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Flourishing for Sport Consumers: The Case of Fantasy Baseball and Social Media Engagement

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FLOURISHING FOR SPORT CONSUMERS: THE CASE OF
FANTASY BASEBALL AND SOCIAL
MEDIA ENGAGEMENT

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ABSTRACT

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Digital technology transformation within the sports industry has led to increasing attention being given to how digital services can influence fans' positive psychological perspectives. In particular, through this study I aimed to understand the effects of fantasy sports and social media engagement on positive psychological benefits, such as perceived value and flourishing. In the current study, regulatory engagement theory was applied to understand whether the digital engagement of sports consumers is positively associated with perceived value and flourishing as a form of well-being. In the implementation of the pre-, mid-, or post-consumption model, three groups were created based on the participants' habits of using fantasy sports and social media before, while, and after watching television. I then attempted to explore how the aforementioned relations can differ across these three groups. Responses from a total of 629 sports fans were collected via an online Qualtrics panel. Data analysis was conducted using confirmatory factor analysis (CFA), structural equation modeling analysis (SEM), multi-group CFA, and multi-group SEM to verify the hypotheses. It was found that engagement in fantasy sports and social media had a positive effect on perceived value and well-being. In addition, perceived value mediated the relationship between fantasy sports or social media engagement and flourishing. The findings of the group comparison showed that there were no differences across the three groups in the effects of fantasy sports and social media engagement on perceived

value and flourishing. This empirical study contributed to supporting that digital consumption among sports consumers plays a positive role in their lives, suggesting the need to develop strategic management in the digital sports field. In addition, the digital activity patterns of sports consumers were successfully classified based on game schedules, providing a better understanding of their digital consumption journey in the future.

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INTRODUCTION

Background of Fantasy Sports Consumption

The past few years have witnessed considerable development in the fantasy sports industry, with overall participation in the US and Canada increasing from 32 million in 2010 to 59.3 million in 2017 (Fantasy Sports & Gaming Association, 2022) and demand rising significantly from 31% in 2012 to 64% in 2015 (Chan-Olmsted & Kwak, 2020). In parallel, sports managers must keep pace with the trend of increasing participation in integrated and multiplatform fantasy sports gaming (Stegmann et al., 2021). Evidence for this trend is that 65% of fantasy sports participants watch sporting events on television, while 61% read posts online, including those published on social media (Lee, 2018). Understanding the multitude of platforms available for digital sport engagement has been emphasized as relevant to the quality of content options for fantasy sports (Billings et al., 2021; Ströbel et al., 2021). However, there have been limited explorations into the use of various digital engagement platforms (e.g., social media and television) among fantasy sports followers (Chan-Olmsted & Kwak, 2020). Examining such environments offers insights that can provide an advantage in increasing the efficiency of sports and strengthening their value (Deloitte, 2021).

Sports organizations need to explore the media engagement habits (e.g., the time points at which viewership occurs) of fans and the media consumption of these populations. The experiences of contemporary sports consumers include social interactions before, during, and after the viewership of mediated games (Clavio et al., 2012; Shabazz, 2019). For example,

almost 70% of fans prefer to engage with pre-game content right before a sporting event starts (Linchpin, 2022); about 50% of sports consumers check Facebook posts on their mobile devices during a game (Linchpin, 2022); and devotees take part in highly interactive activities upon finishing watching sporting events in offline and online settings (Shabazz, 2019). The same pre-, during-, and post-event behaviors are exhibited by fantasy sports participants, who, in this process, tend to use multiplatform media formats (e.g., social media and television; Chan-Olmsted & Xiao, 2019). Given the complicated media usage of sports consumers, media engagement before, during, and after sporting events deserves further study.

No theoretical framework has been proposed for categorizing time-related components and determining how the use of multiple platforms in fantasy sports affects positivity in the psychological viewpoints of sports consumers. Particularly when considering the role digital usage plays in fantasy sports, the relationship between fantasy sports and mental health issues has been given more attention (Kahn, 2016). Some links between fantasy sports and flourishing have been conceptually explicated. Depending on the reasons (external rewards or enjoyment) for participation, fantasy sports consumption can generate either positive or negative well-being (Dhurup & Dlodlo, 2013). Wilkins et al. (2021) argued that a "real-time" game can reduce the potential detrimental effects of fantasy participation on well-being, as fantasy sports cannot be consumed at the free will of fantasy users. Given the increasing interest in the psychological factors in fantasy sports, further research should be conducted to better understand the assessment of fantasy sports experiences. Perceived value can be attributed to individuals' well-being as a form of enhancement derived from sports settings (Yoshida et al., 2013). When confronted with the need for digital involvement in value co-creation (Ströbel et al., 2021), it is

important to comprehend the effects of value on well-being and develop strategies for the use of future digital technologies across time points in the viewership of sporting events.

Problem Statement

Although Yim et al. (2021) recently expanded the concept of millennial sport fandom, further description is needed in order to illuminate the effects of technology-driven engagement (e.g., fantasy participation and social media engagement) on sport consumers' psychological perspectives. Social media has received a great deal of attention from both scholars and sport entities (Filo et al., 2015). However, it is still premature to attempt to determine the role or effectiveness of social media in sport (Filo et al., 2015). Regarding involvement in fantasy sport, perceived competitiveness and goal-framing were found by Jang et al. (2020) to positively induce the amount of inner energy as well as self-control performance. Their study, however, focused only on individual activities and did not consider interactions with others. Interactive activities in fantasy sport must more fully understand the various types of digital engagement and combinations of multiplatform digital devices in order to enhance the fan experience.

Along with digitalized engagement, sporting events offer tools and serve as valuable platforms for individual networking, which allows for value co-creation in sport (Grohs et al., 2020). Sporting events are socialized spheres where various actors have interactions (including brands, athletes, sponsors, media, and communities) as part of the co-creation process (Grohs et al., 2020; Kolyperas et al., 2019). Although previous studies have attempted to describe value co-creation (Grohs et al., 2020; Kolyperas et al., 2019; Uhrich, 2014; Woratschek et al., 2014; Yoshida et al., 2013), consumer perceptions of value have not yet illuminated how digital interactions might affect internal value states (Aggerholm & Breivik, 2021; Shapiro et al., 2019). As many sport teams and leagues are currently working to augment digital consumption design,

it is critical to understand the benefits perceived by sport consumers who use the service and to identify positive impacts for the strategic management of future digital transformation.

