^2 = 0.04$, $p < .05$). This suggests that SOTG may have a stronger corrective effect on the behavioural tendencies that are usually tested in highly competitive environments (as opposed to more social sport participants/environments).

Role: General player, captain and spirit captain

Table 16 records the findings in the 'role' category for general players, captains and spirit captains in relation to the impact on their behaviour in other sports.

Table 16*Role Comparisons*

Behaviour	Role	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Fair-mindedness	General Player	Before	2.7%	18.9%	51.4%	13.5%	13.5%	<.01*
		After	0%	0%	35.1%	37.8%	27.0%	
	Captain	Before	9.1%	9.1%	54.5%	27.3%	0%	0.56
		After	0%	0%	27.3%	54.5%	18.2%	
	Spirit Captain	Before	0%	16.7%	50%	16.7%	16.7%	0.19
		After	0%	0%	50%	33.3%	16.7%	
Positive Attitude	General Player	Before	2.7%	16.2%	43.2%	24.3%	13.5%	<.01*
		After	0%	5.4%	24.3%	54.1%	16.2%	
	Captain	Before	0%	9.1%	54.5%	27.3%	9.1%	0.48
		After	0%	0%	36.4%	54.5%	9.1%	
	Spirit Captain	Before	0%	0%	66.7%	16.7%	16.7%	0.56
		After	0%	0%	33.3%	50%	16.7%	
Respectful Communication	General Player	Before	2.7%	24.3%	43.2%	21.6%	8.1%	<.01*
		After	0%	2.7%	21.6%	56.8%	18.9%	
	Captain	Before	0%	27.3%	72.7%	0%	0%	0.42
		After	0%	0%	36.4%	54.5%	9.1%	
	Spirit Captain	Before	0%	16.7%	50%	16.7%	16.7%	0.32
		After	0%	16.7%	16.7%	66.7%	0%	

Table 16 (continued)*Role Comparisons*

Moderation	General Player	Before	0%	8.1%	48.6%	32.4%	10.8%	<.01*
		After	0%	0%	35.1%	45.9%	18.9%	
	Captain	Before	0%	9.1%	45.5%	36.4%	9.1%	0.56
		After	0%	0%	36.4%	36.4%	27.3%	
	Spirit Captain	Before	0%	33.3%	33.3%	16.7%	16.7%	0.22
		After	0%	0%	66.7%	16.7%	16.7%	
Tolerance	General Player	Before	0%	32.4%	37.8%	18.9%	10.8%	<.01*
		After	0%	2.7%	35.1%	48.6%	13.5%	
	Captain	Before	0%	27.3%	36.4%	18.2%	18.2%	0.02*
		After	0%	0%	36.4%	45.5%	18.2%	
	Spirit Captain	Before	0%	33.3%	33.3%	16.7%	16.7%	0.15
		After	0%	16.7%	50%	33.3%	0%	
Honesty	General Player	Before	2.7%	10.8%	51.4%	13.5%	21.6%	<.01*
		After	0%	0%	37.8%	32.4%	29.7%	
	Captain	Before	0%	18.2%	54.5%	27.3%	0%	0.45
		After	0%	0%	36.4%	36.4%	27.3%	
	Spirit Captain	Before	0%	33.3%	16.7%	33.3%	16.7%	0.17
		After	0%	0%	33.3%	33.3%	33.3%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Focusing on role, the behavioural improvement of general players in other sports is particularly significant (Table 16). This group demonstrated statistically significant improvements in all six measured behavioural domains ($p < 0.01$). This might indicate that general players who usually take on less leadership responsibility have experienced more significant behavioural growth through exposure to SOTG. Meanwhile, the spirit captain and team captain did not show statistically significant changes in these areas. This might suggest that the initial behavioural standards of athletes in UF leadership positions were already high, or it might reflect the small sample size ($n=11$ and $n=6$ respectively).

SOTG and Daily Life

Age: 20-30, 31-40, 41-50 and above 50

Table 17 records the findings in the 'age' category for 20-30, 31-40, 41-50, and 50+ age groups of UF players in relation to the impact of SOTG on their behaviour in daily life.

Table 17*Age Comparisons*

Behaviour	Age	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Fair-mindedness	20-30	Before	2.6%	5.1%	61.5%	20.5%	10.3%	0.03*
		After	0%	0%	33.3%	48.7%	17.9%	
	31-40	Before	0%	0%	76.9%	15.4%	7.7%	<.01*
		After	0%	0%	46.2%	46.2%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	0%	33.3%	66.7%	
		After	0%	0%	0%	0%	100%	
Positive Attitude	20-30	Before	2.6%	5.1%	61.5%	23.1%	7.7%	<.01*
		After	0%	2.6%	28.2%	51.3%	17.9%	
	31-40	Before	0%	15.4%	69.2%	7.7%	7.7%	0.01*
		After	0%	0%	53.8%	38.5%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	0%	33.3%	66.7%	

Table 17 (continued)*Age Comparisons*

Respectful Communication	20-30	Before	0%	15.4%	35.9%	33.3%	15.4%	<.01*
		After	0%	0%	25.6%	53.8%	20.5%	
	31-40	Before	0%	7.7%	69.2%	15.4%	7.7%	0.14
		After	0%	0%	30.8%	53.8%	15.4%	
	41-50	Before	0%	100%	0%	0%	0%	
		After	0%	0%	100%	0%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	0%	33.3%	66.7%	
Moderation	20-30	Before	0%	15.4%	43.6%	25.6%	15.4%	<.01*
		After	0%	0%	33.3%	53.8%	12.8%	
	31-40	Before	0%	7.7%	61.5%	23.1%	7.7%	0.01*
		After	0%	0%	30.8%	61.5%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	66.7%	33.3%	0.08
		After	0%	0%	0%	66.7%	33.3%	
Tolerance	20-30	Before	0%	25.6%	38.5%	28.2%	7.7%	0.25
		After	0%	2.6%	28.2%	56.4%	12.8%	
	31-40	Before	7.7%	38.5%	30.8%	15.4%	7.7%	0.14
		After	0%	7.7%	30.8%	53.8%	7.7%	
	41-50	Before	0%	0%	100%	0%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	66.7%	33.3%	0.39
		After	0%	0%	0%	33.3%	66.7%	

Table 17 (continued)*Age Comparisons*

Honesty	20-30	Before	0%	2.6%	57.9%	26.3%	13.2%	<.01*
		After	0%	0%	34.2%	47.4%	18.4%	
	31-40	Before	0%	0%	53.8%	30.8%	15.4%	0.24
		After	0%	0%	23.1%	46.2%	30.8%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	33.3%	66.7%	
		After	0%	0%	0%	0%	100%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

By age group, the improvement in life behaviours was most significant in the 20-30 and 31-40 age groups. Among participants aged 20-30 years, fair-mindedness ($\chi^2 = 0.03$, $p < .05$), positive attitude ($p < .01$), respectful communication ($p < .01$), moderation ($p < .01$) and honesty ($p < .01$) all showed significant improvement. The 31-40 age group showed significant improvement in terms of fairness ($p < .01$), positive attitude ($\chi^2 = 0.01$, $p < .05$) and moderation ($\chi^2 = 0.01$, $p < .05$). These results suggest that young and early middle-aged people may be more receptive to the ethical and interpersonal values contained in SOTG culture.

Playing time: Less than 1 year, 1-5 years and 5+ years

Table 18 records the findings in the 'playing time' category for UF players with less than one year, one to five years, and more than five years' experience in relation to the impact of SOTG on their behaviour in daily life.

Table 18*Playing Time Comparisons*

Behaviour	Play Time	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Fair-mindedness	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	53.8%	30.8%	15.4%	0.10
		After	0%	0%	38.5%	53.8%	7.7%	
	More than 5 Years	Before	2.3%	4.7%	62.8%	18.6%	11.6%	<.01*
		After	0%	0%	32.6%	44.2%	23.3%	
Positive Attitude	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	76.9%	15.4%	7.7%	<.01*
		After	0%	0%	30.8%	61.5%	7.7%	
	More than 5 Years	Before	2.3%	9.3%	55.8%	23.3%	9.3%	<.01*
		After	0%	2.3%	32.6%	44.2%	20.9%	
Respectful Communication	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	38.5%	46.2%	7.7%	0.03*
		After	0%	0%	23.1%	69.2%	7.7%	
	More than 5 Years	Before	0%	16.3%	44.2%	23.3%	16.3%	<.01*
		After	0%	0%	25.6%	48.8%	25.6%	

Table 18 (continued)*Playing Time Comparisons*

Moderation	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	53.8%	23.1%	15.4%	<.01*
		After	0%	0%	30.8%	53.8%	15.4%	
	More than 5 Years	Before	0%	14.0%	41.9%	30.2%	14.0%	<.01*
		After	0%	0%	30.2%	55.8%	14.0%	
Tolerance	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	30.8%	30.8%	30.8%	7.7%	0.06
		After	0%	0%	30.8%	53.8%	15.4%	
	More than 5 Years	Before	2.3%	25.6%	37.2%	25.6%	9.3%	0.15
		After	0%	4.7%	25.6%	53.5%	16.3%	
Honesty	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	61.5%	15.4%	23.1%	<.01*
		After	0%	0%	46.2%	30.8%	23.1%	
	More than 5 Years	Before	0%	2.4%	50%	33.3%	14.3%	<.01*
		After	0%	0%	23.8%	47.6%	28.6%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

UF playing time seems to also affect the daily life behaviours of athletes.

Players with over five years of experience in UF report that they have made significant improvements in all behavioural areas ($p < .01$) of their lives except tolerance. By contrast, participants with one to five years of experience have shown significant progress in two areas being positive attitude ($p < .01$) and moderation ($p < .01$). These results indicate that the longer players participate in UF, the more extensive the impact of UF on their daily behaviours. Further research would be required to substantiate causal relations.

Gender: Male, female, non-binary/third gender and prefer not to say

Table 19 records the findings in the 'gender' category for male, female and non-binary/third gender UF players in relation to the impact on their behaviour in daily life.

Table 19*Gender Comparisons*

Behaviour	Gender	Period	Poor	Not Good	Good	Very Good	Excellent	χ^2
Fair-mindedness	Male	Before	0%	0%	62.1%	27.6%	10.3%	0.03*
		After	0%	0%	34.5%	37.9%	27.6%	
	Female	Before	4.0%	8.0%	60%	16.0%	12.0%	<.01*
		After	0%	0%	32.0%	60%	8.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Positive Attitude	Male	Before	0%	6.9%	58.6%	27.6%	6.9%	<.01*
		After	0%	0%	20.7%	62.1%	17.2%	
	Female	Before	4.0%	8.0%	64.0%	16.0%	8.0%	0.02*
		After	0%	0%	44.0%	36.0%	20%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	50%	50%	0%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	

Table 19 (continued)*Gender Comparisons*

Respectful Communication	Male	Before	0%	13.8%	37.9%	31.0%	17.2%	0.03*
		After	0%	0%	24.1%	51.7%	24.1%	
	Female	Before	0%	12.0%	52.0%	28.0%	8.0%	0.03*
		After	0%	0%	24.0%	60%	16.0%	
	Non-binary or Third Gender	Before	0%	50%	0%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Moderation	Male	Before	0%	13.8%	41.4%	31.0%	13.8%	<.01*
		After	0%	0%	27.6%	51.7%	20.7%	
	Female	Before	0%	12.0%	48.0%	28.0%	12.0%	<.01*
		After	0%	0%	32.0%	60%	8.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	50%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Tolerance	Male	Before	3.4%	24.1%	34.5%	27.6%	10.3%	0.16
		After	0%	3.4%	27.6%	51.7%	17.2%	
	Female	Before	0%	32.0%	36.0%	28.0%	4.0%	0.20
		After	0%	4.0%	24.0%	56.0%	16.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	50%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	

Table 19 (continued)*Gender Comparisons*

Honesty	Male	Before	0%	0%	55.2%	20.7%	24.1%	<.01*
		After	0%	0%	24.1%	37.9%	37.9%	
	Female	Before	0%	4.2%	50%	41.7%	4.2%	<.01*
		After	0%	0%	33.3%	54.2%	12.5%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	

Note. Percentages may not total 100% due to rounding. *Statistically significant $p < .05$.

Finally, the analysis based on gender revealed that both male and female participants made significant progress in multiple behavioural domains. Male participants made significant progress in positive attitude, respectful communication, moderation and honesty ($p \leq .03$). Female participants showed significant changes in positive attitude, respectful communication and moderation behaviour ($p \leq .03$). Although the sample size for non-binary participants was small ($n = 2$), the overall gender patterns suggest that the UF framework based on SOTG can comprehensively support behavioural development across diverse groups.

4.4.3 Qualitative Data: Impact of SOTG beyond UF

In the interviews and survey open-ended text responses, many UF players also described the impact of SOTG on their behaviour in other sports and daily life beyond UF. Drawing from the coding template (refer to section 4.1) and the literature review (Chapter Two), the data supports key 'theoretical' themes: of sportspersonship and self-leadership. The researcher also derived two new themes, communication and ethics in life, from the data.

Sportspersonship

The application of the spirit concept in UF clearly extends to how players approach fairness and respect in other sports. The code *Impact on other sports* captures relevant insights, in particular how the spirit concept reinforces high standards of integrity and discourages unsporting behaviour in other sports.

Players described the promotion of their sportspersonship by the spirit concept, thereby changing their thoughts and behaviours when participating in other sports:

"Someone's going for a layup ... and someone will grab their arm and foul just to stop that basket. I will never do that. If they've beaten me and I haven't been able to stop them before that, fair enough."
(Player B)

"I already had a natural inclination towards playing sport fairly and with sportspersonship as a priority." (Open text response Q15 #32)

“Because of how much of a high standard I hold myself and my opponents to in Ultimate, I do avoid any other sports where the same practice isn’t the norm. One could say Ultimate has ruined other sports for me and I therefore have a low tolerance for poor sportspersonship.” (Open text response Q15 #32)

“I like to get a grasp on all the rules before playing, allowing me better knowledge of what is or isn’t legal in specific sports.” (Open text response Q14 #4)

These reflections indicate that the spirit concept will prompt players to prioritize fairness and respect and be more rule-abiding.

Others also emphasised that the spirit concept has changed their views on sports:

“It has taught me that the purpose of playing the game is for the love of the game itself, rather than how you can bend the rules to your advantage.” (Open text response Q14 #3)

“The general atmosphere of UF is much nicer than any of the other sports I’ve played, which comes from SOTG, and this drives me to exemplify the spirit categories in hopes that other people will experience what I have too.” (Open text response Q17 #4)

Finally, some responses linked SOTG to positivity and respect for referees:

“I have become more aware about remaining positive in my other sport. Basketball always is a competitive environment: you don’t always congratulate people for doing something well on the other team.” (Open text response Q14 #6)

“[SOTG] helped me to not talk back as much to referees in other sports.” (Open text response Q15 #30)

These reflections highlight how the spirit concept promotes the sportspersonship of UF players and helps them better cope with competition in different sporting environments. They are also consistent with the quantitative findings showing improvements in fair-mindedness, positive attitude, respectful

communication, and moderation, suggesting that the ethical and behavioural values developed in UF extend meaningfully into other sporting contexts.

Self-leadership

The code *Impact on life* highlight how SOTG encourages reflection, accountability, and greater tolerance in players' daily lives. In particular, UF players described how the principles of the spirit concept guided their responses to challenges, helping them act with composure and integrity.

First, some players emphasized that the spirit concept helps build players' sense of responsibility for their own actions:

"I feel like SOTG has held me accountable for my own actions."

(Open text response Q15 #34)

"[The spirit concept] makes me reflect on how I am talking to other

people and hold myself accountable." (Open text response Q15 #10)

"The SOTG can easily be applied to life situations. Encouraging

enjoyment, honesty, communication, well-being, respect etc." (Open text response Q15 #27)

These extracts indicate that the spirit concept can cultivate players' self-discipline and behavioural control both on and off the field.

Participants also described changes in the way they handled differences or conflicts:

"It's made me try to see everyone's perspectives first ... it's definitely made me stop and think." (Player A)

"Especially in situations with work because I work in sales ... actually just letting them have their point of view first." (Player A)

"My overall tolerance has definitely been better when dealing and communicating respectfully to others especially when I don't agree with their opinion." (Open text response Q15 #4)

“It definitely helped me to control how I react to certain situations. I am no longer as quick to disagree and react negatively when something has gone against me.” (Open text response Q15 #13)

“I learnt that it pays to be calm, respectful, and form logical arguments, and also acknowledge that the other person may have a different perspective.” (Open text response Q15 #37)

These comments illustrate that the spirit concept helps UF players master the skills of handling disputes such as slowing down, reflecting and remaining calm when facing conflicts, especially in their careers and daily lives.

Participants also believe that the spirit concept is shaping their systematic way of thinking about interpersonal relationships:

“It has made me think more critically about the systems we use for conflict resolution and the trust (or rather lack thereof) often embedded in our systems of communication.” (Open text response Q15 #15)

“It has made me feel more positively about alternative systems and tools for conflict resolution in all areas of my life (work, play, sport, personal relationships etc.).” (Open text response Q15 #15)

Overall, the research results show that SOTG cultivates self-leadership by encouraging players’ sense of responsibility, composure and tolerance. Participants emphasized that it not only helps to deal with conflicts in a calm and reflective way but also shapes a broader perspective on interpersonal relationships. These reflections are consistent with the quantitative data showing improvements across moderation, tolerance, honesty, and respectful communication, indicating that the self-regulation and ethical awareness promoted through UF participation translate into broader behavioural growth beyond the sport.

Communication

Alongside self-leadership, many participants highlighted communication as an area strongly influenced by the spirit concept. The code *Impact on life* captures

data showing how the spirit concept encouraged respectful communication and listening, and interpersonal skills that extend beyond sport.

Many participants reflected on how the spirit concept encourages more deliberate forms of dialogue in which listening and respect are given priority.

“Many of the communication skills I’ve learned have been very useful in a lot of my group project courses at university ... being able to listen to another person’s opinion before respectfully stating my own is what SOTG is all about.” (Open text response Q15 #3)

“Learning to use phrases like ‘from my perspective’ and accepting that there can be multiple valid perspectives.” (Open text response Q15 #23)

“Having conversations with people ... actually just like letting them have their point of view first as if you would have called listen to them talk.” (Player A)

“I’m now less afraid to ask questions when I need clarity on a subject, and I am more confident in my ability to hold respectful conversations.” (Open text response Q15 #6)

“I can communicate more clearly in work and social scenarios.” (Open text response Q15 #14)

In summary, these comments show that SOTG enhances players’ communication skills by fostering active listening, respect for diverse viewpoints, and expressing oneself more clearly in different settings. These reflections indicate that the skills cultivated through SOTG are not limited to UF but can also help individuals participate more confidently and constructively in daily interactions.

4.4.4 Summary of RO3: Impact of SOTG Beyond UF

The findings show that the influence of the spirit concept is not limited to UF but extends to the daily lives of athletes and their participation in other sports. Quantitative research results show that the self-reported behaviours of

participants have undergone positive changes, indicating that values such as fairness, honesty and respect are not only passed down in non-sports fields but also applied in various sports activities. The comparison results further confirm that, since participating in UF, the athletes feel they have become more proactive, more responsible, and pay more attention to the spirit concept in all aspects of life and sports. The category comparison data suggests that, in other sports, the most significant progress has been made by elite and competitive athletes and general athletes (not spirit captain/captain), which indicates that the SOTG principle can be applied extensively in structured and competitive environments. In daily life, the participants who have made the greatest progress are the younger ones (aged 20-40) and those with one to five years of UF experience, which indicates that SOTG is particularly beneficial to those individuals who are still developing interpersonal communication skills and moral behaviour.

The quantitative data confirm the existence of these changes, while the qualitative findings explain how athletes actively practice the spirit concepts. Participants indicated that the spirit concept encouraged them to take responsibility, reflect and be inclusive in both personal and professional settings, and shaped their attitudes towards competition in other sports. Some participants indicated that, whether in UF or other sports activities, they became calmer in conflict situations (moderation), more respectful in communication, and more willing to listen to different viewpoints (tolerant).

These reflections indicate that the transferable skills cultivated by the application of the spirit concept in UF goes far beyond the field of play itself. For many UF athletes, the lessons learned from UF not only help them make ethical decisions, communicate constructively and actively participate in others' activities in work and social relationships, but also influence the way they interact with teammates and opponents in other sports.

Overall, the findings indicate that the spirit concept is not only a sportspersonship concept but also a broader personal ethical framework. By shaping an individual's attitude towards responsibility, fairness and respect, the UF spirit concept influences behaviour both within and outside UF and extends to athletes' broader sports participation and daily life.

4.5 Summary

This chapter presented the main findings from both the quantitative and qualitative data, addressing the three research objectives that guided this study.

For RO 1, the findings showed that SOTG and the spirit captain together form the ethical foundation and playing system of UF. Evidence from WFDF and NZU leaders confirmed that SOTG developed from a simple value into a structured, rules-based framework promoting fairness, respect, and accountability. The spirit captain role was later introduced to support communication and reflection, helping teams uphold SOTG in competitive situations. Both leaders emphasised that SOTG is what distinguishes UF from referee-based sports and acts as a social contract that maintains self-refereeing and fair competition.

For RO 2, quantitative findings revealed significant behavioural improvements among UF athletes across several SOTG principles. Players showed statistically significant improvements in rules knowledge and use, positive attitude and self-control, and fouls and body contact, with positive trends in respectful communication and fair-mindedness. The data also indicated that these improvements are influenced by playing time (less than one year, one to five years, more than five years) and team role (general player, captain, spirit captain). Players with more than five years' experience demonstrated the strongest improvements in rule knowledge and use, while those with one to five years' experience showed significant growth in positive attitude and self-control, and respectful communication. Role comparisons revealed that general players reported notable progress in positive attitude and self-control, suggesting that SOTG benefits all participants, not just team leaders. Survey responses further showed that most athletes perceived the spirit captain's influence as moderate, with gender-based variation, and female players generally reporting higher perceived influence.

Qualitative findings supported these statistical trends. Participants consistently identified SOTG as central to their engagement in UF, shaping sportspersonship, emotional regulation, and teamwork. Three main themes emerged: (1) Sportspersonship vs. Competitiveness, where athletes recognised

the need to balance performance with respect and fairness; (2) Self and Ethical Leadership, showing how SOTG fosters reflection, composure, and self-regulation while encouraging spirit captains to act as moral role models; and (3) Shared and Collective Leadership, where leadership responsibility was seen as distributed among all players, reinforcing collaboration and accountability within teams.

For RO 3, the results showed that the influence of SOTG extended beyond UF to other sports and daily life. Quantitatively, all six measured areas (fair-mindedness, positive attitude, respectful communication, moderation, tolerance, and honesty) showed statistically significant improvement in other sports and daily life (all $p < .05$). In other sports, elite and competitive players reported stronger improvement than social players, and general players showed more change than captains and spirit captains. In daily life, players aged 20-30 and 31-40, and those with more than five years of experience, showed the greatest improvement, suggesting that long-term involvement helps to internalise SOTG values.

The qualitative data confirmed these results. Players described using SOTG principles of fairness, respect, and calm communication in other sports that have referees. In daily life, they reported clearer communication, greater patience, and more honesty in workplaces, studies, and personal relationships.

Overall, Chapter Four has shown that SOTG strengthens ethical and behavioural standards within UF and also promotes the positive transfer of those standards into other sports and daily life. Through its focus on self-regulation, fairness, and shared responsibility, SOTG can operate as both a sporting ethic and a wider behavioural framework that encourages leadership, respect, and integrity beyond the field.

Chapter Five: Discussion

5.1 Introduction

This chapter interprets and discusses the research results in combination with the previously established conceptual framework and the theories reviewed in Chapter Two. The aim of this study was to investigate the influence of Spirit of the Game (SOTG) and roles of spirit captain on the behaviour of athletes in Ultimate Frisbee (UF) and in other sports and life domains, and to explore how leadership theories can help explain the observed patterns. This study seeks to achieve three objectives:

RO1: To confirm what was/is the purpose of the spirit concept and captain in the sport of UF.

RO2: To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in the sport and with their team (in New Zealand).

RO3: To explore, through a leadership lens, the impact of UF player engagement with the spirit concept and/or spirit captain on the players' behaviours in other sports and areas of their lives (in New Zealand).

The quantitative analysis presented in the previous chapter reveals that the players SOTG-related behaviours in UF sports have significantly improved from their first experience with UF to their current stage across five SOTG dimensions (rules knowledge and use, fair-mindedness, positive attitude and self-control, respectful communication, fouls and body contact). Additionally, the players' behaviours in other sports and daily life have improved across six dimensions (fair-mindedness, positive attitude, respectful communication, moderation, tolerance, honesty).

The qualitative data reveals how SOTG and the spirit captain shape aspects of players' behaviours in UF such as sportspersonship and self-leadership, as well as the influence of leadership in this process. In other sports and life domains, the qualitative data illustrate how SOTG affects players' behaviours in terms of sportspersonship, self-leadership and interpersonal communication.

The following section (5.2) explores how SOTG and spirit captains relate to behavioural changes within UF from the perspectives of sportspersonship, self-leadership, and ethical/shared/collective leadership theories (RO2). Section 5.3 extends the analysis to other sports and life domains (RO3), with a focus on the transfer of sportspersonship, self-leadership and communication skills. Finally, section 5.4 offers a summary of the main insights and conclusions drawn from the discussion.

5.2 SOTG and spirit captain effects *within* UF

This section explores how the application of SOTG and the role of the spirit captain influence players' engagement and behaviour within UF itself. Drawing on both quantitative and qualitative data, this section interprets how SOTG operates as a behavioural and ethical structure, shaping players' sportspersonship, self-leadership, and collective forms of leadership on the field. It also examines how variations in experience, role, and culture intersect with these behavioural changes.

5.2.1 SOTG as a sportspersonship framework

The quantitative data indicate that from first participation in UF ('before') to the time of survey completion ('after'), ratings across all five SOTG dimensions have shifted upward. Chi-square analyses show statistically significant distributional changes for rules knowledge and use, positive attitude and self-control, and fouls and body contact. Although fair mindedness and respectful communication did not reach statistical significance, the distributions still moved upward, with more participants selecting higher categories in both areas, consistent with strengthening SOTG-related behaviour as UF participation increases. These changes reflect the normality of SOTG and are in line with the academic view that SOTG is not only regarded as a principle but also as a practical framework for improving, monitoring and evaluating ethical behaviour during competition (Amoroso et al., 2024; Crocket, 2015). Meanwhile, the self-refereeing system of UF enables players to jointly enforce rules, thereby promoting sportsmanship among athletes of different ages and levels (Amoroso et al., 2024). This provides a reasonable explanation for the observed

improvement in the overall behaviour of the players and the general increase in spirit scores.

Interestingly, the results add a different angle to the findings of Amoroso et al. (2024). Amoroso et al. (2024) indicated that, typically, players scored higher in positive attitude and self-control, but lower in rules knowledge and use. In the present study, rules knowledge and use increased significantly from first participation to when participants completed the survey, yet it continued to lag behind the other spirit dimensions. At the time of completing the survey, only 17.9% selected “excellent” and 0% selected “very good” for rules knowledge and use, which is consistent with Amoroso et al. (2024) who reported lower ratings for this dimension. In contrast, fair-mindedness was marginally the highest dimension, with 76.7% selecting “very good” or “excellent”, and both positive attitude and self-control and respectful communication were also high at 75%. This distinction may be similar to the interpretations which argue that SOTG varies greatly depending on the level of play, player experience and in relation to team history (Amoroso, Valente-dos-Santos et al., 2022). Due to the different understandings of SOTG by different players, there are differences in the evaluations of others and self-evaluations among the four dimensions except for rules knowledge and use, while the evaluation criteria of rules knowledge and use are more unified and standardized.

Comparative analyses within UF indicate that a longer duration of UF participation is associated with the improvement of rules knowledge and use. The quantitative data shows that shorter participation time (one to five years) leads to more significant improvement in positive attitude and self-control as well as respectful communication. The WFDF (2020) emphasizes that UF athletes need to be familiar with the rules, control/avoid physical contact, always maintain fairness, and be guided to keep a positive attitude and good communication. Therefore, although no significant increase in all SOTG dimensions in the quantitative data was observed, these distribution patterns met some of the expectations of the WFDF. Meanwhile, the comparison results in terms of gender and playing level did not show significant differences, which limited the study’s inference about which groups had ‘more’ sportpersonship. Given the evidence in other literature, this restriction is reasonable. For

example, Çetinkaya (2024) reported a significant association between nationality, elite status, and years of exercise and sportspersonship. However, the gender patterns in different studies are not consistent, Kusan (2024, as cited in Çetinkaya, 2024) and Tsai and Fung (2005, as cited in Çetinkaya, 2024) suggested that female athletes have higher sports performance, while Sabırlı (2024, as cited in Çetinkaya, 2024) and McLaughlin (2020, as cited in Çetinkaya, 2024) suggested that male athletes have higher performance. Therefore, independent gender effects (such as a significant improvement in female respectful communication observed in this research) are insufficient to determine the broader gender differences in sportspersonship associated with SOTG.

At the same time, this behavioural improvement model of players can also be understood from the two-dimensional perspective of sportsmanship behaviour (Gr et al., 2018). Constandt et al. (2018) classified sportsmanship behaviours into an inhibitory dimension (avoiding unsocial/immoral acts) and a prosocial dimension (acting in socially moral ways). From the first participation in UF to the time they completed the survey, the low scores (poor and not good) in relation to fouls and body contact have completely disappeared and all have been upgraded to high scores (good, very good and excellent). This trend reflects a behavioural change in the inhibitory dimension, which indicates that athletes are more consistently avoiding dangerous or excessive physical contact and fouls during the game.

The growth in the prosocial dimension is simultaneously reflected in the increase of fair-mindedness, respectful communication and positive attitude and self-control. Although behavioural changes in terms of respectful communication and positive attitude and self-control did not show statistical significance, the positive trends in these three dimensions indicate that behaviours related to fair-mindedness, positive attitude and self-control, and respectful communication were widely reinforced. These changes are manifestations of the prosocial dimension (Constandt et al., 2018).

The qualitative data further elaborate on how these two dimensions are reflected in UF. One survey participant described specific inhibitory behaviours: "I might pull out of a contest in the air ... in order to keep good spirit." These

choices suggest that athletes will suppress potential antisocial behaviours for safety and fairness (Constandt et al., 2018). Player B also described specific prosocial behaviour: “I’ll shake hands ... introduce myself ... we’ll have a laugh”; “I will always talk to the other team”; “I’ll help them along ... giving little tips ... to raise the standard”; “We’ll ... ask the players if they want to have some throws.” These descriptions reflect engagement in prosocial behaviour, shifting from merely abiding by rules to actively caring about the experiences and performance of others.

5.2.2 SOTG and self-leadership

Manz (1986) explained self-leadership was “conceptualized as a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating” (p. 589). Qualitative data in the present study describe how athletes apply self-influence strategies in UF sport. For example, some survey participants and Player A all said that they would deliberately slow down the pace of conversation, listen to the other’s viewpoints, and adjust the tone in disputes. They would use phrases such as “from my perspective” and “I saw this”; they said it was important to “check in with yourself before you speak ... make sure you’re calm so you don’t escalate things” and “listen to another person’s perspective and truly consider it”; and they reflected on “being able to listen to another person opinion before respectfully stating my own.” Ensuring one’s composure before engaging in a conversation reflects self-control as a discipline-oriented self-influence strategy (Stewart et al., 2011).

Stewart et al. (2011) indicated that self-influence strategies also include self-observation, self-prompt management, self-goal setting, self-reward/criticism, and rehearsal. When disputes arise in UF, the use of phrases such as “from my perspective” and “I saw this” serves as self-prompt management as players prompt themselves to state facts rather than emotions and distinguish observations from judgments to resolve penalties more objectively. At the same time, players listen to their opponents’ views before expressing their own opinions, and carefully considering others’ views reflects their self-goal setting

which is to solve penalties calmly and rule-centred. These findings show how players use self-influence strategies for self-leadership.

5.2.3 Ethical leadership in UF

Ethical leadership concepts in UF

Multiple pieces of evidence in the qualitative data suggest that the notion of the spirit captain is in line with the ethical leadership theory proposed by Brown et al. (2005), which emphasizes two aspects of a leader's character (personal behaviour) and leader's behaviour (communication, motivation, decision-making). First, one general player described the spirit captain as a moral model: "The spirit captain leads by example, [brings] up issues to [hold] the team accountable to playing fairly and honestly and [helps] uphold the integrity of [the] rules." Meanwhile, this image of the "moral person" is also consistent with the ethical leadership theory proposed by Shakeel et al. (2019), which suggests cultivating an individual's moral awareness first and then guiding others.

Secondly, two survey participants believed that the spirit captain is a "moral manager" who enhances the team's behaviour through two-way communication, guidance and motivation, which is consistent with the view of Brown et al. (2005). One captain explained how spirit captains "pass on key bits of feedback", "act as the conscience for your behaviour," and guide team members on how to communicate. Also, one general player pointed out that spirit captain told them to "not come into calls 'hot'", to use phrases such as "from my perspective," and use descriptive language instead of accusatory language ("I think rather than 'you did this'").

Shakeel et al. (2019) placed the constituent elements of ethical leadership on a development timeline and elaborated specifically on the various stages that leaders go through on this development path: developing individual ethics; setting a benchmark for ethics and welcoming feedback; guiding followers based on rules; developing principles/inspiring followers; service to others; and implementing change together with all stakeholders. The patterns observed in the present study partially reflect the staged ethical development described by Shakeel et al. (2019), although the present study did not measure those stages

directly. By regulating the words and deeds of team members in conflict, spirit captains realize the idea proposed by Shakeel et al. (2019) of guiding followers based on rules and setting a benchmark for ethics and welcoming feedback. The same pattern is also reflected in the interaction among teams in UF: one general player explained that spirit captains “ask for feedback ... at half time, summarise and share it ... and then take [it] to the rest of their team to work on [for] the rest of the game.” One captain believed that the spirit captain “has influence on facilitating discussion between team members and opposition.” This demonstrates the spirit captain is at the stage of implementing change together with all stakeholders. Furthermore, this is in line with the role added by Constandt et al. (2020) within the realm of ethical leadership: the ‘ethical entrepreneur’. The ethical entrepreneur strives to “innovate by implementing new ethical norms when current norms are insufficient to tackle occurring challenges” (Constandt et al., 2020, p. 385). The UF spirit captain solicits feedback, summarises and shares it, and then discusses it with team members and opponents to evaluate and adjust ethical behaviour during the game.

Finally, two general players believed that the positive influence of the spirit captain can enhance the overall level of the team: “Having a spirit captain who takes their role seriously ... makes me a better player, and lifts the whole team,” and “spirit captains have often been the ones that have taught me new things.” These cases are in line with the principles of developing/inspiring followers and offering service to others in Shakeel et al.’s (2019) theory, and also accord with the view of Constandt et al. (2018) that ethical leaders can promote altruistic behaviour by formulating and strengthening clear norms.

Ethical climate

Ethical leadership is highly correlated with the ethical climate of a team and helps shape it, and the ethical climate is closely related to ethical behaviour (Constandt et al., 2018). The findings of the research provide examples of the impact of an ethical climate on teams and members. On the positive side, two general players emphasised that a responsible team spirit leader can lift “the whole team” and become a “trustworthy pillar” of “all spirit aspects”, thereby strengthening the positive ethical climate of the team. On the negative side, Player B also recognised that some influential individuals with a “win-at-all-

costs” mindset will “pull a team away from a focus on spirit”, which indicates how leaders (formal or informal) shape the ethical climate of the team. These findings are also consistent with the research results of Kavussanu (2008) and Shields et al. (2007): this pattern indicates that the unethical behaviour of other important figures (coaches, teammates, spectators) may trigger similar imitations, while ethical leadership and a positive ethical climate can curb this negative tendency.

The influence differences of the spirit captain

Not all players feel the same influence from the spirit captain. In terms of the quantitative data, survey participants’ perception of the influence of the spirit captain is concentrated at a medium level (with an average of 2.61), while gender comparisons show that there are significant differences in people’s perceptions of this influence. Most women players considered the influence of the spirit captain to be in a medium category, while men players showed a wider spread of responses across low, medium, and high categories.

In terms of the qualitative data, one general player and Player B described different experiences: “[Some] take their role seriously ... [which] lifts the whole team” while others “don’t necessarily have too big of a role”, or are “not ... willing to challenge their teammates”, thereby limiting their influence. In very few cases, one spirit captain mentioned that being a spirit captain “doesn’t change anything for me”, explaining that regardless of whether he holds a formal ethical leadership role or not, he already upholds good sportsmanship. These observations align with the view of Shakeel et al. (2019) that not all leaders are able to practise ethical leadership. The CEO of NZU also expressed similar concerns, noting that assigning a formal “person in charge” role might overly concentrate “ethical work” on a single individual, thereby weakening the shared ethical responsibility of other members.

5.2.4 Shared/Collective Leadership in UF

Leadership in UF is not concentrated within a single formal position. In UF, leadership roles include the captain and spirit captain, with other team members also expected to display SOTG ‘self-leadership’. This aligns with the concept of

shared leadership, where influence is horizontally distributed (across the captain and the spirit captain) and also emerges through interactions between teammates working toward shared goals (Carson et al., 2007; Conger & Pearce, 2003). Zhu et al. (2018) identified three main characteristics of shared leadership: horizontal influence among peers, the development of leadership as a team-level property, and the distribution of leadership roles across members. These features are clearly reflected in the current findings. Two players described spirit responsibilities as shared among members rather than belonging only to the spirit captain. As one general player stated, “Anyone on the field can do [the spirit captain’s job],” and Player B added, “Not my role, but I thought our spirit captain’s not going to do that so I thought it would be nice to front-foot it.” Such expressions reflect the collaborative environment described by Zhu et al. (2018), where leadership is embedded within the actions of the group rather than a specific role.

Findings also show that formal and informal leadership complement each other, echoing Zhu et al.’s (2018) argument that shared leadership works together with vertical leadership. One general player and a captain explained that the spirit captain is a communicator and organiser, helping coordinate interactions between teams: “Spirit captains will ask for feedback for the opposition at half-time, summarise and share it, and then take their feedback to the rest of their team” (general player), and “The SC has influence on facilitating discussion between team members and opposition ... without a single point person identified to do that” (captain). This reflects the internal team environment of shared purpose, voice, and social support described by Carson et al. (2007). The spirit captain therefore acts as a communication link that strengthens understanding and provides structure for team discussions. This pattern corresponds with the mid-level shared leadership model proposed by Cotterill et al. (2022), where leadership is distributed across a manageable number of players, allowing multiple voices to be involved while remaining coordinated to avoid confusion.

The qualitative findings also illustrate the advantages and challenges of this model. Shared leadership encourages autonomy and collaboration which, as a general player said, “Anyone on the field can do, but sometimes it’s nice to have

a person on your team who you can rely on if needed.” This supports the idea that shared leadership provides opportunities for initiative and support within the team (Kocolowski, 2010). However, certain challenges were also identified. The CEO of NZU cautioned that assigning “a person who’s gonna be in charge” might inadvertently diminish the individual sense of responsibility among other team members. Similarly, Player B noted that a “win-at-all-costs” mentality could “pull a team away from a focus on spirit,” undermining the collective accountability that SOTG seeks to promote. These findings align with Kocolowski’s (2010) observation that shared leadership, while fostering collaboration, can also encounter coordination difficulties when responsibility and influence are distributed too broadly across a group.

Beyond shared leadership, several findings indicate a shift toward collective leadership, which focuses more on building an environment where responsibility and influence are shared across relationships and time (Ospina, 2017). While shared leadership describes distributed influence within the team, collective leadership involves UF team members jointly contributing to maintaining ethical and inclusive participation. This can be seen in statements from Player B such as “we can have responsibility for the engagement and enjoyment of the game by other players”, and “everyone ... has a duty as a referee”. These ideas highlight not just distributed roles, but a collective understanding that all players contribute to upholding the quality and fairness of play.