Every digital interaction can intentionally or unintentionally influence the well-being of individual users. Understanding sport consumers' well-being can lead to reinforcement of perceived needs and positive psychological experiences (Kim et al., 2017). The psychological benefits have encouraged a growing number of scholars and practitioners to further explore the impacts of various sport services on well-being (e.g., live spectatorship, Inoue et al., 2017; spectatorship on online streaming services, Kim & Kim, 2020; viewing sporting events on television, Kim et al., 2017; online shopping for sport merchandise products, Paek et al., 2021). Such approaches help to explain how well-being benefits can be leveraged in sport consumers' engagement processes. Despite continuous pursuit of design that encourages deeper meaning, enjoyment, and flourishing in sport consumption, no study has considered technology-driven activities through the lens of psychological pathways or used social media habits to examine well-being viewpoints in virtual settings.

Regarding sport services, scholars in sport management should consider more specific categorizations of media consumption, such as sport fans' experiences as indicated before, during, or after consumption (Funk, 2017; Shabazz, 2019). Research on one- or two-way interactivity on social media before, during, and after a Big Ten football season has discovered active social interaction based on captured tweets (Clavio et al., 2012). Additionally, fantasy sport users disparately increase their media consumption, such as social media or television, before, during, and after sporting events (Chan-Olmsted & Kwak, 2020). Although a few scholars have attempted to explore attitudinal traits before, during, and after sporting events, no theoretical framework for categorizing the three groups currently exists. Very few studies have

examined how engagement activities related to fantasy sport and social media intertwine with television viewing habits. Therefore, to better understand this topic, studies should address how the various activities related to mediated sports and contemporary engagement are harmoniously related.

Importance of the Study

To address the dearth of research on the roles of social media and fantasy sport in the induction of positive psychological experience, through this dissertation, I sought to identify the theoretical and practical implications of the influence of media usage habits on benefits to sport consumers. By filling the existing gaps in sport management literature, this current study will help to expand theoretical foundations and to develop strategic plans in the context of virtual settings.

First, I adopted the regulatory engagement theory (RET) paradigm (Higgins, 2006) in an innovative approach that examines the relationship between digitalized engagement and optimized mental health within the context of sport. Contemporary research advises studies to concentrate on improving well-being through service domains or systems (Higgins, 2014). The RET theory, which emerged from these research trends, helps researchers understand the positive and negative influences of engagement and value. In addition, the strength of hedonic engaged experiences plays a crucial role in the formation of consumers' perceived value. Thus, perceived value holds great explanatory power for positive attitudinal properties, such as well-being (Higgins, 2014). Adoption of the RET framework allows for description of activities in various spheres of life that facilitate willingness to engage in and improve well-being and the value-creation processes (Finsterwalder et al., 2017). This approach can provide insight into how sport

consumers' digital experiences create value and subsequent benefits (i.e., uplifting individuals' flourishing).

Sport teams should not enact further digital transformation without first identifying sport fans' perceived benefits and values. Thus, in order to efficiently improve the value creation process, sport teams and leagues need to understand the relative effectiveness of different forms of digital engagement. A value-centric approach to sport should reflect the influence of sport consumers' lifestyles (Grohs et al., 2020). While investigating value creation in sporting events, sport managers can integrate strategic practices to achieve two types of positive outcomes: 1) planned outcomes, which are referred to as sustaining value from the user-service provider creation atmosphere, and 2) spontaneous outcomes in which sport organizers merely provide social opportunities, such as sub-event activities linking sponsors, athletes, and consumers (Grohs et al., 2020). The inclusion of perceived value provides insightful perspectives related to the development of strategic practices in support of collaborative tactics or potential willingness to continue engaging the "virtuous" experiential cycle. Moreover, conceptualization of the value co-creation processes can assist in assessment of the target value and in the repositioning of value proposition, which are in turn manifested in collective inner patterns (Kolyperas et al., 2019). Therefore, this present research promotes a better evaluation of the valuation checking process of the sport consumer.

Consideration of sport fans' psychological well-being can advance the delivery of sport services through identification of the impact of positive mental health features as well as by legitimizing the production of those services (Kim & James, 2019). Further, an empirical understanding of the well-being of sport fans would enhance the literature addressing how individual and collective flourishing can be reinforced by a range of sport services (Inoue et al.,

2020). Prior study of sport consumers' well-being has predominantly focused on how behavioral and psychological engagement in sport leads to either feeling great or to functioning positively (Inoue et al., 2020). Although studies on well-being have contributed to establishing a broad range of knowledge (Inoue et al., 2020), relatively less research has been conducted concerning purposeful and meaningful value in consumers' life domain (Sirgy et al., 2020). Therefore, I proposed that meaningful quality of life and flourishing represent the optimal state of well-being and introduces a concept that incorporates both. This research expands on the kinds of digital engagement in sport media that can lead fans to a positive psychological state and further emphasizes the significance of consumers' interactions.

Various technologies and multiple connected devices enhance sport consumer interactions by actively generating content (Chan-Olmsted & Xiao, 2019). However, there is a dearth of studies of the effect of this digitalization on sport management (Ströbel et al., 2021). By utilizing time-framed groups and reflecting upon the timings of online usage habits (such as before, during, or after watching sport games), such approach provides detailed information concerning the disparate impact of fantasy sport and social media engagement in sport consumers' positive states. Additionally, depending on the type of content and the needs of users, consumers' usage patterns determine how content delivery is conducted (Chan-Olmsted & Xiao, 2019). This current study provides in-depth information concerning the relationship between multitask engagement and sport consumers' positive states. Therefore, this research further articulates the digitalized journey process and the level of positive psychological states in the digital context.

Statement of Purpose

I attempted to address sport consumers' experiences with sports in digital formats as well as how perceived value and flourishing can be created in a virtual sport setting. Therefore, this present research can promote a better understanding of the individual aspects of valuation and of the positive psychological benefits of utilizing technology-driven engagement in the sport domain, wherein the media platform and the magnitude of content is increasingly shifting into a multitude of forms. The purposes of this research are as follow: (a) to assess whether sport consumers' fantasy sport engagement and social media can build up their values and flourishing state, (b) to better understand the mediating role of perceived value in the relationship between digitalized engagement and flourishing state, and (c) to explore digital multitasking engagement in order to determine how social media and fantasy sport engagement are differently related to their positive states according to different time points in sporting event viewership.