The concept of collective leadership also aligns with the perspectives of Ospina et al. (2020) and Spiller et al. (2020), who describe leadership as emerging through relationships and cooperation within a broader system rather than from individual actions. This interpretation is strongly reflected in the practice of SOTG. Both leaders and players emphasised that maintaining fairness and respect relies on collaboration and communication among everyone involved. For instance, the WFDF president noted that, without SOTG, referees would be required, as the system depends on athletes’ willingness to “agree to follow the rules and respect each other” and “cooperate to enforce them.” Similarly, the CEO of NZU observed that, before the introduction of the spirit captain role, “the responsibility of maintaining SOTG was shared by all the players,” and cautioned that assigning one person to be “in charge” could reduce the sense of

shared responsibility. Players' reflections reinforce this collective approach, describing how SOTG encourages calm and respectful conversation in disagreement: one general player said it helped them "think about optimal ways to communicate with others ... be calm, respectful, and form logical arguments." A captain also remarked that after each point, "everyone is really positive and congratulatory," showing how SOTG supports an environment of open communication and mutual respect. Together, these examples illustrate that SOTG encourages players to take responsibility for fairness and positive communication collectively, not through reliance on formal leaders or referees. In this way, SOTG not only provides a framework for shared leadership within teams but also cultivates a collective form of leadership across the wider UF community. This discussion also illustrates the theoretical and practical challenges associated with differentiating between shared and collective leadership.

5.2.5 Understanding and Cultural Difference in SOTG

Multiple aspects of the findings of this research confirm the viewpoints of Crocket (2015) and Amoroso, Valente-dos-Santos et al. (2022) regarding the different understandings of SOTG by players. Many cases have highlighted the difference in people's perceptions of the appearance and essence of "good spirit". Player A said that people often measure sportsmanship by some external behaviours: "A lot of people thinking that, like, giving a high five is a good spirit and if someone doesn't give you a high five or doesn't want to engage in conversation on the sideline that that's unspirited." He added, "if you're happy and you're smiling, you're well spirited... and I think there are a lot of other things get overlooked, like listening to the other team and having a good knowledge of the rules." These viewpoints are highly consistent with those of Crocket (2015): Athletes may all attach importance to the "moderation", but their understanding and manifestation of it vary. Some people think that friendliness and enthusiasm are spirit, while others pay more attention to having principled conversations and following the rules when in dispute.

Secondly, the influence of the institutional environment has increased the complexity of the problem. Player A compared UF in New Zealand with UF in

American universities and pointed out that "they have observers rather than game advisers ... and quite often ... the players actually don't know the rules themselves ... they just ask the observer to make a call." This observation echoes the view of Amoroso, Valente-dos-Santos et al. (2022), who emphasize how team history and the game system affect the understanding of SOTG. Therefore, when external authorities frequently make calls, athletes may place less emphasis on their own ability to understand rules.

Finally, the data also shows how athletes actively negotiate SOTG in different cultural and level contexts, which is precisely what Crocket (2015) emphasised: the necessity for athletes to negotiate SOTG in real-time interaction when boundaries are blurred. Players described that spirit captain would collect the opinions of the opponents, summarise them, and then convey the information to the team to adjust the tactics in a timely manner. When the discussion is intense, they will avoid getting emotionally agitated and instead use some sentences expressing their personal opinions to respect different views and eventually reach a consensus. These practices are precisely the embodiment of the mechanisms expounded by Crocket (2015) and Amoroso, Vanlente-dos-Santos et al. (2022): When there are differences in interpretations under different cultures, at different levels or in different historical backgrounds, communication becomes an effective way to reconcile differences. The leadership participants also emphasized the need to provide support for such negotiations at the system level. The president of WFDF and the CEO of NZU emphasized the development initiatives at the institutional level, such as spirit scoring, spirit time-outs, and event-long feedback. It is precisely to ensure a consistent understanding of sportsmanship among all parties in "in diverse and highly competitive environments".

5.3 SOTG impacts in other sports and life

This section discusses how behaviours shaped by SOTG in UF carry over to other sports and into daily life, and links those changes to the literature reviewed in Chapter Two. The focus is on how the improvements are explained by ideas such as the two dimensions of moral behaviour and the self-leadership strategies that guide calm, fair, and respectful action. Short quotations are used

to show how athletes apply these habits in new settings, and comparisons highlight which groups show the clearest transfer of behaviour.

5.3.1 Sportspersonship in Other Sports

Quantitative research shows that the positive impact related to SOTG goes beyond the UF movement. In other sports, all six target domains showed significant positive changes (fair-mindedness, positive attitude, respectful communication, moderation, tolerance, and honesty, all $p < .01$). This model is consistent with the two-dimensional interpretation theory (prosocial and inhibitory) of moral behaviour in sports proposed by Constandt et al. (2018). Advances in respectful communication, fair-mindedness, positive attitude and tolerance reflect the prosocial dimension, while improvements in moderation and honesty indicate an enhancement in the inhibitory dimension. These quantitative results indicate that the moral improvement shaped by SOTG is not limited to UF but can be extended to the broader sports experience of athletes. This provides an empirical basis for connection with qualitative insights, which reveal how athletes consciously apply the SOTG principle to other environments.

Qualitative research further clarifies how these sportspersonship tendencies are manifested in the context of other sports. Player B explicitly stated their refusal to adopt the "win-at-all-costs" strategy commonly found in other sports: "Someone's going for a layup ... and someone will grab their arm and foul just to stop that basket. I will never do that. If they've beaten me ... fair enough." These expressions reflect the inhibitory dimension (avoiding unfair/unsafe behaviour) and honesty as a universal sportspersonship criterion across different sports. One spirit captain also associated SOTG with greater respect for referees: "[SOTG] helped me to not talk back as much to referees in other sports", as well as a more lenient attitude towards the performance of another general player: "I have become more aware about remaining positive in my other sport ... you don't always congratulate people." These are all typical prosocial behaviours in the theory of Constandt et al. (2018). These statements also reinforce Bandura's (1999) statement of two aspects of morality: proactive morality is expressed in the ability to act humanely, while refrain morality is

expressed in the ability to avoid inhumane behaviour. Player B and survey participants showed athletes practising restraint while expressing humanity toward opponents and officials.

In addition, Player A also reflected on how the cultural differences between UF and other sports affect people's interpretation of spirit-related behaviours. Player A said: "a lot of people thinking that like giving a high 5 is a good spirit and if someone doesn't give you a high five or doesn't want to engage in conversation on the sideline that that's unspirited." This indicates that SOTG helps players distinguish between seemingly friendly postures and deeper forms of respectful communication. Although high-level competitions may demand higher physical fitness, SOTG maintains a moral bottom line to prevent superficial friendliness from being mistaken for true respect and aggressive behaviour.

This dynamic highlight how UF redefines competitiveness to be in line with ethical self-restraint, a departure from Keating's (1964) distinction between playing for pleasure and playing for victory. Keating (1964) made the distinction between sport (play governed by moderation and generosity) and competitive sport (play governed by victory, sacrifice and concentration). However, in the present study, a general player clearly redefined the purpose of sports: "[SOTG] has taught me that the purpose of playing the game is for the love of the game itself, rather than how you can bend the rules to your advantage." This coincides with the view in relevant literature that sportsmanship is related to fundamental moral qualities and values (Çetinkaya, 2024; Jong, 2012; Turan et al., 2022). In the quantitative data of this study, this shift in values is accompanied by a significant improvement in fair-mindedness and the spirit of honesty in other sports, indicating that SOTG can bring the competitive environment back to the concept of sportspersonship without erasing the essence of competition. These findings are consistent with the research results of Turan et al. (2022), who emphasized that moral intelligence encourages athletes to oppose harmful behaviour through empathy, conscience, and kindness. The quotes from the above participants reflect these moral intellectual elements: empathy in recognizing the opponent's viewpoint, conscience in refusing to cheat, and kindness in maintaining respect after contests.

The atmosphere of UF also has an impact on sports activities outside of UF. The research by Kavussanu and Al-Yaaribi (2021) indicated that the behaviour of teammates significantly influences athletes' prosocial and antisocial actions. One captain explicitly stated that the team atmosphere he experienced in UF influenced the way they interacted with teammates and opponents in other sports: "The general atmosphere of UF is much nicer ... that is to say, this drives me to exemplify the spirit categories in hopes that other people will experience what I have too." The prosocial movement atmosphere seems to foster similar positive behaviours in new groups, which is in line with the teammate-influence mechanism proposed by Kavussanu and Al-Yaaribi (2021).

Comparative analyses further reveal which groups have changed the most. In other sports, general players (as distinct from the captain/spirit captain) have shown significant progress in six dimensions (fair-mindedness, positive attitude, respectful communication, moderation, tolerance and honesty) in regard to other sports, while the changes reported by captains and spirit captains have been relatively minor. This might reflect those athletes who have integrated into leadership norms already possess good moral values and behaviours. This is similar to the theory of ethical leadership by Shakeel et al. (2019), that is, the role of moral person usually refers to the leader's own moral values while the role of moral manager refers to the activities that the leader takes to instil these moral values in their followers. Player B also indicated that if SOTG "is not part of [spirit captains'] value set already then it will be a little bit more difficult" for spirit captains to do their job and "it's not essential that [spirit captains] have a moral compass that's aligned with spirit, but it's easier if you do." These findings suggest that some players might have been chosen for leadership positions by the team because they already had good values and ethical behaviour.

Although these are not causal assertions, they are consistent with the direction of existing research results, that is, the influence of different variables on athlete behaviour remains inconsistent, and environmental and cultural factors have an impact on the sportsmanship (Çetinkaya, 2024).

Overall, these patterns suggest that SOTG may serve as a restorative framework for modern sports, addressing the sportspersonship erosion noted by Crocket (2015) in highly commercialised "win-at-all-costs" environments. By

integrating self-officiation, conversation and moral responsibility into the competition, UF provides a feasible model for ethical sports practice. Further extending this argument, SOTG's emphasis on self-regulation and respect can serve as a blueprint for reforms across other sports and even in the advancement of a bid for Olympic inclusion. The quantitative and qualitative data suggest that UF participants have applied SOTG-related behaviours to sports outside of UF, indicating that this "spirit" can help international sports organisations move towards a new model of ethical competition, achieving a balance between outstanding performance and moral responsibility.

5.3.2 Self-leadership in Other Sports and Daily Life

In the quantitative results, players reported significant improvements in behavioural domains related to moderation (control of own behaviour), tolerance (actions to other's behaviour), honesty, and respectful communication (all $p < .01$). These patterns suggest that the influence of SOTG supports the development of self-leadership skills—particularly those that involve self-observation, intrinsic motivation, and self-regulation. According to Manz (1986), self-leadership requires a higher standard of self-regulation than simple self-control, integrating motivation and behaviour change through personal commitment rather than external pressure. The behavioural changes observed in this study, especially those related to calmness, patience, and reflection, indicate that athletes not only regulated their own actions but also used self-influence strategies that extended to other sports and daily life.

Manz (1986) defined self-leadership as "conceptualized as a comprehensive self-influence perspective" (p. 589). Neck and Houghton (2006) group self-leadership strategies into three types: behaviour-focused (e.g., self-goal setting, self-reward, self-punishment, self-observation, self-prompting), natural reward (emphasizing inherently enjoyable aspects of tasks), and constructive thought pattern strategies (e.g., self-talk, imagining successful performance). In this study, athletes described how they were influenced by SOTG and subsequently applied these self-influence strategies to other sports and their daily lives.

First, athletes described how they applied behaviour-focused strategies in their daily life. For instance, two general players indicated that they would pause to

think before speaking and pay attention to their emotional state. One general player said, "I feel like SOTG has held me accountable for my own actions" (in daily life), and another explained that "[SOTG] makes me reflect on how I am talking to other people and hold myself accountable" (in daily life). Player A also indicated that they would adjust their communication methods to avoid escalating conflicts: "It's made me try to see everyone's perspectives first ... it's definitely made me stop and think" (in daily life). Another general player added: "I learnt that it pays to be calm, respectful, and form logical arguments, and also acknowledge that the other person may have a different perspective" (in daily life).

Two further examples from general players illustrates this reflective process: "I am no longer as quick to disagree and react negatively when something has gone against me," and "My overall tolerance has definitely been better when dealing and communicating respectfully to others" (in daily life). These experiences show conscious self-regulation and awareness of emotional triggers, key indicators of behaviour-focused strategies outlined by Neck and Houghton (2006), who argued that such strategies teach individuals to monitor their own behaviour, replace reactive habits with constructive responses, and build intrinsic motivation.

Behaviour-focused self-leadership was also visible in athletes' conduct during other sports. Several participants showed how they transferred UF's emphasis on self-control and fairness into other competitive settings that traditionally encourage aggression. Player B stated: "Someone's going for a lay-up ... and someone will grab their arm and foul just to stop that basket. I will never do that. If they've beaten me ... fair enough." Similarly, a spirit captain remarked that they always "get a grasp on all the rules before playing" (other sports). These accounts demonstrate self-goal-setting and self-prompting strategies from Neck and Houghton (2006), showing that UF athletes consciously set ethical boundaries for their own behaviour and prepare to act with fairness and clarity before competition. The findings suggest that behaviour-focused strategies enable athletes to internalise a moral discipline that does not depend on external officials or referees for enforcement.

Second, the natural-reward strategy focuses on finding inherent satisfaction in ethical behaviour and fair play rather than external rewards (Neck & Houghton, 2006). One general player expressed the view that “the purpose of playing the game is for the love of the game itself, rather than how you can bend the rules to your advantage” (in other sports). This shows how UF’s SOTG encourages athletes to derive pleasure from playing the game, not from winning at all costs. In daily life, the same principle appears in participants’ reflections on interpersonal communication, where calm and respectful dialogue itself becomes a source of satisfaction. Although the statement below from a general player was discussed earlier as an example of behaviour-focused regulation, it also illustrates the sense of intrinsic reward gained from acting ethically: “It pays to be calm, respectful, and form logical arguments” (in daily life). These examples align with Neck and Houghton’s (2006) assertion that natural-reward strategies increase intrinsic motivation by helping individuals re-frame tasks in a positive light. Türköz et al. (2013) further suggested that such intrinsic motivation is key to sustaining ethical behaviour over time, and the findings support that relationship between enjoyment, motivation, and moral conduct.

Finally, constructive thought-pattern strategies can also be reflected in several quotes discussed above. For example, comments such as “It’s made me try to see everyone’s perspectives first ... it’s definitely made me stop and think” and “Many of the communication skills I’ve learned have been very useful in a lot of my group project courses at university ... being able to listen to another person’s opinion before respectfully stating my own is what SOTG is all about” show positive self-talk, perspective-taking, and emotional regulation—core features of constructive thought-pattern strategies (Neck & Houghton, 2006). These habits demonstrate how UF athletes internalise SOTG’s reflective mindset and extend it into other sports and everyday communication.

Self-leadership is not only influenced by internal factors but also by the external environment. Stewart et al. (2011) pointed out that external factors such as self-leadership training, empowered leadership, shared leadership and cultural influences can affect an individual’s self-leadership practice. The qualitative data show that UF, through its SOTG culture and the influence of spirit captains, provides precisely such an environment. One spirit captain affirmed: “The

SOTG can easily be applied to life situations. Encouraging enjoyment, honesty, communication, well-being, respect etc.” Another player noted: “The spirit captain leads by example, brings up issues to hold the team accountable to playing fairly and honestly and helps uphold the integrity of the rules” (in other sports). These reflections demonstrate how UF’s ethical climate and leadership structures serve as external catalysts for self-monitoring, providing lived examples of moral consistency and accountability.

Moreover, social learning within UF reinforces these individual processes. Players observed that “spirit captains ... taught me new things” and “act as the conscience for your behaviour” (in daily life). Through vicarious learning, athletes internalise ethical behaviours modelled by their leaders and peers, a process consistent with Allen’s (2007) notion of moral self-awareness. The interaction between internal reflection and external modelling creates a collaborative environment where individual morality and collective responsibility reinforce each other.

Importantly, these influences go beyond UF. A captain reflected on how “the general atmosphere of UF is much nicer ... this drives me to exemplify the spirit categories in hopes that other people will experience what I have too.” This shows how UF’s ethical climate encourages the replication of SOTG values in other sports. Therefore, as an external system, UF not only cultivates an individual’s self-leadership but also extends moral practices to a broader sports culture. Quantitative results showed that both male and female participants demonstrated significant behavioural growth in multiple domains, indicating that the UF/SOTG environment serves as a transferable moral scaffold that promotes positive self-leadership in various contexts. Although causality cannot be confirmed, the quantitative patterns support this interpretation.

In conclusion, the integration of SOTG principles and spirit-captain leadership within UF offers both internal and external mechanisms for developing self-leadership. Such mechanisms extend self-leadership from the UF domain to other sports and daily life, indicating that SOTG is not only a behavioural guideline but also a transferable cognitive ethical model that can promote the sustainable development of individuals and society.

5.4 Summary

This chapter interprets the quantitative and qualitative research results from the theoretical perspectives introduced earlier, illustrating how SOTG and spirit captain are associated with the development of behaviour, ethics and leadership both within and outside UF.

Within UF, athletes showed improved in rules knowledge and use, fair-mindedness, positive attitude and self-control, respectful communication, and the avoidance of fouls and excessive contact. The research results suggest that SOTG is not only a principle but also a practical system that promotes fairness, emotional regulation and mutual respect. The spirit captain plays an important role within this system by modelling ethical conduct and facilitating respectful conversation between players. These achievements reflect sportspersonship theories (Constandt et al., 2018; Keating, 1964) and ethical leadership theories (Brown et al., 2005; Shakeel et al., 2019) that emphasize the value of fairness, responsibility and rules-based integrity in moral development.

The research results also suggest that SOTG contributes to the cultivation of self-leadership. The athletes employed the behaviour-focused, natural-reward, and constructive thought-pattern strategies described in the literature (Manz, 1986; Neck & Houghton, 2006). They learned to observe and regulate their own behaviour, inspire themselves through their inner values, and apply positive thinking patterns when facing challenges. The quantitative improvements in moderation, tolerance, honesty, and respectful communication reflect these processes of self-leadership enhancement. Qualitative evidence reinforces this explanation as athletes explained that they would pause before responding, consider other perspectives, and find satisfaction in calm and fair interactions. Through these practices, the SOTG environment appears to become a platform for learning self-discipline, self-reflection and internal motivation.

Furthermore, the research has found that the influence of SOTG is not limited to UF. Athletes applied the experience of fairness, empathy and honesty to other sports and daily life. They stated that they had also applied similar values in other competitions, demonstrating restraint, respecting referees, and improving communication with teammates and opponents. These findings suggest that the

moral and behavioural habits cultivated through SOTG are portable and adaptable. The transfer of these skills indicates that SOTG promotes sustainable ethical behaviour, supporting both sporting integrity and interpersonal respect in daily life (Amoroso et al., 2024; Bandura, 1999).

External influences also play a crucial role in the development of UF athletes' self-leadership. The environment of UF, the leadership structure and the social example set by the spirit captain have created a strong ethical climate that encourages athletes to practice self-discipline and a sense of responsibility. Participants described the spirit captain as a role model for maintaining fairness and providing constructive feedback. This environmental support is in line with existing leadership theories that emphasize shared, collective, and empowered leadership processes (Carson et al., 2007; Conger & Pearce, 2003; Ospina et al., 2020; Stewart et al., 2011); in turn, these theories suggest that self-leadership development is most effective in communities that value cooperation, reflection, and shared moral responsibility.

Overall, the discussion suggests SOTG as a behavioural and cognitive ethical framework, shaping how athletes guide themselves and others. The interaction between self-leadership and the ethical environment created by SOTG results in behavioural growth that extends to other sports and life situations. The discussion presented in this chapter therefore confirms the central argument of the study: SOTG can develop athletes who lead themselves and others through integrity, empathy, and respect, and provides a transferable model of ethical conduct that can benefit sport and society.

Chapter Six: Conclusion

6.1 Introduction

This study sought to confirm the purpose of the spirit concept and the spirit captain in the sport of Ultimate Frisbee (UF) (RO1) and to explore the impact of player engagement with the spirit concept/captain on players' behaviours in the sport and with their team, in other sports, and in other areas of their lives (RO2, RO3). The research is primarily set within New Zealand, integrating secondary data (global), interviews with UF organisation leaders, survey data (New Zealand elite, competitive and social athletes), and athlete interviews (elite and social).

The research results show that Spirit of the Game (SOTG) is the core concept of UF, and together with the spirit captain can effectively influence the sportspersonship behaviour of players in UF. Both elements are crucial for cultivating self-leadership and sportspersonship. Furthermore, this study also indicates that the SOTG concept has broader applicability, may have a positive application to other sports and may impact on personal behavioural norms. This chapter reviews the research findings, elaborates on their implications (academic and practical), points out the limitations of the research and considers future research directions.