Research Questions and Hypotheses

The aim of this current study was to explore consumers' mediated activities related to sporting events and to further understand how sport consumers experience positive psychological experiences before, during, and after viewing sport games. To achieve the research objectives, I answered the following research questions:

Q1   What roles do fantasy sport and social media engagement play in users' positive psychological state?

Q2   What are the roles of perceived value in the relationship between digitalized engagement and positive psychological state?

Q3   Do the effects of digital engagement journeys differ in users' positive psychological state when they watch before, during, and after sporting events?

The first three hypotheses, listed below, are based in the RET theoretical framework. Based on this theory (Higgins, 2006, 2014), the activities with which an individual engages influence the levels of valuation of service experiences and that perceived value has a degree of influence on positive psychological states, such as well-being. In the proposed model, fantasy sport and social media engagement will explain the state of value and well-being such as flourishing (see Figure 1.1).

H1   Fantasy sport engagement is positively associated with the consumer's perceived value.

H2   Social media engagement is positively associated with the consumer's perceived value.

H3   Perceived value is positively associated with the consumer's flourishing.

As an exploration of the highlighted relationships, the RET framework was applied to investigate further the mediating role of perceived value between digital engaged activities and positive psychological potential, such as flourishing. In the sport management literature, perceived value has a mediating role in sport attendance and ticket purchases (Byon et al., 2013). Although researchers have attempted to explore perceived value as a mediator between sport service involvement and positive attitudinal outcomes, there are limited studies in which the role of perceived value is examined in virtual environments, such as fantasy sport and social media engagement. The gap in the sport management literature may be filled by exploring the mediating role of self-valuation. Given the previously suggested rationale, I developed two mediating hypotheses, as follows:

H4   The relationship between fantasy sport engagement and flourishing will be mediated by perceived value.

H5   The relationship between social media engagement and flourishing will be mediated by perceived value.

To further examine the relationships between engagement activities, perceived values, and flourishing, three time points were applied to the proposed model. This allows for comparison of the associations of the hypothesized model before, during, and after watching sporting events. Hypothesis 6 to Hypothesis 9 allow for comparison of different digital usage habits as well as determination of the time point most crucial to explaining the theoretical model in this study (See Figure 1.1).

H6 The relationship between fantasy sport engagement, perceived value, and flourishing is different across the three distinguished groups (i.e., before, during, and after watching sporting events).

H7 The relationship between fantasy sport engagement, perceived value, and flourishing is stronger before sporting events.

H8 The relationship between social media engagement, perceived value, and flourishing is different across the three distinguished groups (i.e., before, during, and after watching sporting events).

H9 The relationship between social media engagement, perceived value, and flourishing is stronger during sporting events.

Figure 1.1

Proposed Theoretical Model for Sport Consumer Flourishing
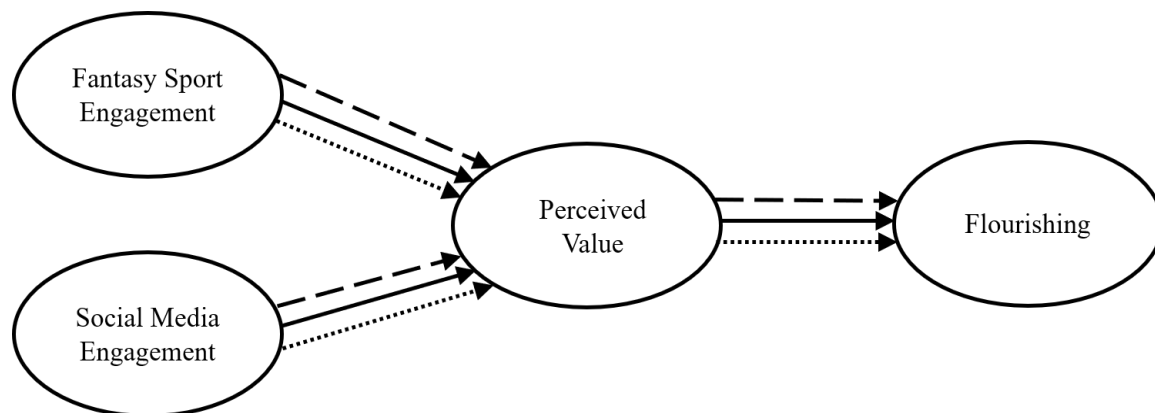
Note*:* Dashed arrow signifies before group, straight arrow signifies during group, and dotted arrow signifies after group.

Delimitation

This section acknowledges the delimitations of this study. First, the target sample in this study focused only on fantasy baseball in generating fans' psychological viewpoints. In this regard, the sampling frame of fantasy baseball participants might render the findings ungeneralizable to general fantasy sports engagement. Even though fantasy baseball participants are the second largest user group (Fantasy Sports & Gaming Association, 2022), fantasy baseball can be delimited from a number of other fantasy sports, such as football, basketball, and hockey. Also, even though the format and payout system of traditional fantasy sports (TFS) and daily fantasy sports (DFS) are disparate (Dwyer, Drayer, & Shapiro, 2019), both types of fantasy sports engagement include drafting athletes as a crucial aspect of team management (Jang et al., 2020); however, this dissertation does not divide fantasy baseball fans into TFS and DFS users. Furthermore, this dissertation does not examine whether different types of fantasy sports engagement produce disparate positive effects on participants' mental health. Although excessive sports betting can cause health problems, sports betting activities, driven by intrinsic motives, such as enjoyment and the desire to complete challenging tasks, can also be associated with enhanced mental health (Lee et al., 2014). In the future, it would be interesting to explore whether DFS involvement more often leads to either positive or negative mental health outcomes (Jang et al., 2020).

The second delimitation is related to the criteria of the grouping process. Three sports consumer groups were segmented on the basis of different time points: one day before, during, and one day after watching a sporting event. This grouping approach can be delimited to reflect the attitudinal features of sports-mediated consumption. This study artificially created a sampling procedure to collect a relatively proportional sample size, such as 200 participants per subgroup.

In a real consumption process, the ratio of sports fans' digital reliance around viewing television would not be exactly divided, since digital consumers are likely to involve multiple usage times around the actual purchase process (Livas et al., 2022). For example, sports consumers can actively engage in their digital activities in both the pre-consumption and mid-consumption stages. Alternatively, a specific stage of the buying process can be less associated with digital engagement in a real-world situation. Thus, setting a particular ratio for subgroups can be problematic in terms of individuals being overrepresented or underrepresented (Furnham, 1986).

Third, one component of the flourishing paradigm, which is measured to explore consumer well-being, might delimit the paradigm of sports consumers' positive psychology. Compton and Hoffman (2020) suggested a new well-being perspective: engagement theory. This approach defines well-being as a measure of how immersed individuals are in the activities of their lives; a state of well-being results from being absorbed in or captivated by what one is doing at the moment (Compton & Hoffman, 2020; Csikszentmihalyi, 1990). These immersive experiences are called flow states (Csikszentmihalyi, 1990). Flow states can involve positive subjective experiences and enhance the perceived quality of experiences in virtual sports services (Kim & Kim, 2020; Paek et al., 2021). The inclusion of flow experiences from sports e-services might help future scholars better understand the positive psychological viewpoints of sports consumers.

Limitation

This research applies an online survey method and invariance testing to explore the effects of fantasy sport and social media involvement on well-being states and on group differences in sport digital services. Although this method engenders new possibilities, it is not without limitations. First, this research adopts a cross-sectional design. Respondents were asked

to complete online survey at one point time and were asked to provide retrospective self-reported data. Though cross-sectional design is useful for identifying the statistical patterns of covariation among a set of variables, cross-sectional data do not allow for causal inferences or explanations unless a randomized experiment were used (Dwyer, 1983). It is possible that sport consumers who heavily use sport media interfaces may be predisposed to play fantasy sport (Chan-Olmsted & Kwak, 2020); this possibility might diminish the importance of fantasy sport and social media engagement as determinants of television viewership and positive psychological states. Investigation of the causal relationships between sport ancillary service activities and sporting event viewership is not a main purpose of this study; however, conducting pre- and post-event surveys or adopting a longitudinal research design might more fully explain sport event viewing and well-being states (Kim et al., 2017).

Second, inclusion of fantasy sport engagement in the proposed model may be controversial due to associations with sport gambling. By using a highlighted framework in gambling literature, Dwyer, Drayer, and Shapiro (2019) argued that DFS involvement more often overlapped with TDS participation than with other forms of gambling. DFS users showed stronger fandom, thought they are more competitive than other opponents, and believed they are in more control of the activity. Although Dwyer, Drayer, and Shapiro (2019) did not directly compare the DFS, TFS, and gambler target groups, they implied, based on non-significant indicators related to inability to stop gambling and interpretive bias, that there are differences between fantasy users and gamblers. Given the findings of that study, fantasy sport engagement can be considered to be a digital interaction or a transaction on a digital platform between the sport consumers and sport teams.

Definition of Terms

Regulatory Engagement Theory: Regulatory Engagement Theory proposes that an individual's
engagement in certain activities is related to their perceived value and desired outcomes
(Higgins, 2006; Higgins & Scholer, 2009; Scholer & Higgins, 2009).

Engagement: Engagement in the RET approach is defined as an individual being
involved and interested in an object or an action (Higgins, 2006).

Value: Value experience is referred to as an experience of an inner power determining
one's feelings toward attraction or repulsion (Higgins et al., 2012).

Well-being: RET explains that the way that an individual is engaged in something they
feel strongly about allows them to *feel alive* (Higgins, 2014).

Pre-consumption: The pre-consumption phase involves looking for information about a
product (Blackwell et al., 2001).

Mid-consumption: Mid-consumption is defined as the possession and usage of goods and
services (Lindquist & Sirgy, 2009).

Post-consumption: Post-consumption is regarded as involving actions following a
purchase (Lindquist & Sirgy, 2009).

Fantasy sport engagement: The definition of fantasy sport participation involves an
ancillary service activity of professional sport consumers, in which the fantasy
sport is connected with real-life sporting events and sport games records (Dwyer
et al., 2016).

Social media engagement: Three dimensions of social media engagement are: fan-to-fan
relationship, team-to-fan relationship, and fan co-creation engagement (Santos et al.,
2019).

Perceived value: The definition of perceived value is the benefits consumers perceive

themselves to acquire from a service provider's offering (Behnam et al., 2020).

Flourishing: consumers' flourishing is that involvement with brands can result in a

psychological attachment with service providers and play a role in revitalizing one's life

sphere (Shu et al., 2020).

Chapter Summary

Sport organizations have been forced to adopt digital transformation to satisfy the needs of sport stakeholders at all levels. Particularly, examination of the role of multitasking in digital transformation before, during, and after sporting events is needed to improve consumer experiences. However, it is difficult to encapsulate the nature of digitalized engagement and there is a general lack of understanding regarding the effects of digital involvement on psychological viewpoints, such as value or well-being. Given these challenges, the aims of this study were (1) to provide in-depth information about the effectiveness of multitask engagement among sport consumers, (2) to explore the value co-creation process and well-being in the digital setting, and (3) to probe how auxiliary engagement in fantasy sport and social media is related to viewing sporting events on television with different time frameworks.

CHAPTER II

LITERATURE REVIEW

The literature review for this study is categorized into three sections. The first section

focuses on the description of the theoretical framework. Through describing RET, the

explanation of each variable and the dynamic of major variables are discussed. To further

understand RET, the decision-making process model (e.g., pre-consumption, mid-consumption,

and post-consumption) is addressed in the context of digital settings. The second section

highlights the features of the key variables and the importance of each variable. In particular,

social media engagement, fantasy sport engagement, perceived value, and flourishing are

comprehensively addressed. The last section proposes research hypotheses to examine key

variables based on RET and the decision-making process framework.

Regulatory Engagement Theory

Features of Regulatory Engagement Theory

RET proposes that an individual's engagement in certain activities is related to their

perceived value and desired outcomes (Higgins, 2006; Higgins & Scholer, 2009; Scholer &

Higgins, 2009). RET explains that the way that an individual is engaged in something they feel

strongly about allows them to *feel alive*. Particularly, getting routinely engaged in life is

associated with the level of well-being. Moreover, *feeling right* during a prior task can increase a

positive reaction, in turn connecting with one's sense of well-being (Avnet & Higgins, 2006;

Higgins, 2014). By applying RET, the value-creation process can be described in the setting of digitalized engagement for sport consumers.