6.2 Research Findings

The findings of this study indicate that SOTG is both the ethical foundation and behavioural framework of UF. From a quantitative perspective, players reported statistically significant improvements across key SOTG domains, particularly in rules knowledge and use, positive attitude and self-control, and fouls and body contact, which demonstrate that engagement with SOTG leads to measurable behavioural enhancement within the sport. Fair-mindedness and respectful communication also showed positive directional changes, indicating that these qualities are integral to UF's culture.

Qualitative data further indicate that UF athletes regard SOTG as the core of their identity within UF. Through interviews and open-ended text responses, the

athletes described how SOTG helped them balance competitiveness with fair play, regulate their emotions, and maintain respect during disputes. They also recognised that the spirit captain promotes this process by facilitating calm conversation, setting an example of integrity, and helping the team uphold ethical standards under pressure.

This study also revealed the differences related to playing experience and role. UF athletes with more than five years of experience demonstrated stronger rule knowledge and ethical consistency, while new athletes (one to five years) showed rapid improvement in self-control and communication. This indicates that SOTG learning began at an early stage of UF participation. The spirit captain is widely regarded as having a positive influence, although people's perceptions of the extent of their influence vary. This variability highlights that while SOTG values are shared collectively, leadership enactment differs by individual involvement and team context.

Beyond UF, athletes also reported that they had shifted SOTG-based behaviours to other sports and their daily lives. Survey evidence showed improvements in fair-mindedness, positive attitude, moderation, honesty, tolerance, and respectful communication, indicating that the ethical and self-regulatory skills cultivated through UF extend beyond the game itself. Players described consciously applying calm conflict resolution, empathy, and honesty in workplaces, relationships, and other sporting settings, reinforcing the idea that SOTG functions as a transferable moral framework.

6.3 Implications of the Research

This section is divided into three parts. It first explains the academic implications of the study by showing how the findings add to existing theories and fill gaps in current research. The second part outlines the practical implications, focusing on how SOTG and the spirit captain can guide player development, leadership practice, and sport management in UF. The third part discusses the implications beyond UF, showing how the lessons from this study may apply to other sports and support the wider social and ethical values of sport.

6.3.1 Academic Implications

This thesis enriches the relevant literature in the field of UF research by exploring the influence of SOTG and the role of spirit captain on behaviour. Most of the existing literature focuses on physiology or competition rules, while this study takes UF as a case to explore its application in sportspersonship and leadership. The research findings support the viewpoint proposed by Amoroso et al. (2024) and Crocket (2015) that SOTG operates both as a principle of ethical practice and a measurable behavioural framework. However, this study extends their theoretical claims by providing empirical evidence from the New Zealand UF community, an area not previously examined. Whereas Amoroso et al. and Crocket's works focused mainly on international or conceptual perspectives, this research demonstrated through quantitative and qualitative data how SOTG functions in practice among New Zealand athletes, showing measurable behavioural change and leadership development over time.

A notable gap addressed by this study lies in the application of SOTG to athlete behaviour beyond UF. Existing research has primarily discussed SOTG as an in-game fairness mechanism, but the present findings show that it can also foster self-leadership, emotional regulation, and moral behaviour transferable to other sports and daily life. Thus, while the work of Amoroso et al. (2024) and Crocket (2015) conceptualised SOTG as a rules-based system of moral accountability, this study reveals its developmental dimension by showing how it shapes athletes' ethical identity and reflective habits.

Furthermore, this thesis bridges the literature on SOTG with leadership theory. The findings empirically link SOTG to the frameworks of ethical leadership, shared/collective leadership, and self-leadership, illustrating how athletes enact these principles in game situations. UF players demonstrated self-observation, intrinsic motivation, and self-regulation (self-leadership); they also displayed shared and collective decision-making in managing spirit issues and conflicts. This shows that leadership in UF is not positional but distributed, aligning with shared and collective leadership theory, and confirming that UF's unique leadership model provides practical examples of ethical leadership.

Nevertheless, gaps in theoretical understanding remain, particularly in understanding the mechanisms of leadership within UF. This study identified that leadership in UF operates through ethical, shared, and collective forms rather than a formal hierarchy, yet the processes through which these forms interact were not examined in depth. The findings illustrated that spirit captains and players often co-construct leadership through conversations, mutual accountability, and example-setting, but it remains unclear how these dynamics evolve over time or differ across team environments. Future research should therefore explore how leadership is enacted and sustained within the SOTG framework. For example, further research could examine how ethical and shared leadership principles are translated into practical decision-making, communication, and behavioural regulation during play. Further investigation could also determine whether these leadership processes are consistent across different cultural or competitive contexts, and how they contribute to maintaining UF's self-refereeing and ethical integrity.

6.3.2 Practical Implications for UF

From a practical perspective, this study shows that SOTG can enhance athletes' performance in all five spirit aspects (rules knowledge and use, fair-mindedness, respectful communication, positive attitude and self-control, fouls and body contact). The spirit captain role has also played a positive role in guiding athletes to create a good sports atmosphere and promoting constructive dialogue in conflicts. Although its influence varies depending on the degree of emphasis an individual attaches to the role and the degree of participation of the spirit captain, this role remains an important guarantee and driving force for maintaining SOTG and UF's self-refereeing culture.

The influence of the spirit captain varies widely between teams and levels. Quantitative findings indicated that most athletes perceived the spirit captain's influence as moderate, while qualitative data revealed examples of both highly proactive and less engaged spirit captains. This variability raises practical questions about how spirit captains are selected and supported. Teams that value ethical culture may benefit from establishing clear selection criteria, prioritising emotional intelligence, communication skills, and ethical credibility,

and maybe providing training or mentoring to enhance consistency in leadership quality. Structured development programmes could help strengthen the spirit captain's ability to mediate conflicts, model composure, and reinforce SOTG principles.

From a wider perspective, these findings also have implications for UF's Olympic aspirations. The results of this study demonstrate that high-level performance and ethical behaviour can coexist within the self-refereeing framework of UF. This evidence strengthens the argument that the sport can successfully integrate into the Olympic system without compromising its core values or requiring external referees. The centrality of the SOTG concept to UF also demonstrates strong alignment with the Olympic movement's values (excellence, respect and friendship), philosophy and goals (International Olympic Committee, n.d.). Maintaining the SOTG framework would allow UF to preserve its distinctive culture of autonomy and moral accountability while meeting the standards of elite competition. This evidence highlights a valuable opportunity for UF to model an alternative approach to officiating; however, further investigation is needed to assess how this self-refereeing system can be effectively sustained and adapted within high-level international and Olympic contexts.

6.3.3 Implications beyond UF

The significance of this study is not limited to UF but also applies to other sports that have problems such as ethical violations, excessive competitiveness and lack of personal responsibility. The research findings show that frameworks like SOTG are helpful in cultivating self-leadership and sportspersonship. Survey participants indicated that they apply UF's values to other sports and daily lives, such as maintaining a respectful, honest and fair attitude even in other environments. For sports management, UF provides an effective example, demonstrating that the athlete-led model can also operate effectively in high-level competitions, thereby offering a feasible alternative to the traditional referee-centred system.

Beyond UF, the findings illustrate the potential for sport to deliver on its broader social-good promises. The SOTG framework actively develops teamwork,

communication skills, empathy, and fairness, qualities that align with sport's ideal role as a builder of moral character. Participants in this study described becoming more patient and cooperative both on and off the field, suggesting that UF's ethical system can counter some of the dark sides of modern sport, such as aggression, deceit, and win-at-all-costs attitudes. In this sense, SOTG demonstrates how a moral structure in sport can foster genuinely prosocial outcomes, transforming sport into a practical means of civic and moral education rather than merely entertainment or competition. These findings highlight the potential of sport to promote ethical development, but further research is needed to explore how such frameworks can be adapted and applied in other sporting and community contexts.

6.4 Limitations

Although this research meets relevant ethical and quality criteria, its limitations also need to be noted.

Firstly, in terms of the survey, the sample size (56 valid responses) is relatively small compared to the total number of UF sports participants in New Zealand (approximately 3500 in 2017) (Jeram, 2017), which limits the general applicability of the research findings. The survey was also completed at one point in time, asking participants to reflect back in time to make the relevant ratings, rather than capturing these earlier ratings at the time, which may introduce memory and bias limitations. Finally, although the study covered data from the elite, competitive and social levels, the sample size of social participants was relatively small (only two people), so the research results mainly reflected the situations at the elite and competitive levels.

In terms of the athlete interviews, whilst only two athletes (social and elite) were interviewed, and they did provide useful explanations and added some depth, the interviews could not comprehensively reflect viewpoints at different levels.

Additionally, the players who chose to complete the survey or participate in the interview may have particularly strong opinions about SOTG or the spirit captain, which may cause the results to favour more engaged or proactive individuals. Alternative explanations for the findings should also be considered.

Participants who chose to engage in UF may have already possessed characteristics such as fairness, honesty, respect, self-regulation and so on before their involvement in UF. Similarly, players who strongly identify with SOTG values may be more likely to remain involved in UF over time, while those less aligned with these values may be more likely to leave the sport. Therefore, some of the positive behaviours and attitudes reported in this study may reflect pre-existing participant characteristics, self-selection effects, or the retention of individuals already aligned with SOTG values, rather than being solely attributable to participation in UF.

In general, the research findings mainly focus on the UF community in New Zealand and may not necessarily extend to other countries or the overall cultural background of UF sports.

Some of these limitations are a product of the project size and time constraints associated with a master's thesis which could be addressed by research not operating under such constraints. Regardless of their nature, these limitations do not affect the validity of the current research conclusions, but they serve as a reminder to be cautious when promoting and applying these conclusions.

6.5 Future Research

Future research could provide more comprehensive insights into the functioning and evolution of leadership within the UF context. While this study identified the presence of ethical, shared, and collective leadership within the SOTG framework, the relationships between these leadership forms remain underexplored. Further research could examine how these leadership types influence one another in team interactions and decision-making, and how these dynamics change over time as athletes gain experience. Longitudinal studies could reveal whether ethical and collective leadership behaviours become more internalised with continued participation and how leadership is redistributed within teams during different stages of competition. Applying the frameworks of Brown et al. (2005) on ethical leadership and Constandt et al. (2018) on the development of an ethical climate may help explain how accountability and autonomy are maintained within UF.

Another area for future research could be the influence of SOTG and the spirit captain on self-leadership. This study showed that athletes used the behaviour-focused, natural reward, and constructive thought strategies identified by Manz (1986) and Neck and Houghton (2006) to regulate emotions and behaviours during games. However, future research could assess how the presence or leadership style of a spirit captain strengthens or limits these self-leadership strategies. Mixed-method or experimental designs could help identify whether specific spirit captain practices, such as structured reflection or communication training, improve self-leadership indicators including self-observation, self-reward, and intrinsic motivation. Such research could further extend the theoretical connection between self-awareness and self-regulation described by Hagger et al. (2010).

Cross-cultural comparative research is also an important next step. This study focused only on New Zealand athletes, and their understandings of self-awareness, self-regulation, and leadership may reflect the local sporting culture. Comparative studies involving UF communities in other countries could explore how cultural values influence interpretations of fairness, respect, and autonomy. Such research could also examine whether ethical, shared, and collective leadership are expressed differently in collectivist and individualist cultures, providing valuable insights for the global sport ethics literature. Expanding the sample size and diversity of participants would further improve the generalisability of the findings.

Another valuable direction is to compare self-refereeing systems like UF with traditional referee-based sports. By analysing how different models of officiating influence athletes' moral reasoning, sense of responsibility, and communication, researchers can assess whether SOTG principles could be adapted to enhance fairness and accountability in other sports. Building on the work of Constandt et al. (2018) and Shields et al. (2007), future studies could evaluate whether introducing athlete-led discussion or spirit scoring mechanisms in traditional competitions encourages ethical awareness and reduces unsporting behaviour.

Further research can also explore how to apply the ethical framework based on SOTG to other sports and promote it to the community or youth groups. Examining how similar principles of autonomy, respect and moral responsibility

operate outside of UF will help to gain a deeper understanding of the significance of sports ethics practices in their broader social applications.

Another future research direction could explore how to maintain and adjust the self-refereeing model in the context of international high-level events and the Olympic Games. Future research can assess how competitive intensity, cultural diversity and institutional requirements affect the implementation of SOTG principles at this level. Such research will help clarify how UF can meet the expectations of global elite sports while maintaining its autonomy and ethical standards.

Furthermore, research could investigate the governance and organisational aspects of integrating self-refereeing within sport management structures. As discussed by Amoroso et al. (2024), self-refereeing in UF functions as both an ethical principle and a practical governance framework that enables players to share responsibility and maintain fairness through autonomy. Examining how national or international federations promote or limit the practice of self-refereeing through policy, education, or evaluation could deepen the understanding of how ethical frameworks can be implemented across different levels of sport.

Together, these future directions would deepen the understanding of how SOTG and the spirit captain contribute to athlete development, team culture, and sport governance across different competition environments and cultural contexts. By connecting UF's unique self-refereeing model with wider theoretical perspectives on morality, ethics, and self-leadership, future research could also assess its sustainability within high-level international and Olympic games and its adaptability to other sports. These studies would strengthen both the academic and practical foundations for promoting integrity, autonomy, and moral growth in sport.

6.6 Summary

This study indicates that SOTG and the spirit captain are not accessory elements but core components in the concept and practice of UF sport. They shape athletes' attitudes about participation by encouraging fairness,

communication and self-leadership, and have a positive impact on athletes' off-field behaviour. For UF, these elements maintain its unique self-refereeing system and provide a potential path for the sport to gain Olympic recognition without compromising its core values. For the entire sports community, they provide an example for addressing the pressing issues of sports ethics. Although the sample size and scope of this study were limited, it has contributed to the discussions among the academic community, the UF community, and sports management institutions on issues such as how to build a sports system to promote ethical behaviour and athlete development. Future research can be based on these findings to further explore the transformative potential of SOTG and the spirit captain in both UF sport and other sports.

References

- Adams, W. C. (2015). Conducting semi-structured interviews. In K. E. Newcomer, H. P. Hatry & J. S. Wholey (Eds.), *Handbook of practical program evaluation* (pp. 492-505). Wiley.
<https://doi.org/10.1002/9781119171386.ch19>
- Adeoye-Olatunde, O. A., & Olenik, N. L. (2021). Research and scholarly methods: Semi-structured interviews. *Journal of the American College of Clinical Pharmacy*, 4(10), 1358-1367. <https://doi.org/10.1002/jac5.1441>
- Alabi, O., & Bukola, T. (2023). The introduction to descriptive statistics. In B. S. Kumar (Ed.), *Recent advances in biostatistics*. IntechOpen.
<https://doi.org/10.5772/IntechOpen.1002475>
- Allen, S. (2007). Expertise in sport: A cognitive-developmental approach. *Journal of Education*, 187(1), 9-29.
<https://doi.org/10.1177/002205740718700103>
- Allua, S., & Thompson, C. B. (2009). Inferential statistics. *Air Medical Journal*, 28(4), 168-171. <https://doi.org/10.1016/j.amj.2009.04.013>
- Amoroso, J., Antunes, R., Valente-dos-Santos, J., Furtado, G., & Rebelo-Gonçalves, R. (2022). Dispositional orientations in competitive ultimate frisbee athletes. *Cuadernos de Psicología del Deporte*, 22(2), 282-293.
<https://doi.org/10.6018/cpd.468761>
- Amoroso, J. P., Coelho, L., Boulton, R. A., Gonzalez-Toro, C. M., Costa, F., Christodoulides, E., Cools, W., Dudley, D., Moore Jr, J. E., Furtado, G. E., Cheng, M. Y., & Calmeiro, L. (2024). Assessing ethical behavior and self-control in elite ultimate championships: A cross-sectional study using the spirit of the game scoring system. *Frontiers in Sports and Active Living*, 6, 1297821. <https://doi.org/10.3389/fspor.2024.1297821>
- Amoroso, J. P., Coelho, L., Papp, H., Costa, F., Christodoulides, E., Cools, W., Erdosi, Z., Moore Jr, J. E., & Furtado, G. E. (2023). Self-refereeing system in ultimate during the joint junior ultimate championship in three different divisions—A different way to promote fair-play? *Youth*, 3(1), 414-427. <https://doi.org/10.3390/youth3010028>
- Amoroso, J. P., Valente-dos-Santos, J., Furtado, G. E., Rebelo-Gonçalves, R., Antunes, R., & Calmeiro, L. (2022). Ultimate frisbee players: Characteristics according to their competitive level and spirit of the game. *Sports*, 10(12), 197. <https://doi.org/10.3390/sports10120197>
- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3(3), 193-209.
https://doi.org/10.1207/s15327957pspr0303_3
- Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology*, 12(2), 202-222.

- Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97(2), 117-134. <https://doi.org/10.1016/j.obhdp.2005.03.002>
- Carson, J. B., Tesluk, P. E., & Marrone, J. A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal*, 50(5), 1217-1234. <https://doi.org/10.1109/EMR.2016.7559064>
- Çetinkaya, T. (2024). Examining the relationship between sportsmanship understanding and self-efficacy levels in athletes. *International Journal of Recreation & Sports Science / Uluslararası Rekreasyon ve Spor Bilimleri Dergisi*, 8(1), 23-33. <https://doi.org/10.46463/ijrss.1489072>
- Chow, G. M., Murray, K. E., & Feltz, D. L. (2009). Individual, team, and coach predictors of players' likelihood to aggress in youth soccer. *Journal of Sport and Exercise Psychology*, 31(4), 425-443. <https://doi.org/10.1123/jsep.31.4.425>
- Conger, J. A., & Pearce, C. L. (2003). A landscape of opportunities: Future research on shared leadership. In C. L. Pearce & J. A. Conger (Eds.), *Shared leadership. Reframing the hows and whys of leadership* (pp. 285-303). Sage.
- Constandt, B., De Waegeneer, E., & Willem, A. (2018). Coach ethical leadership in soccer clubs: An analysis of its influence on ethical behavior. *Journal of Sport Management*, 32(3), 185-198. <https://doi.org/10.1123/jsm.2017-0182>
- Constandt, B., Heres, L., Marlier, M., & Willem, A. (2020). A stakeholder perspective on ethical leadership in sport: Bridging the gap between the normative and descriptive lines of inquiry. *Psychologica Belgica*, 60(1), 381. <https://doi.org/10.5334/pb.543>
- Cotterill, S. T., Loughhead, T. M., & Fransen, K. (2022). Athlete leadership development within teams: Current understanding and future directions. *Frontiers in Psychology*, 13, 820745. <https://doi.org/10.3389/fpsyg.2022.820745>
- Crocket, H. (2015). Foucault, flying discs and calling fouls: Ascetic practices of the self in ultimate frisbee. *Sociology of Sport Journal*, 32(1), 89-105. <https://doi.org/10.1123/ssj.2013-0039>
- Dahlquist, G. (2006). Ethics in research: Why and how? *Scandinavian Journal of Public Health*, 34(5), 449-452. <https://doi.org/10.1080/14034940600654667>
- Denburg, R., Kalb, I., & Silver, J. (1975). *Official rules of ultimate*. https://www.alanhoyle.com/ult-rules/5th_Edition.pdf
- Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research.