Engagement in the RET approach is defined as an individual's being involved and interested in an object or an action (Higgins, 2006). The strong intensity of engagement is referred to as being focused on something (Higgins, 2006). The nature of engagement is not equated with a motivation to act or an intention to pursue a goal (Higgins & Scholer, 2009). As explicitly described in RET, engagement is considered as an intensifier in people' lives (Higgins, 2014; Higgins & Scholer, 2009). The concept of engagement in RET can seemingly overlap with the notion of flow, which occurs when one encounters a completely immersed state in their actions (Csikszentmihalyi & Csikszentmihalyi, 1988). In RET, the term "engagement" is explicitly distinguished from the flow state. A flow state associates with optimal mental exertion and effortless involvement in an action that produces one's enjoyment, while engagement itself is not associated with positive mental exertion because of the features of dual directions. According to RET, engagement can reinforce either an attractive response or a repulsive response (Higgins, 2006). The dual and uncertain features of engagement in RET give rise to the need for more attention by scholars, to explain the role of engagement in the value-creation process.

In RET, value experience is referred to as an experience of an inner power determining one's feelings toward attraction or repulsion (Higgins et al., 2012). The concept of value in RET is conceptualized as a motivational and inner force of attraction with positive value or one of repulsion with negative value from the sources of engagement (Hepi et al., 2017; Higgins & Scholer, 2009). Based on RET, value experiences are related to one interaction with two key forces. One force is influenced by one's value object and the other is derived by one's

engagement with the one's value target. The mechanism signifies that one's value is initiated by goal-oriented stimuli as well as one's actions from a value target (Sehnert, 2011). Therefore, the value-creation process is well suited to sport-consumption areas. Sport services provide various platforms and resources that an individual's networks assimilate to the value co-creation process with a multitude of stimuli or objects such as having interactivity with sporting events, athletes, brands, sponsors, or other consumers (Grohs et al., 2020). Value co-creation can offer the subjective pleasure properties of the desired state, such as the one's well-being (Finsterwalder et al., 2017; Higgins, 2006).

A majority of studies on value experiences has highlighted the functions of hedonic experiences, such as the attitudinal distinctions between good and bad or between liking and disliking (Eagly & Chaiken, 1993). As such, Higgins (2006) further emphasized that consumers having engagement can perceive heightened forces of attractive response that strengthen success in one's life (Higgins, 2006). The notion of well-being is suggested as a successful object in the RET context (Higgins, 2014). To put it simply, stronger engagement in pursuit of a goal allows people to "feel alive" and promotes a state of well-being (Higgins, 2014). During the process of engagement in goal-pursuit activities, the value experience is also reinforced. The overall process makes peoples' positive perception even more positive, while it renders negative perceptions even more negative (Higgins & Scholer, 2009). In a similar vein, being truly engaged and in control of engagement improves value intensity, as well as affecting one's state of well-being beyond value experiences (Higgins, 2014). A recent study indicated that the notion of well-being encompasses all the ways in which individuals act in their life domains, including social, health, psychological, and subjective dimensions (Diener et al., 2018). Thus, the concept of flourishing is selected to examine sport consumers' well-being (Keyes, 2002).

Regulatory Engagement Theory
in Marketing Literature

Recent empirical studies have attempted to explain engaged consumers based on the RET approach (Gopalakrishna et al., 2019; Niedermeier et al., 2019; Solem & Pedersen, 2016). Visitors' perceptions concerning attendance at trade shows are associated with personal goals and values as well as their positive outcomes, such as intention to purchase, satisfaction with the trade show, and intention to revisit (Gopalakrishna et al., 2019). Visitors engaging in more diverse activities in trade shows contributed to positive behavioral outcomes for show organizers and exhibitors. Gopalakrishna et al. (2019) contributed to expanding the roles of consumer engagement, involving on-spot events and dialogue about the event on social media. Solem and Pedersen (2016) investigated different kinds of consumer engagement on Facebook and found that engagement is related to brand-value experiences depending on motivational stimuli. Solem and Pedersen expanded the conceptualization of consumer engagement and the drivers of engagement based on the personal fit of engaged activities in order to induce brand-valuation experience. Niedermeier et al. (2019) explored the impact of active and passive engagement on Facebook on users' happiness through having satisfaction, delight, and perceived harmony in their lives. Although previous RET studies have been empirically examined in terms of determinants of value and positive quality-of-life spheres, overall assessment of a theoretical framework with three factors (engagement, value, and well-being) is missing. Therefore, through an in-depth discussion of the RET framework, the evidence from routine consumption engagement should be thoroughly articulated.

Regulatory Engagement Theory
in Sport Literature

Although the RET approach is recognized as an important theory for understanding the process of determining well-being with consumer engagement (Finsterwalder et al., 2017), the number of studies concerning the RET approach in sport literature is limited. Due to the lack of understanding of the RET framework in sports, further research on whether sport engagement leads to well-being is required for a better understanding of sport consumers' psychology process and to extend theoretical literature in sport management. Recently, scholars in sports management have explored the link between well-being and sports consumption activities (Inoue et al., 2020; Kim & James, 2019; Kim et al., 2017). Given the need for sport organizations to enhance consumers' well-being dynamics, the RET paradigm can provide a better understanding of the role that sport services play and whether sport organizations contribute positive experiences to the lives of sport consumers through the delivery of such services. Aligned with recent research trends, it is important to explore how this theory can be applied in relation to digitalized engagement as well as how the types of digitalized engagement can be associated with value experiences and the flourishing state, which are key variables within RET. By doing so, the experiential nature of sport goods and services using online itineraries may be better described within the co-products of meaningful consumption activities.

Pre-Consumption, Consumption, and Post-Consumption

Consumer behavior is defined as a set of actions and perceptions of a person that encompasses preparation for the purchase decision, consideration about the selection of a product, and consumption (Hansen, 1972). Shilbury et al. (2014) proposed that sport consumption decision-making can simply be categorized into three phases as inputs (e.g., social-cultural effects), processes (e.g., information search and service experiences), and outputs (e.g.,

post-purchase assessment). In this regard, consumer behavior is associated with three stages of actions: pre-consumption, consumption, and post-consumption (Bartosik-Purgat, 2018). This paradigm is important for facilitating consumers' immersed reactions in the context of experiential marketing (Arnould et al., 2004). The idea of these three stages has been predominately illustrated in academic literature: "pre-consumption" as recognition of needs and the information-search stage, "mid-consumption" as the actual purchase period, and "post-consumption" as the assessment stage (Choi et al., 2007; Engel et al., 1990; Kotler et al., 1999). However, a limited number of studies in academic literature have applied this theoretical framework to describe each stage of the online decision-making process.

The virtual setting has a tremendous effect on the ways in which consumers search, consume, and remember purchase experiences (Gretzel et al., 2006). The success of online settings can encourage hybrid consumers who use several platforms of media simultaneously. Consumers are extensively associated with pre-, mid-, and post-consumption phases, which can spread through several platforms of media (Gretzel et al., 2006). Multiple types of technologies or media are used in the decision-making process depending on what kind of information consumers seek (Choi et al., 2007). The reasons for using media can be based on the context of life and the various needs of a consumer at a point in time (Fotis et al., 2012). Assessing the three stages of the decision-making process throughout existing technologies can be beneficial to identifying specific consumer needs and to develop optimal designs or functions in the setting of digital marketing strategies. This theoretical framework aims to describe the process of consumption and to associate it with various consumer needs. To further gain an in-depth understanding of multiple consumption phases, the following sections present the features of each stage in the decision-making process (see Figure 2.1).

Figure 2.1

Communication and Information Needs
in the Three Stages of Consumption

Pre-Consumption	Mid-Consumption	Post-Consumption
Planning	Connection	Sharing
Expectation	Navigation	Documentation
Formation	Decision-making	External memory
Transactions	On-site transactions	Re-experiencing
Anticipation		Attachment
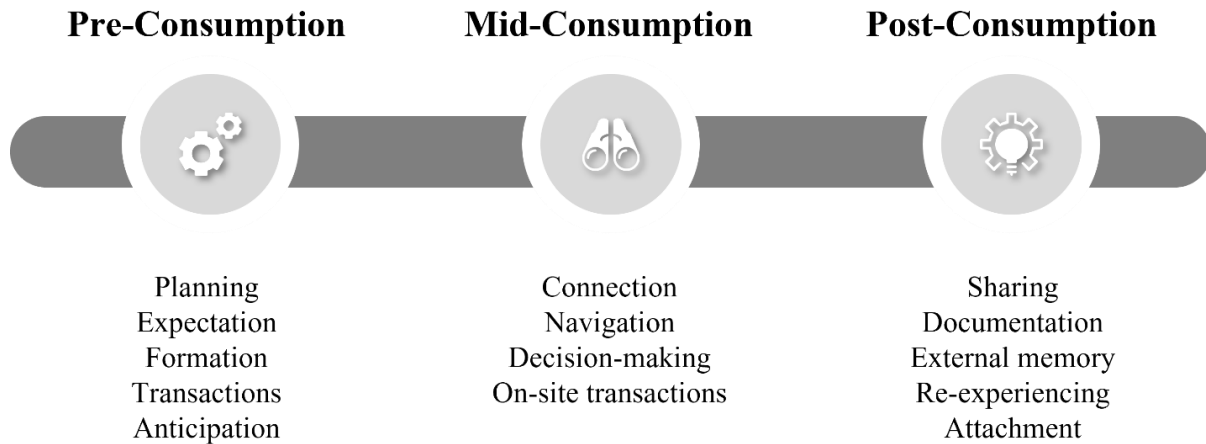
Pre-Consumption (Before Stage)

The pre-consumption phase involves looking for information about a product (Blackwell et al., 2001). In the pre-purchase phase, consumers engage in information search, which is purposeful and deliberate (Lindquist & Sirgy, 2009). Before making a purchase, an individual has a clear and conscious goal of acquiring information that can help them clarify various consumers' needs and desires concerning purchasing a product (Lindquist & Sirgy, 2009). Karahanna et al. (1999) discovered that the pre-consumption stage is associated with perceived usefulness (the degree to which using the technology is better than adopting the practice), ease-of-use (the degree to which using the technology is free of effort), demonstrability (the degree to which using the technology is observable and interactive with others), and visibility (the degree to which using the technology is visible in the service provider). The pre-consumption stage is based on imagery processing cues that help consumers to better visualize future purchase attitudes (Goossens, 2000).

In academic literature, the pre-consumption phase has been explored in a different context. In the food industry literature, the perceived flavor indicates a convergence of multiple sensory inputs, which can be what consumers generally think regarding the flavor of food products; this approach can be regarded as involving the pre-consumption stage (Krishna & Elder, 2021). Consumers in the movie business sector share their excitement and expectations of upcoming movies with their communities via online or face-to-face interactions in the days before the release of a new movie (Oh et al., 2017). Travelers encounter the pre-consumption stage through obtaining various trip ideas to confirm the selection made, to compare alternatives for planning trips, and to communicate with the service providers of tourism products (Gretzel et al., 2006). In the sport context, pre-game anticipation about team performance, identification of a team, and history of the opponent can contribute to the decision to watch the sporting event (Madrigal, 1995).

Before determining a purchase, sport consumers involve four primary pre-stages such as problem recognition, information search, information source, and evaluation of alternatives (Shilbury et al., 2014). The *problem recognition phase* is evident in the lack of existing services that induce the desire to find a new type of entertainment, such as attending or watching sporting events. The *information search stage* consists of two types: recalling knowledge based on internal search and adopting additional knowledge from external search resources. Internal search processes relate to habitual or routine attitudes, while external search processes relate to a desire to find information not included in stored memory. The *information source stage* is regarded as acquiring information via word-of-mouth from family, friends, or colleagues. Further, updates or reviews in several platforms of media are also regarded as crucial information sources. Lastly, the evaluation of alternatives is influenced by the perception of

multiple cues (e.g., a product/service, benefits sought, attitudes of a service provider, and intention to purchase). Taken together, the pre-consumption stage is considered as engagement to acquire the requisite information for planning, to narrow down the choices of a product, to assess alternatives, and to communicate with service providers.

Mid-Consumption (During Stage)

Mid-consumption is defined as the possession and usage of goods and services (Lindquist & Sirgy, 2009). During consumption, the physical context, social context, and marketer control are related to consumption actions (Lindquist & Sirgy, 2009). The physical context is defined as the time and place of consumption. The concept of social context refers to different behaviors based on different types of people. In the marketer context, the marketer watches and affects the ways in which the situation plays out according to the different categorization of consumers (Lindquist & Sirgy, 2009). Understanding consumption appraisals during service encounters is vital since the responses throughout consumption actions positively affect consumers' perceived quality of service and the potential capability to cope with undesirable events (Dalakas, 2006). During actual consumption actions, consumers are more associated with being socialized with others and seeking detailed information about a product or service at the moment in time (Gretzel et al., 2006).