Journal of Research in Nursing, 25(5), 443-455.
<https://doi.org/10.1177/1744987119880234>

Eisenhood, C. (2022). *Ultimate dropped from Los Angeles 2028 Olympics consideration*. Ultiworld. <https://ultiworld.com/2022/08/10/ultimate-dropped-from-los-angeles-2028-olympics-consideration/>

Elgeddawy, M., & Abouraia, M. (2024, July). Pragmatism as a research paradigm. In *European Conference on Research Methodology for Business and Management Studies* (pp. 71-74). Academic Conferences International Limited. https://www.researchgate.net/profile/Mohamed-Elgeddawy/publication/381802464_Pragmatism_as_a_Research_Paradigm/links/6748cbf13d17281c7de6f617/Pragmatism-as-a-Research-Paradigm.pdf

Fairhurst, G. T., Jackson, B., Foldy, E. G., & Ospina, S. M. (2020). Studying collective leadership: The road ahead. *Human Relations*, 73(4), 598-614. <https://doi.org/10.1177/0018726719898736>

Fajardo Pulido, D., & Lystad, R. P. (2020). Epidemiology of injuries in ultimate (frisbee): A systematic review. *Sports*, 8(12), 168. <https://doi.org/10.3390/sports8120168>

Feilzer, M. Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, 4(1), 6-16. <https://doi.org/10.1177/1558689809349691>

Fisher, M. J., & Marshall, A. P. (2009). Understanding descriptive statistics. *Australian Critical Care*, 22(2), 93-97. <https://doi.org/10.1016/j.aucc.2008.11.003>

Frambach, J. M., van der Vleuten, C. P. M., & Durning, S. J. (2013). AM last page: Quality criteria in qualitative and quantitative research. *Academic Medicine*, 88(4), 552. <https://doi.org/10.1097/ACM.0b013e31828abf7f>

Franke, T. M., Ho, T., & Christie, C. A. (2012). The chi-square test: Often used and more often misinterpreted. *American Journal of Evaluation*, 33(3), 448-458. <https://doi.org/10.1177/1098214011426594>

Ghanad, A. (2023). An overview of quantitative research methods. *International Journal of Multidisciplinary Research and Analysis*, 6(8), 3794-3803. DOI: 10.47191/ijmra/v6-i8-52

Hagger, M. S., Wood, C. W., Stiff, C., & Chatzisarantis, N. L. (2010). Self-regulation and self-control in exercise: The strength-energy model. *International Review of Sport and Exercise Psychology*, 3(1), 62-86. <https://doi.org/10.1080/17509840903322815>

Hess, M. C., Swedler, D. I., Collins, C. S., Ponce, B. A., & Brabston, E. W. (2020). Descriptive epidemiology of injuries in professional ultimate frisbee athletes. *Journal of Athletic Training*, 55(2), 195-204. <https://doi.org/10.4085/1062-6050-269-18>

- Howland, J. M. (2007). Mental skills training for coaches to help athletes focus their attention, manage arousal, and improve performance in sport. *Journal of Education*, 187(1), 49-66. <https://doi.org/10.1177/002205740718700105>
- International Frisbee Association. (1976). *6th edition ultimate frisbee official rules*. https://www.alanhoyle.com/ult-rules/6th_Edition.pdf
- International Frisbee Association. (n.d.). *7th edition ultimate frisbee official rules*. https://www.alanhoyle.com/ult-rules/7th_Edition.pdf
- International Olympic Committee. (n.d.). *Olympic values – Excellence, respect and friendship*. <https://www.olympics.com/ioc/olympic-values>
- James, A. (2024, May 7). Flying discs & overhead kicks - the next Olympic sports? *BBC*. <https://www.bbc.com/sport/articles/czvjpwgqz28o>
- Jeram, A. (2017, August 22). Fast-growing ultimate frisbee set for new season. *Te Waha Nui*. <https://tewahanui.nz/sport/fast-growing-ultimate-frisbee-set-for-new-season>
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112-133. <https://doi.org/10.1177/1558689806298224>
- Jong, A. R. (2012). *An examination of the sportpersonship values of collegiate ultimate frisbee players* (Publication No. 2012. 1513643) [Master's thesis, San Jose State University]. ProQuest Dissertations & Theses.
- Kavussanu, M. (2008). Moral behaviour in sport: A critical review of the literature. *International Review of Sport and Exercise Psychology*, 1(2), 124-138. <https://doi.org/10.1080/17509840802277417>
- Kavussanu, M., & Al-Yaaribi, A. (2021). Prosocial and antisocial behaviour in sport. *International Journal of Sport and Exercise Psychology*, 19(2), 179-202. <https://doi.org/10.1080/1612197X.2019.1674681>
- Keating, J. W. (1964). Sportsmanship as a moral category. *Ethics*, 75(1), 25-35. <https://doi.org/10.1086/291517>
- Kjellström, S., Stålné, K., & Törnblom, O. (2020). Six ways of understanding leadership development: An exploration of increasing complexity. *Leadership*, 16(4), 434-460. <https://doi.org/10.1177/1742715020926731>
- Kocolowski, M. D. (2010). Shared leadership: Is it time for a change. *Emerging Leadership Journeys*, 3(1), 22-32.
- Krustrup, P., & Mohr, M. (2015). Physical demands in competitive ultimate frisbee. *The Journal of Strength & Conditioning Research*, 29(12), 3386-3391. <https://doi.org/10.1519/JSC.0000000000000989>
- Liu, M. (2017). Web survey experiments on matrix questions. *Computers in Human Behavior*, 67, 61-72. <https://doi.org/10.1016/j.chb.2016.10.017>

- Loughead, T. M., Hardy, J., & Eys, M. A. (2006). The nature of athlete leadership. *Journal of Sport Behavior*, 29(2), 142-158.
- Manz, C. C. (1986). Self-leadership: Toward an expanded theory of self-influence processes in organizations. *Academy of Management Review*, 11(3), 585-600. <https://doi.org/10.5465/amr.1986.4306232>
- Margherita, A., Elia, G., & Petti, C. (2022). What is quality in research? Building a framework of design, process and impact attributes and evaluation perspectives. *Sustainability*, 14(5), 3034. <https://doi.org/10.3390/su14053034>
- Mayer, D. M. (2014). A review of the literature on ethical climate and culture. In B. Schneider & K. M. Barbera (Eds.), *The Oxford handbook of organizational climate and culture* (pp. 415-427). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199860715.013.0022>
- McHugh, M. L. (2013). The chi-square test of independence. *Biochemia Medica*, 23(2), 143-149. <https://doi.org/10.11613/BM.2013.018>
- Megheirkouni, M. (2018). Self-leadership strategies and career success: insight on sports organizations. *Sport, Business and Management*, 8(4), 393-409. <https://doi.org/10.1108/SBM-02-2018-0006>
- Morgan, D. L. (2014). Pragmatism as a paradigm for social research. *Qualitative Inquiry*, 20(8), 1045-1053. <https://doi.org/10.1177/1077800413513733>
- Morgan, H. (2022). Conducting a qualitative document analysis. *The Qualitative Report*, 27(1), 64-77. <https://doi.org/10.46743/2160-3715/2022.5044>
- Neck, C. P., & Houghton, J. D. (2006). Two decades of self-leadership theory and research: Past developments, present trends, and future possibilities. *Journal of Managerial Psychology*, 21(4), 270-295. <https://doi.org/10.1108/02683940610663097>
- Nemoto, T., & Beglar, D. (2014). Likert-scale questionnaires. In N. Sonda & A. Krause (Eds.), *JALT 2013 conference proceedings* (pp. 1-6). JALT. https://jalt-publications.org/sites/default/files/pdf-article/jalt2013_001.pdf
- New Zealand Ultimate (n.d.-a). *What is ultimate?* <https://ultimate.org.nz/what-is-ultimate>
- New Zealand Ultimate (n.d.-b). *What does NZU does?* <https://ultimate.org.nz/what-nzu-does>
- Ospina, S. M. (2017). Collective leadership and context in public administration: Bridging public leadership research and leadership studies. *Public Administration Review*, 77(2), 275-287.
- Ospina, S. M., Foldy, E. G., Fairhurst, G. T., & Jackson, B. (2020). Collective dimensions of leadership: Connecting theory and method. *Human Relations*, 73(4), 441-463. <https://doi.org/10.1177/0018726719899714>

- Özlü, K., Çeviker, A., Paktaş, Y., Mumcu, H. E., & Kusan, O. (2020). Reflection of immoral and unethical sport events upon the society and mass media throughout history. *African Educational Research Journal Special*, 8(1), 49-53. <https://www.netjournals.org/pdf/AERJ/2020/S1/20-007.pdf>
- Palmer, J. A., Landers, G., Buttfield, A., & Polglaze, T. (2022). Physical demands of elite women's ultimate frisbee between halves and across matches in an international tournament. *The Journal of Strength & Conditioning Research*, 36(3), 838-844. <https://doi.org/10.1519/JSC.0000000000003527>
- Park, Y. S., Konge, L., & Artino Jr, A. R. (2020). The positivism paradigm of research. *Academic Medicine*, 95(5), 690-694. <https://doi.org/10.1097/ACM.0000000000003093>
- Pearce, C. L. (2007). The future of leadership development: The importance of identity, multi-level approaches, self-leadership, physical fitness, shared leadership, networking, creativity, emotions, spirituality and on-boarding processes. *Human Resource Management Review*, 17(4), 355-359. <https://doi.org/10.1016/j.hrmr.2007.08.006>
- Portillo, J., Bravo-Sánchez, A., Abián, P., Dorado-Suárez, A., & Abián-Vicén, J. (2022). Influence of secondary school students' physical fitness on sports performance during an ultimate frisbee competition. *International Journal of Environmental Research and Public Health*, 19(7), 3997. <https://doi.org/10.3390/ijerph19073997>
- Rai, N., & Thapa, B. (2015). A study on purposive sampling method in research. *Kathmandu: Kathmandu School of Law*, 5(1), 8-15. https://www.academia.edu/28087388/A_STUDY_ON_PURPOSIVE_SAMPLING_METHOD_IN_RESEARCH
- Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. *International Journal of Educational Investigations*, 3(8), 51-59. <http://www.ijeionline.com/attachments/article/57/IJEI.Vol.3.No.8.05.pdf>
- Rymar, O., Sorokolit, N., Romanchuk, O., Yaroshyk, M., Solovey, A., Khanikiants, O., Malanchuk, H., & Shevtsiv, U. (2024, May). Physical education of secondary school students using ultimate frisbee. In *Society. Integration. Education. Proceedings of the International Scientific Conference* (Vol. 1, pp. 496-506). Faculty of Education, Languages and Design, Rēzekne Academy of Technology. <https://doi.org/10.17770/sie2024vol1.7871>
- Shakeel, F., Kruyen, P. M., & Van Thiel, S. (2019). Ethical leadership as process: A conceptual proposition. *Public Integrity*, 21(6), 613-624. <https://doi.org/10.1080/10999922.2019.1606544>
- Shields, D. L., LaVoi, N. M., Bredemeier, B. L., & Power, F. C. (2007). Predictors of poor sportspersonship in youth sports: Personal attitudes and social influences. *Journal of Sport and Exercise Psychology*, 29(6), 747-762. <https://doi.org/10.1123/jsep.29.6.747>

- Shorten, A., & Smith, J. (2017). Mixed methods research: Expanding the evidence base. *Evidence-Based Nursing*, 20(3), 74-75.
<https://doi.org/10.1136/eb-2017-102699>
- Siddiqui, S. (2019). Research paradigms: Their assumptions and relevance. *International Journal of Research in Social Sciences*, 9(5), 254-265.
<https://www.indianjournals.com/ijor.aspx?target=ijor:ijrss&volume=9&issue=5&article=017&type=pdf>
- Smythe, L. (2012). Discerning which qualitative approach fits best. *New Zealand College of Midwives Journal*, 46, 5-12.
<https://www.midwife.org.nz/wp-content/uploads/2019/01/JNL-46-June-2012.pdf>
<https://link.gale.com/apps/doc/A345073080/AONE?u=anon~5e051acf&sid=googleScholar&xid=0cff2c5c>
- Spiller, C., Maunganui Wolfgramm, R., Henry, E., & Pouwhare, R. (2020). Paradigm warriors: Advancing a radical ecosystems view of collective leadership from an Indigenous Māori perspective. *Human Relations*, 73(4), 516-543. <https://doi.org/10.1177/001872671989375>
- Stewart, B., & Smith, A. C. T. (2025). *The value of sport: Insights*. Routledge.
<https://doi.org/10.4324/9781003546931>
- Stewart, G. L., Courtright, S. H., & Manz, C. C. (2011). Self-leadership: A multilevel review. *Journal of Management*, 37(1), 185-222.
<https://doi.org/10.1177/0149206310383911>
- Swanborn, P. G. (1996). A common base for quality control criteria in quantitative and qualitative research. *Quality and Quantity*, 30(1), 19-35.
<https://doi.org/10.1007/BF00139833>
- Turan, S., Alemdar, U., Comert, E., Ozcan, H., & Osmanoglu, K. (2022). Do self-efficacy and moral intelligence have a role in the formation of sportsmanship behavior? *Asian Journal of Education and Training*, 8(4), 131-138. <https://doi.org/10.20448/edu.v8i4.4341>
- Türköz, T., Mutlu, T. O., Tabak, A., & Erdogan, M. (2013). Examining the levels of self-leadership perceptions of university student-athletes in terms of sociodemographic characteristics. *Physical Culture and Sport*, 58(1), 43.
<https://doi.org/10.2478/pcssr-2013-0011>
- Ultimate Players Association. (1982). *Eighth edition: The rules of ultimate*.
https://www.alanhoyle.com/ult-rules/8th_Edition.pdf
- USA Ultimate. (2020). *The spirit captain guide*. <https://usaultimate.org/wp-content/uploads/2020/11/Spirit-Captain-Guide-FINAL-VERSION.pdf>
- USA Ultimate. (n.d.). *About ultimate*.
<https://archive.usaultimate.org/about/#:~:text=Ultimate%20is%20governed%20by%20Spirit,and%20women%2C%20girls%20and%20boys.>
- van der Roest, J. W., Spaaij, R., & van Bottenburg, M. (2015). Mixed methods in emerging academic subdisciplines: The case of sport management.

Journal of Mixed Methods Research, 9(1), 70-90.
<https://doi.org/10.1177/1558689813508225>

- Van Wart, M. (2014). Contemporary varieties of ethical leadership in organizations. *International Journal of Business Administration*, 5(5), 27-45. <https://doi.org/10.5430/ijba.v5n5p27>
- Wan Mustapa, W. N., Azizan, F. L., Arifin, M. A., & Rozali, A. Z. (2024). Exploring the scientific evolution of collective leadership: A bibliometric analysis from Scopus database. *Journal of Health Organization and Management*, 38(6), 843-856. <https://doi.org/10.1108/JHOM-02-2024-0063>
- World Flying Disc Federation. (2020). *Spirit captain role*. <https://wfdf.sport/wp-content/uploads/2020/08/PROVISIONAL-WFDF-Spirit-Captain-Role.pdf>
- World Flying Disc Federation. (2021). *WFDF rules of ultimate 2021-2024*. <https://rules.wfdf.sport/wp-content/uploads/2022/01/WFDF-Rules-of-Ultimate-2021-2024-1.pdf>
- World Flying Disc Association. (2025-a). *WFDF – Ultimate – Spirit Score Examples 2025 (Version 3.2)* [Table]. Retrieved from Google Drive. https://drive.google.com/drive/folders/1Qcw9qH0wJXKByzh2AIPCp3MgVRD7kd_n
- World Flying Disc Association. (2025-b). *WFDF rules of ultimate 2025-2028*. <https://rules.wfdf.sport/wp-content/uploads/2024/12/WFDF-Rules-of-Ultimate-2025-2028.pdf>
- World Flying Disc Federation. (n.d.-a). *History of Ultimate*. <https://wfdf.sport/history/history-of-ultimate/>
- World Flying Disc Federation. (n.d.-b). *What is WFDF*. <https://wfdf.sport/about-wfdf/>
- World Flying Disc Federation. (n.d.-c). *Spirit of the game*. <https://wfdf.sport/spirit-of-the-game/>
- World Flying Disc Federation. (n.d.-d). *Ultimate*. <https://wfdf.sport/disciplines/ultimate/>
- Wynn Jr, D., & Williams, C. K. (2012). Principles for conducting critical realist case study research in information systems. *MIS Quarterly*, 36(3), 787-810. <https://doi.org/10.2307/41703481>
- Yong, W. K., Maizaitulaidawati, M. H., & Kamarudin, S. (2021). Understanding research paradigms: A scientific guide. *Journal of Contemporary Issues in Business and Government*, 27(2), 5857-5865. <https://doi.org/10.47750/cibg.2021.27.02.588>
- Zhu, J., Liao, Z., Yam, K. C., & Johnson, R. E. (2018). Shared leadership: A state-of-the-art review and future research agenda. *Journal of Organizational Behavior*, 39(7), 834-852. <https://doi.org/10.1002/job.2296>

Appendices

Appendix A: Letter of Ethics Approval 12/2/2025



Auckland University of Technology Ethics Committee (AUTEC)

12 February 2025

Tracy Molloy
Faculty of Health and Environmental Sciences

Dear Tracy

Re Ethics Application: **25/1 Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.**

Thank you for your responses to AUTEC's conditions.

Your ethics application has been approved for three years until 12 February 2028.

Non-Standard Conditions of Approval

1. Update the date in the Information Sheet.

Non-standard conditions do not need to be submitted to or reviewed by AUTEC unless requested but must be completed before commencing your study.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the [Auckland University of Technology Code of Conduct for Research](#) and as approved by AUTEC.
2. All public facing documents must have the AUTEC approval number and be of a high standard of spelling and grammar. Dates on the Information Sheet(s) and Consent Form(s) must be consistent.
3. Any amendments to the project must be approved by AUTEC prior to being implemented.
4. A progress report is due annually on the anniversary of the approval date.
5. A final report is due at the expiration of the approval period, or, upon completion of project.
6. Any serious or adverse events must be reported to AUTEC, this includes unforeseen issues that might affect continued ethical acceptability of the project.
7. AUTEC grants ethical approval only. You are responsible for obtaining management permission for access from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

The application number and title need to be referenced on all correspondence related to this project.

All forms are available online <http://www.aut.ac.nz/research/researchethics>

For any enquiries, please contact the Secretariat at ethics@aut.ac.nz
(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Cc: xiongzhangzhe@163.com; Richard Wright

Appendix B: Letter of Ethics Approval 21/5/2025



Auckland University of Technology Ethics Committee (AUTEC)

21 May 2025

Tracy Molloy
Faculty of Health and Environmental Sciences

Dear Tracy

Re: Ethics Application: **25/1 Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.**

Thank you for your request for approval of amendments to your ethics application.

The amendment to the data collection protocol (short follow up interview) has been approved.

Non-Standard Conditions of Approval

1. Ensure that post analysis, data and consents are kept with the applicant as per AUT data storage guidelines.

Non-standard conditions do not need to be submitted to or reviewed by AUTEC unless requested but must be completed before commencing your study.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the [Auckland University of Technology Code of Conduct for Research](#) and as approved by AUTEC.
2. All public facing documents must have the AUTEC approval number and be of a high standard of spelling and grammar. Dates on the Information Sheet(s) and Consent Form(s) must be consistent.
3. Any amendments to the project must be approved by AUTEC prior to being implemented.
4. A progress report is due annually on the anniversary of the approval date.
5. A final report is due at the expiration of the approval period, or, upon completion of project.
6. Any serious or adverse events must be reported to AUTEC, this includes unforeseen issues that might affect continued ethical acceptability of the project.
7. AUTEC grants ethical approval only. You are responsible for obtaining management permission for access from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

The application number and title need to be referenced on all correspondence related to this project.

All forms are available online <http://www.aut.ac.nz/research/researchethics>

For any enquiries, please contact the Secretariat at ethics@aut.ac.nz

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat

Auckland University of Technology Ethics Committee

Cc: xiongzhangzhe@163.com; Richard Wright

Appendix C: Information Sheet for Interview with UF Organization Leaders



Participant Information Sheet

Interviews for Ultimate Frisbee Leaders – World Flying Disc Federation (WFDF) and New Zealand Ultimate (NZU)

Date Information Sheet Produced:

16 Sep 2024

Project Title

Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

An Invitation

I am Kangzhe Xiong, studying at AUT under a Master of Business (Sports Leadership and Management) programme. I am an Ultimate player myself and have been involved in many New Zealand leagues and tournaments at all levels. I solemnly invite you to be one of the participants in this research project.

What is the purpose of this research?

The purpose of this research is to explore the impact of the Spirit of the Game (SOTG) and the position of Spirit Captain in Ultimate Frisbee (UF) for the sport of UF, also to determine how SOTG influences the behaviour of UF athletes in UF, in other sports and in their everyday lives.

How was I identified and why am I being invited to participate in this research?

You were identified from the WFDF or NZU websites as one of your organization leaders. If you are a leader of WFDF, you have a deeper knowledge and broader understanding of Frisbee sports around the world. If you are a leader of NZU, you have a deeper understanding of the current state and culture of UF in New Zealand. Therefore, your understanding of the meaning and purpose of SOTG is of great significance to this study.

How do I agree to participate in this research?