The mid-consumption stage in sport literature has been emphasized with the term "on-field success." For sport marketers and scholars, assessment concerning the performance of sport organizations is particularly important in the setting of real-time marketing (Bolle, 2016; Chadwick et al., 2016; Shilbury et al., 2014). To achieve on-field success in the sport field, on-field or off-field elements have been suggested, such as attendance and participation in sport (seasonal events, competitions, and registered sport participation; Funk, Alexandris, &

McDonald, 2016; Funk, Lock, Karg, & Pritchard, 2016), club membership (number of season ticket holders and categories of membership; Shilbury et al., 2014), sponsorship (brand exposure and advertisement; Shilbury et al., 2014), merchandising (awareness of sport-team images and endorsement of sport licensed product lines; Paek et al., 2021), and sport media (watching TV and interactions via various touch points of multiplatform media; Funk, Alexandris, & McDonald, 2016). Recently, there has been a fundamental shift in how sport consumers choose to share their experiences on sport media during interactions with their favorite teams or others.

Digitalized consumptions throughout sport media have continuously transformed all aspects of sport marketing, since digital media delivers cost-effective tools and precise e-transactions in the moments that matter to sport consumers (Bolle, 2016). Yim et al. (2021) found that sport consumers actively exchange different messages with friends or users through sport media while watching sporting events. With virtual types of engagement in the sport media industry, scholars need to further explore the digitalization pattern before, during, and after a sporting event (Bolle, 2016; Chan-Olmsted & Kwak, 2020). Therefore, real-time techniques are becoming more demanding with traditional media formats among sport entities (Bolle, 2016). Aligned with this trend, the potential avenues in the emerging sports media industry should be further examined, such as livestreaming (Kim & Kim, 2020), smartphone apps (Kim et al., 2017), social media (Bolle, 2016), and fantasy sport (Chan-Olmsted & Kwak, 2020). Based on the active level of involvement among sport consumers reported by Yim et al., social media and fantasy sport usage during sporting events will be focused on in this study.

Post-Consumption (After Stage)

Consumption activities elicit cognitive and emotional appraisals in the post-consumption stage (Mano & Oliver, 1993). Post-consumption is regarded as involving actions following a purchase (Bartosik-Purgat, 2018). The post-purchase attitude pertains to instrumentality beliefs and perceived usefulness (Karahanna et al., 1999). In the post-consumption stage, a consumer who already purchased a product continues to obtain information about the choice and assess other selections in the particular marketplace (Lindquist & Sirgy, 2009). Technologies expand the ways in which consumers share, document, and relive consumption experiences throughout storytelling, as well as enhance closer relationships with service providers (Gretzel et al., 2006). Shared stories by consumers play an important role as an enhancer to translate or isolate the pieces of sensory or cognitive knowledge, consequently rendering the consumption actions more memorable and meaningful (Gretzel et al., 2006). For consumers, it is essential to reflect their experiences on digital media and to develop an attitude of emotional commitment (Venkatesh et al., 2012). In the tourism literature, a theoretical model for pre-, mid-, and post-trip is presented in the context of social media (see Table 2.1).

Table 2.1

Three Stages of the Travel Planning
Process in Social Media Use

Contents
Before Holidays
When beginning to search for ideas on where to go for holidays.
When trying to narrow down my choices of destinations.
After I finally chose my destinations, I was looking to confirm that I made a good destination choice.
When I had already chosen my destination, but was seeking ideas and information on accommodation options.
When I had already chosen my destination, but was seeking ideas and information on excursions and other leisure activities.
During Holidays
When trying to find out information about specific attractions and leisure activities.
When I wanted to provide comments and reviews about my holiday experience.
To stay connected with friends.
I visited/ used social media websites, but were not directly related to information I was looking for my holidays.
After Holidays
I am a regular visitor of travel related social media to have ideas as an inspiration for my next holidays.
To provide evaluation and reviews about my accommodation and/or my holiday destination.
To share my experiences and photos with my friends and/or other travelers.

Post-consumption activities have been continuously discussed in sport literature (Chan-Olmsted & Kwak, 2020; Shilbury et al., 2014). During the post-consumption state, sport consumers go through three major outcomes: (1) a sport consumer is totally satisfied with the sport consumption activity and they do not need any further information, (2) a sport consumer is not totally satisfied with the sport consumption activity and may reevaluate the alternatives from the initial information search or other search resources, (3) a sport consumer is dissatisfied with the sport experience and may seek a solution to the problem by comparing other possible options for future use. In the technology-driven context, sport consumers engage in post-consumption

activities through fantasy sport, online ticket purchase, fan community involvement, and checking posts on sport websites or social media (Yim et al., 2021).

Overall, despite increasing media consumption in the sport industry, the sport media journey before, during, and after a sporting event indicates a premature stage. With regard to the technology-driven approach, the theoretical framework to develop the virtual decision-making process in sport literature is non-existent (Chan-Olmsted & Kwak, 2020). To enrich the understanding of digitalized consumption, the usage levels need to be divided in a time framework and the various types of media formats should be compared (Chan-Olmsted & Kwak, 2020). Therefore, in this dissertation study, sport consumers were examined to ascertain whether their social media and fantasy sport engagement is associated with viewing sporting events on television before, during, and after a sporting event and how the different types of sport media engagement relate to their perceived value and positive psychology. To do this, RET and the decision-making process (pre-consumption, mid-consumption, and post-consumption) was implemented.

Fantasy Sport Engagement

Fantasy Sport Participation and Engagement

The definition of fantasy sport participation involves an ancillary service activity of professional sport consumers, in which the fantasy sport is connected with real-life sporting events and sport games records (Dwyer et al., 2016). This form of fantasy sport consumption is generally performed online and encompasses psychological, social, and market factors that can encourage participants playing during a regular season (Roy & Goss, 2007). Fantasy sport is played with the selection and maintenance of fictional teams drawn from a selection of players throughout a sport league (Karg & McDonald, 2011). Team performance is determined by the

performance scores of the selected players in participants' own team on the basis of actual game statistics (Karg & McDonald, 2011). Karg and McDonald (2011) stated that fantasy sport enables users to choose a team from all professional rosters and to own their fictional teams and then compete with other fictional teams. Fantasy sport participants play roles as general managers or owners of their sport teams (Dwyer et al., 2016).