If you are willing to be involved in this research, you will be asked to sign a consent form before we start the interview. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

I will conduct an interview with you and you will be provided with a list of indicative questions in advance. The interview will last 30-45 minutes. You will be asked questions about the meaning and purpose of SOTG and Spirit Captain's role. The interview will be conducted via Microsoft TEAMS, and I will record and transcribe the entire interview.

What are the discomforts and risks?

It is not expected that you will experience any discomfort or risk by participating in this research.

What are the benefits?

This study will address a gap in the academic literature on UF and has the potential to increase the influence of UF and promote a range of benefits that may help UF develop.

Benefits to the researchers include contribution to a master's qualification, potential publications and conference outputs.

How will my privacy be protected?

The video and transcript of the interview will only be kept with me (and my project supervisors) in a password protected location. The files will be destroyed after 6 years.

You will not be named in any publications however your organisation and position will be identified. Any material paraphrased or quoted from transcripts will only be identified using a pseudonym. In the interview only appropriate questions will be asked. You will be provided with copies of the transcripts to review, approve, and confirm that the recordings and data gathered is a true and accurate representation of what was said. You will be given the opportunity to provide feedback if you wish to extract or remove any parts of the conversation and to approve the use of any quotes in any publications.

Please note that due to the size and nature of the industry limited confidentiality only can be offered.

What are the costs of participating in this research?

The cost of participation is your time. The interview will take about 30-45 minutes of your time. I may ask follow-up questions via email to clarify some parts of your response or to seek further information.

What opportunity do I have to consider this invitation?

You have two weeks to consider this invitation.

Will I receive feedback on the results of this research?

Yes, you will. You will receive a summary of the research findings. I will send the summary to you via email once the research is complete.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor Dr Tracy Molloy, tracy.molloy@aut.ac.nz, (+64) 021 022 37701

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTECH, ethics@aut.ac.nz, (+649) 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details: Kangzhe Xiong xiongekangzhe@163.com

Project Supervisor Contact Details: Dr Tracy Molloy tracy.molloy@aut.ac.nz

Approved by the Auckland University of Technology Ethics Committee on *type the date final ethics approval was granted*,
AUTECH Reference number *type the reference number*.

Appendix D: UF Leaders Interview Consent Form



Consent Form

For use when interviews are involved.

Project title: Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

Project Supervisor: Tracy Molloy

Researcher: Kangzhe Xiong

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated dd mmmm yyyy.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ☐ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ☐ I agree to take part in this research.
- ☐ I wish to receive a summary of the research findings (please tick one): Yes ☐ No ☐

Participant's signature:

Participant's name:

Participant's Contact Details (if appropriate):

.....
.....
.....
.....

Date:

Approved by the Auckland University of Technology Ethics Committee on type the date on which the final approval was granted AUTEK Reference number type the AUTEK reference number

Note: The Participant should retain a copy of this form.

Oral Consent Protocol

For use when interviews are being conducted by videoconference.

Project title: Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

Project Supervisor: Tracy Molloy

Researcher: Kangzhe Xiong

The participant joins the videoconference

☐ Do you agree to my recording your consent to participate?

If they agree, then the record function will be activated and they will be asked the following:

- ☐ Have you read and understood the information provided about this research project in the Information Sheet dated dd mmmm yyyy?
- ☐ Do you have any questions about the research?
- ☐ Do you understand that notes will be taken during the interviews and that the interview will also be audio-recorded and transcribed?
- ☐ Do you understand that taking part in this study is voluntary (your choice) and that you may withdraw from the study at any time without being disadvantaged in any way?
- ☐ Do you understand that if you withdraw from the study then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used? However, once the findings have been produced, removal of your data may not be possible.
- ☐ Do you agree to take part in this research?
- ☐ Do you wish to receive a summary of the research findings? (please tick one): Yes ☐ No ☐
- ☐ Do you want me to send you a copy of the audio recording for this consent? Yes ☐ No ☐
- ☐ Please confirm your name and contact details

Participant's name:

Participant's Contact Details (if appropriate):

.....
.....
.....
.....

I will now turn off the recording of the Consent and then will start a separate recording for the interview.

Approved by the Auckland University of Technology Ethics Committee on *type the date on which the final approval was granted* AUTEK Reference number *type the AUTEK reference number*

Note: The Participant should retain a copy of this form.

Appendix E: Indicative Interview Questions for UF Organization Leaders

Ultimate Frisbee: The Impact of the 'Spirit of the Game' concept.

Indicative Interview Questions — UF Leaders

Questions:

Q1: Can you share a bit about your background in the sport of Ultimate Frisbee?

Q2: Can you discuss what you know about the history and evolution of Spirit of the game and Spirit Captain?

Q3: How would you explain the meaning of "Spirit of the Game" in Ultimate Frisbee and it's purpose?

Q4: Why do you think the Spirit of the game is such a crucial part of Ultimate Frisbee compared to other sports?

Q5: In your opinion, can or, how does, the spirit of the game contribute to the growth and appeal of Ultimate Frisbee globally?

Q6: What do you see as the main responsibilities and/or purpose of the Spirit Captain?

Q7: Why is the role of Spirit Captain so integral to Ultimate Frisbee?

Q8: Do you think the Spirit of the game and having Spirit Captains could be applied to other sports? Why, or why not?

Q9: Do you want to share anything else about the meaning or purpose of the Spirit of the game and Spirit Captain?

Appendix F: Information Sheet for Interview with UF Players



Participant Information Sheet

Interviews for Ultimate Frisbee Players

Date Information Sheet Produced:

22 April 2025

Project Title

Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

An Invitation

I am Kangzhe Xiong, studying at AUT under a Master of Business (Sports Leadership and Management) programme. I am an Ultimate player myself and have been involved in many New Zealand leagues and tournaments at all levels. I solemnly invite you to be one of the participants in this research project.

What is the purpose of this research?

The purpose of this research is to explore the impact of the Spirit of the Game (SOTG) and the position of Spirit Captain in Ultimate Frisbee (UF) for the sport of UF, also to determine how SOTG influences the behaviour of UF athletes in UF, in other sports and in their everyday lives.

How was I identified and why am I being invited to participate in this research?

You were identified as one of the athletes who is 20 or over representing three groups:

Elite - New Zealand players at World Ultimate Championships 2024

Competitive - Played in 2024 NZ Mixed National

Social - Played in 2024 Auckland ultimate4TES

How do I agree to participate in this research?

You be contacted directly by the researcher to arrange an interview time. If you are willing to be involved in this research, you will be asked to sign a consent form before we start the interview. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

I will conduct an interview with you and you will be provided with a list of indicative questions in advance. The interview will last 20-30 minutes. You will be asked questions about how Spirit Captain's role impact your behaviour on the field and how SOTG impact your behaviour on and off the field. The interview will be conducted via Microsoft TEAMS, and I will record and transcribe the entire interview.

What are the discomforts and risks?

It is not expected that you will experience any discomfort or risk by participating in this research.

What are the benefits?

This study will address a gap in the academic literature on UF and has the potential to increase the influence of UF and promote a range of benefits that may help UF develop.

Benefits to the researchers include contribution to a master's qualification, potential publications and conference outputs.

How will my privacy be protected?

The video and transcript of the interview will only be kept with me (and my project supervisors) in a password protected location. The files will be destroyed after 6 years.

The interview will be kept confidential and no identity information will appear in any form during this research. Any material paraphrased or quoted from transcripts will only be identified using a pseudonym. In the interview only appropriate questions will be asked. You will be provided with copies of the transcripts to review, approve, and confirm that the recordings and data gathered is a true and accurate representation of what was said. You will be given the opportunity to provide feedback if you wish to extract or remove any parts of the conversation and to approve the use of any quotes in any publications.

Please note that due to the size and nature of the industry limited confidentiality only can be offered.

What are the costs of participating in this research?

The cost of participation is your time. The interview will take about 20-30 minutes of your time. I may ask follow-up questions via email to clarify some parts of your response or to seek further information.

What opportunity do I have to consider this invitation?

You have two weeks to consider this invitation.

Will I receive feedback on the results of this research?

Yes, you will. You will receive a summary of the research findings. I will send the summary to you via email once the research is complete.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor Dr Tracy Molloy, tracy.molloy@aut.ac.nz, (+64) 021 022 37701

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTC, ethics@aut.ac.nz, (+649) 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details: Kangzhe Xiong xiongekangzhe@163.com

Project Supervisor Contact Details: Dr Tracy Molloy tracy.molloy@aut.ac.nz

Approved by the Auckland University of Technology Ethics Committee on *type the date final ethics approval was granted*,
AUTEC Reference number *type the reference number*.

Appendix G: Players Interview Consent Form





Consent Form

For use when interviews are involved.

Project title: Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

Project Supervisor: Tracy Molloy

Researcher: Kangzhe Xiong

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated dd mmmm yyyy.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ☐ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ☐ I agree to take part in this research.
- ☐ I wish to receive a summary of the research findings (please tick one): Yes ☐ No ☐

Participant's signature:

Participant's name:

Participant's Contact Details (if appropriate):
.....
.....
.....
.....

Date:

Approved by the Auckland University of Technology Ethics Committee on type the date on which the final approval was granted AUTEK Reference number type the AUTEK reference number

Note: The Participant should retain a copy of this form.

Consent Form Exemplars 032020.docx

page 1 of 2 This version was last edited in September 2021

Oral Consent Protocol

For use when interviews are being conducted by videoconference.

Project title: Ultimate Frisbee: The impact of the 'Spirit of the Game' concept.

Project Supervisor: Tracy Molloy

Researcher: Kangzhe Xiong

The participant joins the videoconference

☐ Do you agree to my recording your consent to participate?

If they agree, then the record function will be activated and they will be asked the following:

☐ Have you read and understood the information provided about this research project in the Information Sheet dated dd mmmm yyyy?

☐ Do you have any questions about the research?

☐ Do you understand that notes will be taken during the interviews and that the interview will also be audio-recorded and transcribed?

☐ Do you understand that taking part in this study is voluntary (your choice) and that you may withdraw from the study at any time without being disadvantaged in any way?

☐ Do you understand that if you withdraw from the study then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used? However, once the findings have been produced, removal of your data may not be possible.

☐ Do you agree to take part in this research?

☐ Do you wish to receive a summary of the research findings? (please tick one): Yes ☐ No ☐

☐ Do you want me to send you a copy of the audio recording for this consent? Yes ☐ No ☐

☐ Please confirm your name and contact details

Participant's name:

Participant's Contact Details (if appropriate):

.....
.....
.....
.....

I will now turn off the recording of the Consent and then will start a separate recording for the interview.

Approved by the Auckland University of Technology Ethics Committee on type the date on which the final approval was granted AUTEK Reference number type the AUTEK reference number

Note: The Participant should retain a copy of this form.

Appendix H: Indicative Interview Questions for UF players

Ultimate Frisbee: The Impact of the 'Spirit of the Game' concept.

Indicative Interview Questions — UF players

Background

Q1. Could you start by sharing your background and involvement in Ultimate Frisbee?

SOTG — Impact on UF

Q2. In your experience, how has Spirit of the Game (SOTG) influenced your behavior on the field?

Q4. Can you share a specific example of how SOTG affected your actions or decisions during a game?

Q3. Some players feel that SOTG reduces the competitive intensity of Ultimate. What are your thoughts on this?

Q4 : According to my survey results, compared with the first knew SOTG until now, the SOTG scores of most players have remained the same or increased, but there are still a small number of players or individual category that have decreased. What's your thought on that?

SOTG — Role of Captain

Q5. What does it mean to you to be a Captain or Spirit Captain, and what responsibilities come with the role?

Q6. Has serving in a captaincy role influenced your on-field behavior? If so, in what ways?

Q7. Can you describe your leadership style and how has SOTG impacted your leadership style?

Q8. Can you describe a moment where being a (Spirit) Captain impacted your approach or behavior during a game?

Q9. According to the open text questions in my survey, there are few players believe that spirit captain had little or none influence on players' behaviour. What's your thought on that?

SOTG – Other Sports

Q10. Do you play any other sports? If so, which ones?

Q11. Has your experience with SOTG influenced how you act in those sports? If yes, how?

Q12. Could you share a story that shows how SOTG has affected your behavior in another sport?

SOTG – Everyday Life

Q13. Do you think SOTG has influenced your behavior in everyday life? If so, how?

Q14. Could you share a story that reflects SOTG's impact on your life outside of sport?

SOTG – Ethical Leadership

Q15. One of the theories I'm using in my study relates to ethical leadership. This theory describes a moral person as the leader's own moral values, such as

optimism, positivity, a moral manager as the activities that the leader takes to instill these moral values in his followers. Can you share any reflections about if/how UF – SOTG has developed any of these approaches for you?

Appendix I: Survey Questions

Q1 Age (If you are under 20, please do not complete this survey)

- ☐ 20-30 (2)
 - ☐ 31-40 (3)
 - ☐ 41-50 (4)
 - ☐ Above 50 (5)
-

Q2 Gender

- ☐ Male (1)
 - ☐ Female (2)
 - ☐ Non-binary / third gender (3)
 - ☐ Prefer not to say (4)
-

Q3 How long you have been playing Ultimate Frisbee?

- ☐ Less than 1 year (1)
 - ☐ 1-5 years (2)
 - ☐ More than 5 years (3)
-

Q4 In 2024, what is the highest level you played?

- ☐ New Zealand National team (1)
 - ☐ New Zealand Mixed National Division 2 (2)
 - ☐ 2024 ultim4TES League (3)
-

Q5 In the competition level you identified in the previous question, what was your team role?

- ☐ Captain (1)
 - ☐ Spirit Captain (2)
 - ☐ General Player (3)
-

Q6 Do you play any other competitive sports than ultimate frisbee?

- ☐ No (1)
 - ☐ Yes (2)
-

Page Break

Display this question:

If Do you play any other competitive sports than ultimate frisbee? = Yes

Q7 What other sport do you play?

Page Break

Q8 Please rate your own Spirit of the Game aspects as at the time you first played Ultimate Frisbee.

	Poor (1)	Not good (4)	Good (8)	Very Good (9)	Excellent (10)
Rules knowledge and use (2)	☐	☐	☐	☐	☐
Positive attitude and self-control (3)	☐	☐	☐	☐	☐
Respectful communication (4)	☐	☐	☐	☐	☐
Fair-mindedness (5)	☐	☐	☐	☐	☐
Fouls and Body contact (6)	☐	☐	☐	☐	☐

Q9 Please rate your own Spirit of the Game aspects now.

	Poor (1)	Not good (2)	Good (3)	Very Good (4)	Excellent (5)
Rules knowledge and use (2)	☐	☐	☐	☐	☐
Positive attitude and self-control (3)	☐	☐	☐	☐	☐
Respectful communication (4)	☐	☐	☐	☐	☐
Fair-mindedness (5)	☐	☐	☐	☐	☐
Fouls and Body Contact (6)	☐	☐	☐	☐	☐

Q10 Please rate your behaviour when you were playing other sports in the following areas
(before you played Ultimate Frisbee).

	Poor (1)	Not good (4)	Good (5)	Very good (6)	Excellent (7)
Fair-mindedness (1)	☐	☐	☐	☐	☐
Positive attitude (2)	☐	☐	☐	☐	☐
Respectful communication (3)	☐	☐	☐	☐	☐
Moderation (control of own behaviour) (7)	☐	☐	☐	☐	☐
Tolerance (reaction to other's behaviour) (8)	☐	☐	☐	☐	☐
Honesty (9)	☐	☐	☐	☐	☐

Q11 Please rate your behaviour when you are playing other sports in the following areas (now).

	Poor (1)	Not good (3)	Godd (4)	Very good (5)	Excellent (7)
Fair-mindedness (1)	☐	☐	☐	☐	☐
Positive attitude (2)	☐	☐	☐	☐	☐
Respectful communication (3)	☐	☐	☐	☐	☐
Moderation (control of own behaviour) (5)	☐	☐	☐	☐	☐
Tolerance (reaction to other's behaviour) (6)	☐	☐	☐	☐	☐
Honesty (7)	☐	☐	☐	☐	☐

Q12 Please rate your behaviour in life in the following areas (before playing Ultimate Frisbee).

	Poor (1)	Not good (2)	Good (3)	Very good (4)	Excellent (5)
Fair-mindedness (1)	☐	☐	☐	☐	☐
Positive attitude (2)	☐	☐	☐	☐	☐
Respectful communication (3)	☐	☐	☐	☐	☐
Moderation (control of own behaviour) (4)	☐	☐	☐	☐	☐
Tolerance (reaction to other's behaviour) (5)	☐	☐	☐	☐	☐
Honesty (6)	☐	☐	☐	☐	☐

Q13 Please rate your behaviour in life in the following areas (now).

	Poor (1)	Not good (2)	Good (3)	Very good (4)	Excellent (5)
Fair-mindedness (1)	☐	☐	☐	☐	☐
Positive attitude (2)	☐	☐	☐	☐	☐
Respectful communication (3)	☐	☐	☐	☐	☐
Moderation (control of own behaviour) (5)	☐	☐	☐	☐	☐
Tolerance (reaction to other's behaviour) (6)	☐	☐	☐	☐	☐
Honesty (7)	☐	☐	☐	☐	☐

Display this question:

If Do you play any other competitive sports than ultimate frisbee? = Yes

Q14 Please share some reflections or stories about how SOTG influences your behaviour in other sports.

Q15 Please share some reflections or stories about how SOTG influences your behaviour in life.

Q16 How much influence does the Spirit Captain have on your behaviour during Ultimate Frisbee games?

- ☐ None (1)
- ☐ Low (2)
- ☐ Moderate (4)
- ☐ High (5)

Q17 Please share some reflections or stories about how the Spirit Captain and/or SOTG influence your behaviour during Ultimate Frisbee games.

Appendix J: Preliminary Codes

1	Understanding and Culture Difference		2.3.3 SC's influence depends on own behavior	3.2.3 SOTG as a unique part	3.5.1.4 Impact Accommodati		
	1.1	Understanding		3.3 SOTG and Own ethics	ng in UF		
	1.2	Culture	2.3.4 Moral person easy to be a moral leader	3.4 SOTG and competitiveness	3.5.2 Impact on other sports		
2	Spirit Captain		2.3.5 Easy to be bad SC, hard to be good SC	3.4.1 Tension	3.5.2.1 Impact		
	2.1	SC Style		3.4.2 Balance	Sportsperson		
	2.1.1	SC Style up front	2.3.6 Coach shared function of SC	3.5 Positive impact of SOTG	s-hip in other sports		
	2.1.2	SC Style lack of confidence		3.5.1 Impact on UF			
	2.2	Impact of SC		3.5.1.1 Impact	3.5.2.2 Impact Rules		
	2.2.1	SC has little or none impact	3 SOTG	Tolerance in UF	knowledge and use in other sports		
	2.2.2	Positive impact of SC		3.5.1.2 Impact Rules			
	2.3	Elements affect SC's influence		3.2 SOTG, self-officiation and UF	knowledge and use in UF	3.5.2.3 Impact	
		2.3.1		SC's involvement based on game	3.2.1 Tension between officiation and SOTG	3.5.1.3 Impact	Positive attitude in other sports
		2.3.2		SC's influence depends on players' behavior	3.2.2 SOTG as an attractive part	Positive attitude and self-control in UF	3.5.2.4 Impact
						Moderation in other sports	
				3.5.2.5 Impact	3.5.3.5 Impact	4.2 Collective responsibility	
				Deliberate in other sports	Empathy in life		
				3.5.2.6 Impact	3.5.3.6 Impact		
				Communicati on in other sports	Deliberate in life		
				3.5.3.7 Impact			
			3.5.3 Impact on life	Communicati on in life			
			3.5.3.1 Impact				
			Tolerance in life	3.6 Little or none impact on life			
			3.5.3.2 Impact	3.6.1 Little or none impact on life			
			Positive attitude in life	3.6.2 Little or none impact on other sports			
			3.5.3.3 Impact				
			Moderation in life	3.7 Elements affect SOTG's influence			
			3.5.3.4 Impact				
			Honesty in life	4 Collective responsibility for UF			
				4.1 SOTG and responsibility for others			

Appendix K: NVivo Coding Template

Name	Files	References
Understanding and Culture Difference of SOTG	0	0
Understanding	0	0
Focus on positive attitude and communication	2	3
Different view of SOTG	2	8
Culture	0	0
NZ's good spirit	2	3
Culture different between SOTG	2	4
Spirit Captain	0	0
SC Style	0	0
SC Style up front	1	3
SC style lack of confidence	1	2
Impact of SC	0	0
SC has little or none impact	2	4
Poor SC has little or none impact	1	2
Positive impact of SC	0	0
SC's responsibility	2	11
SC leadership	1	5
SC is responsible for the team	2	8
SC make more engagement	0	0
SC make more engagement of players	2	9
SC make more engagement for themself	2	2

Name	Files	References
SC impact SOTG	0	0
SOTG get into team through SC	2	3
SC impact rules knowledge and use	1	1
SC impact positive attitude	1	4
SC impact communication	1	4
Elements affec SC's influence	0	0
SC's involvement basd on game	2	3
SC's influence depends on players' behaviour	2	3
SC's influence depends on own behaviour	3	6
Moral person easier to be a moral leader	2	4
Easy to be bad SC, hard to be good SC	2	3
Coach shared function of SC	2	2
SOTG	0	0
Team culture and SOTG	1	1
SOTG, self-officiation and UF	0	0
Tension between officiation and SOTG	2	6
SOTG as an attractive part	2	3
SOTG as a unique part	2	2
SOTG and own ethics	2	13
SOTG and Compatitiveness	0	0
Tension	0	0
Tension between SOTG and Competitiveness	3	14
Lack of rules knowledge and use	1	2
Balance	0	0
Balance between SOTG and Competitiveness	2	10

Name	Files	References
- Positive impact of SOTG - Impact on UF - SOTG impact tolerance in UF - SOTG impact rules knowledge and use in UF - SOTG impact positive attitude in UF - SOTG impact accomodating in UF - Impact on other sports - SOTG impact sportspersonship in other sports - SOTG impact rules knowledge and use in other sports - SOTG impact positive attitude in other sports - SOTG impact moderation in other sports - SOTG impact deliberate in other sports - SOTG impact communication in other sports - Impact on life - SOTG impact tolerance in life - SOTG impact positive attitude in life - SOTG impact moderation in life - SOTG impact honesty in life - SOTG impact empathy in life - SOTG impact deliberate in life - SOTG impact communication in life - Little or none impact from SOTG (2) - SOTG has little or none impact on life - SOTG had little or none impact in other sports - Collective responsibility for UF - SOTG and responsibility for others - Collective responsibility	0 0 1 1 3 2 0 2 1 2 2 1 1 1 0 2 1 2 2 1 2 1 1 2 0 1 1 0 2 2	0 0 1 1 4 4 0 2 2 2 2 3 0 7 3 5 2 5 1 18 4 1 0 6 4

Appendix L: Information Sheet for Survey

		
Participant Information Sheet		
Date Information Sheet Produced: 3 Mar 2024		
Project Title Ultimate Frisbee: The impact of the 'Spirit of the Game' concept. An Invitation I am Kangzhe Xiong, studying at AUT under Master of Business (Sports Leadership and Management). I am an Ultimate player myself and have been involved in many New Zealand leagues and tournaments at all levels. I solemnly invite you to be one of the participants in this study.		
What is the purpose of this research? The purpose of this research is to confirm the impact of the Spirit of the Game (SOTG) and the position of Spirit Captain in Ultimate Frisbee (UF) for the sport of UF, also to explore how SOTG influences the behaviour of UF athletes in UF, in other sports and on a daily basis.		
How was I identified and why am I being invited to participate in this research? You were identified as one of the athletes who is 20 or over representing three groups: Elite - New Zealand players at World Ultimate Championships 2024 Competitive - Played in 2024 NZ Mixed National Social - Played in 2024 Auckland ultim4TES		
How do I agree to participate in this research? By completing the online survey, you indicate your agreement to participate in the research.		
What will happen in this research? You will be asked to fill out an online survey about the impact SOTG has had on your participations in UF, in other sports and in your life. It will take 10-15 minutes to complete the survey.		
What are the benefits? This study will help increase the awareness of the influence of UF and benefits of SOTG can help Ultimate Frisbee develop. The benefits to the researcher included contribution to a Master qualification, potential publications and conference outputs and fill in a gap in the academic literature in UF.		
How will my privacy be protected? Your answers will be anonymous. Neither I nor my supervisors will know your name or contact details unless you want to enter the prize draw. If you enter the prize draw, your name and contact information will not be link to your answers.		
What are the costs of participating in this research? The survey will take about 10-15 minutes of your time.		
What opportunity do I have to consider this invitation? You have three weeks to consider this invitation.		
Will I receive feedback on the results of this research? Since the survey is anonymous, I will not know your contact information. However, I will send the results of my research to NZ Ultimate who can put it on their website.		
Who is the sponsor of the prize draw?		
23 July 2025	page 1 of 3	This version was edited in October 2022

AUT Business School Postgraduate fund

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor Tracy Molloy, tracy.molloy@aut.ac.nz , (+64) 021 022 37701

Concerns regarding the conduct of the research should be notified to the Executive Secretary of ATEC, ethics@aut.ac.nz , (+649) 921 9999 ext 6038.

Approved by the Auckland University of Technology Ethics Committee on 12/02/2025, ATEC Reference number 25/1.

Appendix M: Changes of SOTG (Playing Time)

SOTG	Playing Time	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Rules Knowledge and Use	Less than 1 Year	Before	0	0	0	0	0	
		After	0	0	0	0	0	
	1-5 Years	Before	10	3	0	0	0	0.63
		After	0	3	10	0	0	
	More than 5 Years	Before	23	17	3	0	0	<.01
		After	0	1	32	0	10	
Positive Attitude and Self-control	Less than 1 Year	Before	0	0	0	0	0	
		After	0	0	0	0	0	
	1-5 Years	Before	0	0	7	4	2	0.01
		After	0	0	2	9	2	
	More than 5 Years	Before	0	4	18	16	5	0.18
		After	0	2	10	18	13	
Respectful Communication	Less than 1 Year	Before	0	0	0	0	0	
		After	0	0	0	0	0	
	1-5 Years	Before	0	1	8	3	1	<.01
		After	0	0	2	10	1	

	More than 5 Years	Before	0	6	21	12	4	0.18
		After	0	1	11	17	14	
Fair- mindedness	Less than 1 Year	Before	0	0	0	0	0	
		After	0	0	0	0	0	
	1-5 Years	Before	0	1	5	5	2	0.18
		After	0	0	2	8	3	
	More than 5 Years	Before	0	2	24	10	7	0.58
		After	0	0	11	17	15	
Fouls and Body Contact	Less than 1 Year	Before	0	0	0	0	0	
		After	0	0	0	0	0	
	1-5 Years	Before	1	4	5	2	1	0.01
		After	0	0	5	7	1	
	More than 5 Years	Before	1	12	20	7	3	0.12
		After	0	0	16	17	10	

Appendix N: Gender – Comparisons of SOTG

SOTG	Gender	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Rules Knowledge and Use	Male	Before	65.5%	31.0%	3.4%	0.0%	0.0%	0.33
		After	0.0%	6.9%	72.4%	0.0%	20.7%	
	Female	Before	52.0%	44.0%	4.0%	0.0%	0.0%	0.07
		After	0.0%	4.0%	84.0%	0.0%	12.0%	
	Non-binary or Third Gender	Before	50.0%	0.0%	50.0%	0.0%	0.0%	0.16
		After	0.0%	50.0%	0.0%	0.0%	50.0%	
	Prefer not to say	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
Positive Attitude and Self-control	Male	Before	0.0%	6.9%	55.2%	31.0%	6.9%	0.39
		After	0.0%	3.4%	20.7%	48.3%	27.6%	
	Female	Before	0.0%	4.0%	36.0%	44.0%	16.0%	0.06
		After	0.0%	0.0%	24.0%	52.0%	24.0%	
	Non-binary or Third Gender	Before	0.0%	50.0%	0.0%	0.0%	50.0%	0.16
		After	0.0%	50.0%	0.0%	0.0%	50.0%	
	Prefer not to say	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
Respectful Communication	Male	Before	0.0%	17.2%	51.7%	27.6%	3.4%	0.69
		After	0.0%	3.4%	31.0%	37.9%	27.6%	

	Female	Before	0.0%	8.0%	52.0%	24.0%	16.0%	0.05
		After	0.0%	0.0%	12.0%	64.0%	24.0%	
	Non-binary or Third Gender	Before	0.0%	0.0%	50.0%	50.0%	0.0%	0.16
		After	0.0%	0.0%	50.0%	0.0%	50.0%	
	Prefer not to say	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
Fair-mindedness	Male	Before	0.0%	3.4%	65.5%	17.2%	13.8%	0.23
		After	0.0%	0.0%	24.1%	37.9%	37.9%	
	Female	Before	0.0%	8.0%	40.0%	32.0%	20.0%	0.10
		After	0.0%	0.0%	20.0%	56.0%	24.0%	
	Non-binary or Third Gender	Before	0.0%	0.0%	100.0%	0.0%	0.0%	
		After	0.0%	50.0%	0.0%	50.0%	0.0%	
	Prefer not to say	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
Fouls and Body Contact	Male	Before	6.9%	37.9%	34.5%	17.2%	3.4%	0.14
		After	0.0%	0.0%	44.8%	37.9%	17.2%	
	Female	Before	0.0%	20.0%	56.0%	16.0%	8.0%	0.31
		After	0.0%	0.0%	28.0%	52.0%	20.0%	
	Non-binary or Third Gender	Before	0.0%	0.0%	50.0%	0.0%	50.0%	0.16
		After	0.0%	0.0%	50.0%	0.0%	50.0%	

	Prefer not to say	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	

Appendix O: Level – Comparisons of SOTG

SOTG	Level	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Rules Knowledge and Use	Elite	Before	56.7%	33.3%	10.0%	0.0%	0.0%	0.06
		After	0.0%	6.7%	70.0%	0.0%	23.3%	
	Competitive	Before	62.5%	37.5%	0.0%	0.0%	0.0%	0.15
		After	0.0%	0.0%	87.5%	0.0%	12.5%	
	Social	Before	50.0%	50.0%	0.0%	0.0%	0.0%	
		After	0.0%	100.0%	0.0%	0.0%	0.0%	
Positive Attitude and Self-control	Elite	Before	0.0%	10.0%	40.0%	40.0%	10.0%	0.38
		After	0.0%	6.7%	26.7%	40.0%	26.7%	
	Competitive	Before	0.0%	4.2%	54.2%	29.2%	12.5%	0.01
		After	0.0%	0.0%	16.7%	58.3%	25.0%	
	Social	Before	0.0%	0.0%	0.0%	50.0%	50.0%	0.16
		After	0.0%	0.0%	0.0%	50.0%	50.0%	
Respectful Communication	Elite	Before	0.0%	10.0%	50.0%	26.7%	13.3%	0.28
		After	0.0%	3.3%	23.3%	43.3%	30.0%	
	Competitive	Before	0.0%	16.7%	58.3%	25.0%	0.0%	0.32
		After	0.0%	0.0%	25.0%	54.2%	20.8%	
	Social	Before	0.0%	0.0%	0.0%	50.0%	50.0%	0.16
		After	0.0%	0.0%	0.0%	50.0%	50.0%	

Fair-mindedness	Elite	Before	0.0%	6.7%	40.0%	33.3%	20.0%	0.35
		After	0.0%	0.0%	30.0%	33.3%	36.7%	
	Competitive	Before	0.0%	4.2%	70.8%	16.7%	8.3%	0.68
		After	0.0%	0.0%	16.7%	58.3%	25.0%	
	Social	Before	0.0%	0.0%	0.0%	50.0%	50.0%	0.16
		After	0.0%	0.0%	0.0%	50.0%	50.0%	
Fouls and Body Contact	Elite	Before	0.0%	23.3%	50.0%	20.0%	6.7%	0.07
		After	0.0%	0.0%	36.7%	53.3%	10.0%	
	Competitive	Before	8.3%	37.5%	37.5%	12.5%	4.2%	0.25
		After	0.0%	0.0%	37.5%	33.3%	29.2%	
	Social	Before	0.0%	0.0%	50.0%	0.0%	50.0%	0.16
		After	0.0%	0.0%	50.0%	0.0%	50.0%	

Appendix P: Playing Time – Comparisons of SOTG

SOTG	Playing Time	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Rules Knowledge and Use	Less than 1 Year	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
	1-5 Years	Before	76.9%	23.1%	0.0%	0.0%	0.0%	0.63
		After	0.0%	23.1%	76.9%	0.0%	0.0%	
	More than 5 Years	Before	53.5%	39.5%	7.0%	0.0%	0.0%	<.01
		After	0.0%	2.3%	74.4%	0.0%	23.3%	
Positive Attitude and Self-control	Less than 1 Year	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
	1-5 Years	Before	0.0%	0.0%	53.8%	30.8%	15.4%	0.01
		After	0.0%	0.0%	15.4%	69.2%	15.4%	
	More than 5 Years	Before	0.0%	9.3%	41.9%	37.2%	11.6%	0.18
		After	0.0%	4.7%	23.3%	41.9%	30.2%	
Respectful Communication	Less than 1 Year	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
	1-5 Years	Before	0.0%	7.7%	61.5%	23.1%	7.7%	<.01
		After	0.0%	0.0%	15.4%	76.9%	7.7%	

	More than 5 Years	Before	0.0%	14.0%	48.8%	27.9%	9.3%	0.18
		After	0.0%	2.3%	25.6%	39.5%	32.6%	
Fair-mindedness	Less than 1 Year	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
	1-5 Years	Before	0.0%	7.7%	38.5%	38.5%	15.4%	0.18
		After	0.0%	0.0%	15.4%	61.5%	23.1%	
	More than 5 Years	Before	0.0%	4.7%	55.8%	23.3%	16.3%	0.58
		After	0.0%	0.0%	25.6%	39.5%	34.9%	
Fouls and Body Contact	Less than 1 Year	Before	0.0%	0.0%	0.0%	0.0%	0.0%	
		After	0.0%	0.0%	0.0%	0.0%	0.0%	
	1-5 Years	Before	7.7%	30.8%	38.5%	15.4%	7.7%	0.01
		After	0.0%	0.0%	38.5%	53.8%	7.7%	
	More than 5 Years	Before	2.3%	27.9%	46.5%	16.3%	7.0%	0.12
		After	0.0%	0.0%	37.2%	39.5%	23.3%	

Appendix Q: Role – Comparisons of SOTG

SOTG	Role	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Rules Knowledge and Use	General Player	Before	56.4%	38.5%	5.1%	0.0%	0.0%	0.10
		After	0.0%	10.3%	76.9%	0.0%	12.8%	
	Captain	Before	54.5%	45.5%	0.0%	0.0%	0.0%	0.62
		After	0.0%	0.0%	72.7%	0.0%	27.3%	
	Spirit Captain	Before	83.3%	0.0%	16.7%	0.0%	0.0%	0.12
		After	0.0%	0.0%	66.7%	0.0%	33.3%	
Positive Attitude and Self-control	General Player	Before	0.0%	5.1%	35.9%	46.2%	12.8%	<.01
		After	0.0%	5.1%	17.9%	53.8%	23.1%	
	Captain	Before	0.0%	18.2%	63.6%	9.1%	9.1%	0.57
		After	0.0%	0.0%	27.3%	45.5%	27.3%	
	Spirit Captain	Before	0.0%	0.0%	66.7%	16.7%	16.7%	0.56
		After	0.0%	0.0%	33.3%	16.7%	50.0%	
Respectful Communication	General Player	Before	0.0%	12.8%	48.7%	28.2%	10.3%	0.24
		After	0.0%	2.6%	17.9%	53.8%	25.6%	
	Captain	Before	0.0%	18.2%	54.5%	27.3%	0.0%	0.45
		After	0.0%	0.0%	54.5%	27.3%	18.2%	
	Spirit Captain	Before	0.0%	0.0%	66.7%	16.7%	16.7%	0.22

		After	0.0%	0.0%	0.0%	50.0%	50.0%	
Fair-mindedness	General Player	Before	0.0%	7.7%	38.5%	35.9%	17.9%	0.34
		After	0.0%	0.0%	17.9%	46.2%	35.9%	
	Captain	Before	0.0%	0.0%	90.9%	0.0%	9.1%	0.52
		After	0.0%	0.0%	45.5%	45.5%	9.1%	
	Spirit Captain	Before	0.0%	0.0%	66.7%	16.7%	16.7%	0.56
		After	0.0%	0.0%	16.7%	33.3%	50.0%	
Fouls and Body Contact	General Player	Before	5.1%	30.8%	41.0%	17.9%	5.1%	0.26
		After	0.0%	0.0%	35.9%	46.2%	17.9%	
	Captain	Before	0.0%	27.3%	54.5%	18.2%	0.0%	0.45
		After	0.0%	0.0%	45.5%	45.5%	9.1%	
	Spirit Captain	Before	0.0%	16.7%	50.0%	0.0%	33.3%	0.32
		After	0.0%	0.0%	33.3%	16.7%	50.0%	

Appendix R: Age – Comparisons in other sports

Behaviour	Age	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	20-30	Before	5.3%	15.8%	50%	18.4%	10.5%	< .01
		After	0%	0%	39.5%	39.5%	21.1%	
	31-40	Before	0%	16.7%	66.7%	16.7%	0%	0.72
		After	0%	0%	33.3%	58.3%	8.3%	
	41-50	Before	0%	100%	0%	0%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	33.3%	0%	66.7%	
		After	0%	0%	0%	0%	100%	
Positive Attitude	20-30	Before	2.6%	15.8%	44.7%	21.1%	15.8%	< .01
		After	0%	5.3%	26.3%	55.3%	13.2%	
	31-40	Before	0%	8.3%	66.7%	25.0%	0%	0.72
		After	0%	41.7%	50%	8.3%	0%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	33.3%	33.3%	33.3%	
Respectful Communication	20-30	Before	2.6%	21.1%	50%	18.4%	7.9%	< .01
		After	0%	5.3%	26.3%	52.6%	15.8%	

	31-40	Before	0%	25.0%	58.3%	16.7%	0%	0.66
		After	0%	25.0%	75.0%	0%	0%	
	41-50	Before	0%	100%	0%	0%	0%	
		After	0%	100%	0%	0%	0%	
	Above 50	Before	0%	33.3%	33.3%	0%	33.3%	0.22
		After	0%	33.3%	0%	33.3%	33.3%	
Moderation	20-30	Before	0%	5.3%	52.6%	28.9%	13.2%	< .01
		After	0%	0%	44.7%	36.8%	18.4%	
	31-40	Before	0%	33.3%	33.3%	33.3%	0%	0.04
		After	0%	0%	33.3%	50%	16.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	33.3%	66.7%	0%	
Tolerance	20-30	Before	0%	31.6%	39.5%	18.4%	10.5%	< .01
		After	0%	5.3%	39.5%	50%	5.3%	
	31-40	Before	0%	41.7%	33.3%	16.7%	8.3%	0.13
		After	0%	41.7%	41.7%	16.7%	0%	
	41-50	Before	0%	0%	0%	0%	100%	
		After	0%	0%	0%	0%	100%	

	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	33.3%	66.7%	0%	
Honesty	20-30	Before	0%	13.2%	55.3%	15.8%	15.8%	< .01
		After	0%	0%	42.1%	34.2%	23.7%	
	31-40	Before	0%	25.0%	41.7%	25.0%	8.3%	0.14
		After	0%	0%	33.3%	41.7%	25.0%	
	41-50	Before	100%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	33.3%	66.7%	
		After	0%	0%	0%	33.3%	66.7%	

Appendix S: Gender – Comparisons in other sports

Behaviour	Gender	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Male	Before	0%	20.7%	51.7%	20.7%	6.9%	0.04
		After	0%	0%	34.5%	34.5%	31.0%	
	Female	Before	8.7%	8.7%	56.5%	13.0%	13.0%	< .01
		After	0%	0%	34.8%	52.2%	13.0%	
	Non-binary or Third Gender	Before	0%	50%	0%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Positive Attitude	Male	Before	3.4%	10.3%	51.7%	24.1%	10.3%	< .01
		After	3.4%	27.6%	62.1%	6.9%	0%	
	Female	Before	0%	13.0%	47.8%	26.1%	13.0%	0.01
		After	4.3%	26.1%	43.5%	26.1%	0%	
	Non-binary or Third Gender	Before	0%	50%	0%	0%	50%	0.16
		After	50%	0%	0%	50%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Respectful Communication	Male	Before	0%	27.6%	55.2%	6.9%	10.3%	0.02
		After	3.7%	24.1%	57.4%	14.8%	0%	

	Female	Before	0%	17.4%	47.8%	30.4%	4.3%	0.04
		After	21.7%	60.9%	17.4%	0%	0%	
	Non-binary or Third Gender	Before	50%	0%	0%	0%	50%	
		After	100%	0%	0%	0%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Moderation	Male	Before	0%	10.3%	41.4%	37.9%	10.3%	< .01
		After	0%	0%	44.8%	37.9%	17.2%	
	Female	Before	0%	13.0%	52.2%	26.1%	8.7%	0.02
		After	0%	0%	26.1%	47.8%	26.1%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Tolerance	Male	Before	0%	27.6%	41.4%	17.2%	13.8%	< .01
		After	3.4%	37.9%	41.4%	17.2%	0%	
	Female	Before	0%	34.8%	56.5%	8.7%	0%	0.29
		After	0%	0%	34.8%	56.5%	8.7%	
	Non-binary or Third Gender	Before	0%	50%	0%	0%	50%	0.16
		After	50%	0%	0%	0%	50%	

	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Honesty	Male	Before	3.4%	10.3%	48.3%	24.1%	13.8%	< .01
		After	0%	0%	34.5%	34.5%	31.0%	
	Female	Before	0%	21.7%	47.8%	13.0%	17.4%	< .01
		After	0%	0%	39.1%	34.8%	26.1%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	

Appendix T: Playing Time – Comparisons in other sports

Behaviour	Play Time	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	61.5%	15.4%	15.4%	< .01
		After	0%	0%	46.2%	38.5%	15.4%	
	More than 5 Years	Before	4.9%	19.5%	48.8%	17.1%	9.8%	< .01
		After	0%	0%	31.7%	41.5%	26.8%	
Positive Attitude	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	23.1%	46.2%	15.4%	15.4%	< .01
		After	0%	0%	23.1%	61.5%	15.4%	
	More than 5 Years	Before	2.4%	9.8%	48.8%	26.8%	12.2%	< .01
		After	0%	4.9%	29.3%	51.2%	14.6%	
Respectful Communication	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	7.7%	0%	69.2%	15.4%	7.7%	0.05
		After	0%	0%	23.1%	61.5%	15.4%	
	More than 5 Years	Before	0%	31.7%	43.9%	17.1%	7.3%	0.02
		After	0%	4.9%	24.4%	56.1%	14.6%	

Moderation	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	15.4%	53.8%	15.4%	15.4%	< .01
		After	0%	0%	46.2%	38.5%	15.4%	
	More than 5 Years	Before	0%	9.8%	43.9%	36.6%	9.8%	< .01
		After	0%	0%	36.6%	41.5%	22.0%	
Tolerance	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	30.8%	53.8%	0%	15.4%	0.02
		After	0%	0%	46.2%	46.2%	7.7%	
	More than 5 Years	Before	0%	31.7%	31.7%	24.4%	12.2%	< .01
		After	0%	4.9%	34.1%	46.3%	14.6%	
Honesty	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	61.5%	7.7%	23.1%	0.02
		After	0%	0%	30.8%	46.2%	23.1%	
	More than 5 Years	Before	2.4%	17.1%	43.9%	22.0%	14.6%	< .01
		After	0%	0%	39.0%	29.3%	31.7%	

Appendix U: Level – Comparisons in other sports

Behaviour	Level	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Elite	Before	0%	20.7%	55.2%	13.8%	10.3%	0.03
		After	0%	0%	37.9%	37.9%	24.1%	
	Competitive	Before	8.7%	13.0%	52.2%	17.4%	8.7%	0.04
		After	0%	0%	34.8%	43.5%	21.7%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Positive Attitude	Elite	Before	3.4%	6.9%	62.1%	17.2%	10.3%	<.01
		After	0%	6.9%	31.0%	51.7%	10.3%	
	Competitive	Before	0%	21.7%	34.8%	30.4%	13.0%	0.12
		After	0%	0%	26.1%	56.5%	17.4%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Respectful Communication	Elite	Before	0%	20.7%	55.2%	20.7%	3.4%	0.10
		After	0%	3.4%	17.2%	65.5%	13.8%	
	Competitive	Before	4.3%	30.4%	43.5%	13.0%	8.7%	0.04
		After	0%	4.3%	34.8%	47.8%	13.0%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	0%	50%	50%	

Moderation	Elite	Before	0%	10.3%	48.3%	34.5%	6.9%	<.01
		After	0%	0%	34.5%	48.3%	17.2%	
	Competitive	Before	0%	13.0%	43.5%	30.4%	13.0%	0.02
		After	0%	0%	43.5%	34.8%	21.7%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
Tolerance	Elite	Before	0%	34.5%	37.9%	20.7%	6.9%	0.24
		After	0%	3.4%	34.5%	55.2%	6.9%	
	Competitive	Before	0%	30.4%	34.8%	17.4%	17.4%	<.01
		After	0%	4.3%	43.5%	34.8%	17.4%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	0%	50%	50%	
Honesty	Elite	Before	0%	13.8%	58.6%	13.8%	13.8%	<.01
		After	0%	0%	44.8%	27.6%	27.6%	
	Competitive	Before	4.3%	17.4%	39.1%	21.7%	17.4%	<.01
		After	0%	0%	30.4%	39.1%	30.4%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	

Appendix V: Role – Comparisons in other sports

Behaviour	Role	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	General Player	Before	2.7%	18.9%	51.4%	13.5%	13.5%	<.01
		After	0.0%	0.0%	35.1%	37.8%	27.0%	
	Captain	Before	9.1%	9.1%	54.5%	27.3%	0.0%	0.56
		After	0.0%	0.0%	27.3%	54.5%	18.2%	
	Spirit Captain	Before	0.0%	16.7%	50.0%	16.7%	16.7%	0.19
		After	0.0%	0.0%	50.0%	33.3%	16.7%	
Positive Attitude	General Player	Before	2.7%	16.2%	43.2%	24.3%	13.5%	<.01
		After	0.0%	5.4%	24.3%	54.1%	16.2%	
	Captain	Before	0.0%	9.1%	54.5%	27.3%	9.1%	0.48
		After	0.0%	0.0%	36.4%	54.5%	9.1%	
	Spirit Captain	Before	0.0%	0.0%	66.7%	16.7%	16.7%	0.56
		After	0.0%	0.0%	33.3%	50.0%	16.7%	
Respectful Communication	General Player	Before	2.7%	24.3%	43.2%	21.6%	8.1%	<.01
		After	0.0%	2.7%	21.6%	56.8%	18.9%	
	Captain	Before	0.0%	27.3%	72.7%	0.0%	0.0%	0.42
		After	0.0%	0.0%	36.4%	54.5%	9.1%	
	Spirit Captain	Before	0.0%	16.7%	50.0%	16.7%	16.7%	0.32
		After	0.0%	16.7%	16.7%	66.7%	0.0%	

Moderation	General Player	Before	0.0%	8.1%	48.6%	32.4%	10.8%	<.01
		After	0.0%	0.0%	35.1%	45.9%	18.9%	
	Captain	Before	0.0%	9.1%	45.5%	36.4%	9.1%	0.56
		After	0.0%	0.0%	36.4%	36.4%	27.3%	
	Spirit Captain	Before	0.0%	33.3%	33.3%	16.7%	16.7%	0.22
		After	0.0%	0.0%	66.7%	16.7%	16.7%	
Tolerance	General Player	Before	0.0%	32.4%	37.8%	18.9%	10.8%	<.01
		After	0.0%	2.7%	35.1%	48.6%	13.5%	
	Captain	Before	0.0%	27.3%	36.4%	18.2%	18.2%	0.02
		After	0.0%	0.0%	36.4%	45.5%	18.2%	
	Spirit Captain	Before	0.0%	33.3%	33.3%	16.7%	16.7%	0.15
		After	0.0%	16.7%	50.0%	33.3%	0.0%	
Honesty	General Player	Before	2.7%	10.8%	51.4%	13.5%	21.6%	<.01
		After	0.0%	0.0%	37.8%	32.4%	29.7%	
	Captain	Before	0.0%	18.2%	54.5%	27.3%	0.0%	0.45
		After	0.0%	0.0%	36.4%	36.4%	27.3%	
	Spirit Captain	Before	0.0%	33.3%	16.7%	33.3%	16.7%	0.17
		After	0.0%	0.0%	33.3%	33.3%	33.3%	

Appendix W: Age – Comparisons in daily life

Behaviour	Age	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	20-30	Before	2.6%	5.1%	61.5%	20.5%	10.3%	0.03*
		After	0%	0%	33.3%	48.7%	17.9%	
	31-40	Before	0%	0%	76.9%	15.4%	7.7%	<.01*
		After	0%	0%	46.2%	46.2%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	0%	33.3%	66.7%	
		After	0%	0%	0%	0%	100%	
Positive Attitude	20-30	Before	2.6%	5.1%	61.5%	23.1%	7.7%	<.01*
		After	0%	2.6%	28.2%	51.3%	17.9%	
	31-40	Before	0%	15.4%	69.2%	7.7%	7.7%	0.01*
		After	0%	0%	53.8%	38.5%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	100%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	0%	33.3%	66.7%	
Respectful Communication	20-30	Before	0%	15.4%	35.9%	33.3%	15.4%	<.01*
		After	0%	0%	25.6%	53.8%	20.5%	
	31-40	Before	0%	7.7%	69.2%	15.4%	7.7%	0.14
		After	0%	0%	30.8%	53.8%	15.4%	
	41-50	Before	0%	100%	0%	0%	0%	
		After	0%	0%	100%	0%	0%	
	Above 50	Before	0%	0%	33.3%	33.3%	33.3%	0.22
		After	0%	0%	0%	33.3%	66.7%	

Moderation	20-30	Before	0%	15.4%	43.6%	25.6%	15.4%	<.01*
		After	0%	0%	33.3%	53.8%	12.8%	
	31-40	Before	0%	7.7%	61.5%	23.1%	7.7%	0.01*
		After	0%	0%	30.8%	61.5%	7.7%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	66.7%	33.3%	0.08
		After	0%	0%	0%	66.7%	33.3%	
Tolerance	20-30	Before	0%	25.6%	38.5%	28.2%	7.7%	0.25
		After	0%	2.6%	28.2%	56.4%	12.8%	
	31-40	Before	7.7%	38.5%	30.8%	15.4%	7.7%	0.14
		After	0%	7.7%	30.8%	53.8%	7.7%	
	41-50	Before	0%	0%	100%	0%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	66.7%	33.3%	0.39
		After	0%	0%	0%	33.3%	66.7%	
Honesty	20-30	Before	0%	2.6%	57.9%	26.3%	13.2%	<.01*
		After	0%	0%	34.2%	47.4%	18.4%	
	31-40	Before	0%	0%	53.8%	30.8%	15.4%	0.24
		After	0%	0%	23.1%	46.2%	30.8%	
	41-50	Before	0%	0%	0%	100%	0%	
		After	0%	0%	0%	0%	100%	
	Above 50	Before	0%	0%	0%	33.3%	66.7%	
		After	0%	0%	0%	0%	100%	

Appendix X: Gender – Comparisons in daily life

Behaviour	Gender	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Male	Before	0%	0%	62.1%	27.6%	10.3%	0.03
		After	0%	0%	34.5%	37.9%	27.6%	
	Female	Before	4.0%	8.0%	60%	16.0%	12.0%	< .01
		After	0%	0%	32.0%	60%	8.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Positive Attitude	Male	Before	0%	6.9%	58.6%	27.6%	6.9%	< .01
		After	0%	20.7%	62.1%	17.2%	0%	
	Female	Before	4.0%	8.0%	64.0%	16.0%	8.0%	0.02
		After	0%	44.0%	36.0%	20%	0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	50%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Respectful Communication	Male	Before	0%	13.8%	37.9%	31.0%	17.2%	0.03
		After	0%	0%	24.1%	51.7%	24.1%	

	Female	Before	0%	12.0%	52.0%	28.0%	8.0%	0.02
		After	0%	0%	24.0%	60%	16.0%	
	Non-binary or Third Gender	Before	0%	50%	0%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Moderation	Male	Before	0%	13.8%	41.4%	31.0%	13.8%	< .01
		After	0%	0%	27.6%	51.7%	20.7%	
	Female	Before	0%	12.0%	48.0%	28.0%	12.0%	< .01
		After	0%	0%	32.0%	60%	8.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	50%	0%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Tolerance	Male	Before	3.4%	24.1%	34.5%	27.6%	10.3%	0.15
		After	3.4%	27.6%	51.7%	17.2%	0%	
	Female	Before	0%	32.0%	36.0%	28.0%	4.0%	0.20
		After	0%	4.0%	24.0%	56.0%	16.0%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	50%	0%	

	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
Honesty	Male	Before	0%	0%	55.2%	20.7%	24.1%	< .01
		After	0%	0%	24.1%	37.9%	37.9%	
	Female	Before	0%	4.2%	50%	41.7%	4.2%	< .01
		After	0%	0%	33.3%	54.2%	12.5%	
	Non-binary or Third Gender	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	
	Prefer not to say	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	

Appendix Y: Playing Time – Comparisons in daily life

Behaviour	Play Time	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	53.8%	30.8%	15.4%	0.10
		After	0%	0%	38.5%	53.8%	7.7%	
	More than 5 Years	Before	2.3%	4.7%	62.8%	18.6%	11.6%	<.01*
		After	0%	0%	32.6%	44.2%	23.3%	
Positive Attitude	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	76.9%	15.4%	7.7%	<.01*
		After	0%	0%	30.8%	61.5%	7.7%	
	More than 5 Years	Before	2.3%	9.3%	55.8%	23.3%	9.3%	<.01*
		After	0%	2.3%	32.6%	44.2%	20.9%	
Respectful Communication	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	38.5%	46.2%	7.7%	0.03*
		After	0%	0%	23.1%	69.2%	7.7%	
	More than 5 Years	Before	0%	16.3%	44.2%	23.3%	16.3%	<.01*
		After	0%	0%	25.6%	48.8%	25.6%	
Moderation	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	7.7%	53.8%	23.1%	15.4%	<.01*
		After	0%	0%	30.8%	53.8%	15.4%	
	More than 5 Years	Before	0%	14.0%	41.9%	30.2%	14.0%	<.01*
		After	0%	0%	0%	0%	0%	

		After	0%	0%	30.2%	55.8%	14.0%	
Tolerance	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	30.8%	30.8%	30.8%	7.7%	0.06
		After	0%	0%	30.8%	53.8%	15.4%	
	More than 5 Years	Before	2.3%	25.6%	37.2%	25.6%	9.3%	0.15
		After	0%	4.7%	25.6%	53.5%	16.3%	
Honesty	Less than 1 Year	Before	0%	0%	0%	0%	0%	
		After	0%	0%	0%	0%	0%	
	1-5 Years	Before	0%	0%	61.5%	15.4%	23.1%	<.01*
		After	0%	0%	46.2%	30.8%	23.1%	
	More than 5 Years	Before	0%	2.4%	50%	33.3%	14.3%	<.01*
		After	0%	0%	23.8%	47.6%	28.6%	

Appendix Z: Level – Comparisons in daily life

Behaviour	Level	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	Elite	Before	0%	3.3%	66.7%	16.7%	13.3%	0.06
		After	0%	0%	23.3%	56.7%	20%	
	Competitive	Before	4.2%	4.2%	58.3%	25.0%	8.3%	0.03
		After	0%	0%	50%	33.3%	16.7%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Positive Attitude	Elite	Before	0%	3.3%	70%	16.7%	10%	< .01
		After	0%	0%	26.7%	56.7%	16.7%	
	Competitive	Before	4.2%	12.5%	54.2%	25.0%	4.2%	< .01
		After	0%	4.2%	41.7%	37.5%	16.7%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Respectful Communication	Elite	Before	0%	3.3%	70%	16.7%	10%	< .01
		After	0%	0%	26.7%	56.7%	16.7%	
	Competitive	Before	4.2%	12.5%	54.2%	25.0%	4.2%	0.03
		After	0%	4.2%	41.7%	37.5%	16.7%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	

Moderation	Elite	Before	0%	13.3%	46.7%	30%	10%	< .01
		After	0%	0%	23.3%	63.3%	13.3%	
	Competitive	Before	0%	12.5%	45.8%	25.0%	16.7%	0.11
		After	0%	0%	41.7%	45.8%	12.5%	
	Social	Before	0%	0%	0%	50%	50%	0.16
		After	0%	0%	0%	50%	50%	
Tolerance	Elite	Before	3.3%	23.3%	40%	30%	3.3%	0.04
		After	0%	6.7%	13.3%	70%	10%	
	Competitive	Before	0%	33.3%	29.2%	25.0%	12.5%	0.09
		After	0%	0%	41.7%	37.5%	20.8%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	0%	50%	50%	
Honesty	Elite	Before	0%	3.3%	50%	33.3%	13.3%	< .01
		After	0%	0%	20%	56.7%	23.3%	
	Competitive	Before	0%	0%	56.5%	26.1%	17.4%	< .01
		After	0%	0%	39.1%	30.4%	30.4%	
	Social	Before	0%	0%	50%	0%	50%	0.16
		After	0%	0%	50%	0%	50%	

Appendix AA: Role – Comparisons in daily life

Behaviour	Role	Period	Poor	Not Good	Good	Very Good	Excellent	X ²
Fair-mindedness	General Player	Before	2.6%	5.1%	56.4%	23.1%	12.8%	<.01
		After	0.0%	0.0%	30.8%	51.3%	17.9%	
	Captain	Before	0.0%	0.0%	81.8%	18.2%	0.0%	0.27
		After	0.0%	0.0%	36.4%	45.5%	18.2%	
	Spirit Captain	Before	0.0%	0.0%	50.0%	16.7%	33.3%	0.16
		After	0.0%	0.0%	50.0%	16.7%	33.3%	
Positive Attitude	General Player	Before	2.6%	2.6%	64.1%	23.1%	7.7%	<.01
		After	0.0%	0.0%	30.8%	51.3%	17.9%	
	Captain	Before	0.0%	27.3%	54.5%	18.2%	0.0%	0.29
		After	0.0%	0.0%	36.4%	45.5%	18.2%	
	Spirit Captain	Before	0.0%	0.0%	50.0%	16.7%	33.3%	0.24
		After	0.0%	16.7%	33.3%	33.3%	16.7%	
Respectful Communication	General Player	Before	0.0%	10.3%	43.6%	30.8%	15.4%	<.01
		After	0.0%	0.0%	23.1%	59.0%	17.9%	
	Captain	Before	0.0%	27.3%	45.5%	27.3%	0.0%	0.78
		After	0.0%	0.0%	27.3%	45.5%	27.3%	
	Spirit Captain	Before	0.0%	16.7%	33.3%	16.7%	33.3%	0.17
		After	0.0%	0.0%	33.3%	33.3%	33.3%	

Moderation	General Player	Before	0.0%	12.8%	41.0%	33.3%	12.8%	<.01
		After	0.0%	0.0%	33.3%	51.3%	15.4%	
	Captain	Before	0.0%	18.2%	45.5%	27.3%	9.1%	0.04
		After	0.0%	0.0%	27.3%	63.6%	9.1%	
	Spirit Captain	Before	0.0%	0.0%	66.7%	0.0%	33.3%	0.27
		After	0.0%	0.0%	16.7%	66.7%	16.7%	
Tolerance	General Player	Before	0.0%	23.1%	38.5%	33.3%	5.1%	<.01
		After	0.0%	2.6%	25.6%	56.4%	15.4%	
	Captain	Before	9.1%	36.4%	27.3%	18.2%	9.1%	0.70
		After	0.0%	0.0%	27.3%	54.5%	18.2%	
	Spirit Captain	Before	0.0%	33.3%	33.3%	0.0%	33.3%	0.42
		After	0.0%	16.7%	33.3%	33.3%	16.7%	
Honesty	General Player	Before	0.0%	2.6%	47.4%	34.2%	15.8%	<.01
		After	0.0%	0.0%	31.6%	42.1%	26.3%	
	Captain	Before	0.0%	0.0%	72.7%	18.2%	9.1%	0.45
		After	0.0%	0.0%	27.3%	45.5%	27.3%	
	Spirit Captain	Before	0.0%	0.0%	50.0%	16.7%	33.3%	0.16
		After	0.0%	0.0%	16.7%	50.0%	33.3%	