The types of fantasy sport games can generally be segmented into two types: traditional fantasy football (TFS) and daily fantasy sport (DFS). In the TFS format, participants compete based on weekly games such as a head-to-head competition as opposed to other individuals in the participants' own league (Dwyer et al., 2016). Most fantasy leagues consist of participants who know each other, such as friends, colleagues, or family members (Dwyer & Kim, 2011). The statistics of players in a team are accumulated throughout a season and then the best teams in the sport league play for a post-season playoff based on the total points of fantasy sport records. Top performers are awarded prizes at the end of the sport season (Dwyer et al., 2016). According to prior studies about TFS, participants are motivated through entertainment, escape, and social activities (Dwyer & Kim, 2011). They are highly engaged and show loyalty to their fantasy sport activities (Dwyer & Kim, 2011).

Daily fantasy sport includes a different system. Statistics and fantasy points are compiled in the same manner; however, participants in DFS compete over a one-day or one-weekend game rather than seasonal games in a particular sport league (Dwyer et al., 2016). The DFS system involves fee-based participation and winners get a portion of a pre-determined pot. Participants in DFS compete in large pools where top performers win a percentage of the prize (Dwyer et al., 2016). The player selection of a participant is valid for one day. With regard to different types of fantasy-sport consumption, Weiner and Dwyer (2017) focused on the differences in the

motivations and behaviors among fantasy sport participants who play only DFS, only TFS, and play both types. The motivations behind gambling, group affiliation, and competition were disparate across the three groups, while escape and entertainment motivations indicated no difference. Regarding media consumption, DFS and hybrid groups showed a more intensified consumption of sport media (e.g., television, social media, and online activities) compared with the TFS group. Therefore, exploring several platforms of sport media consumption should be considered in the context of fantasy sport.

Fantasy Sport and Television Consumption

Scholars have confirmed strong positive associations between fantasy sport engagement and mediated consumption attitudes, such as television viewership or online usage (Drayer et al., 2010). Fantasy sport participants spent more time watching sporting events as a result of their fantasy sport engagement (Drayer et al., 2010). Mediated consumption for fantasy sport participants is considered as collecting information concerning players or statistics (Drayer et al., 2010). In media-related consumption, internet and digital devices offer expanded access to such information (Drayer et al., 2010). Fantasy sport participants have an increased level of media consumption to watch their favorite fantasy team, fantasy opponents, and even neutral match ups (Weiner & Dwyer, 2017). In a similar vein, novice fantasy sport participants were drawn to watching television to acquire updates on NFL games and programming before playing fantasy games (Dwyer & LeCrom, 2013). On the contrary, Chan-Olmsted and Kwak (2020) discovered that fantasy sport participation reinforces a degree of mediated consumption in general; however, findings show that fantasy sport engagement does not particularly enhance the time spent watching television for sporting events. Due to previous contradictive outcomes in the context of

fantasy sport, it is necessary to explore viewing sports on television and multiple types of media consumption in terms of examining rapidly changing digitalized consumption patterns.

**Fantasy Sports and Social
Media Use**

Although use of television among fantasy sport consumers has been predominantly examined among multiplatform sport media, social media is tremendously drawing academic interests at present (Chan-Olmsted & Kwak, 2020). Based on commonly used social media, evidence addressing the importance of social interactions in fantasy sport is also an indicator as to why social media should be paid more attention (Chan-Olmsted & Kwak, 2020; Chan-Olmsted & Xiao, 2019; Larkin, 2015; Larkin et al., 2020; Ruihley et al., 2014). Larkin (2015) suggested that fantasy participants' intention to use social media accounts and websites explains the increased exposure to statistics as well as projections into players. While fantasy sport users are engaged in social media or sites with social interactions, they can promptly track more live updates, compile well-versed information, and adjust the statistics to their own teams (Chan-Olmsted & Xiao, 2019; Larkin et al., 2020). Since fantasy sport engagement is regarded as a great stimulus for media use surrounding participants' own players and teams (Chan-Olmsted & Xiao, 2019; Weiner & Dwyer, 2017), the process of social media use in fantasy sport should be further investigated. Although digital engagement such as fantasy sport participation and social media induces intensified fandom, the directions of sport consumption on social media, fantasy sport, and television are unclear at this point.

Social Media Engagement

Social media has been considered by scholars and practitioners as a major channel for consumers' involvement and interaction with service providers (Dolan et al., 2016). Given the unique possibilities it provides for consumer empowerment, social media allows practitioners to

explore consumer needs related to a variety of functions performed on social media (e.g.,
uploading posts, commenting, and sharing posts; Vale & Fernandes, 2018). Tsai and Men (2017)
conceptualized the typology of social media engagement behavior on the basis of Muntinga et
al.'s (2011) study. Social media engagement behavior is defined as a behavioral construct of
passive content consumption (e.g., watching video clip/photos or reading the comments about
products) and active consumption, which consists of a two-way interaction and online
recommendations, such as replying to comments, responding to other posts, posting reviews of
products, and uploading one's own videos and photos (Tsai & Men, 2017). The constructs of
social media engagement based on the level of social media use (e.g., active or passive
paradigm) have been adopted in prior management studies.

Social Media Engagement in Sport

Based on previous studies, Muntinga et al. (2011) categorized consumers' online brand-
related involvement into three components: (1) consuming activities, (2) contributing activities,
and (3) creating activities. The concept of consumption activities with a minimum level of
engagement includes activities related to non-active participation such as viewing posts, clicking
on content, or reading others' reviews and posts (Dolan et al., 2016). Contributing activities are
regarded as constituting the middle level of engagement, associated with two-way conversations,
such as liking or sharing posts, commenting, and turning customers into brand-related endorsers
(Dolan et al., 2016). This is associated with previous participation in media, performing brand-
related activities or other sources (Schivinski et al., 2016). Lastly, creating activities are
associated with the highest level of engagement and constitute actively posting, producing, and
co-developing content by engaging in activities such as posting comments, uploading pictures,
and applying hashtags (Dolan et al., 2016). The three multi-constructs of social media

engagement are regarded as well-encapsulated components, addressing engaged activities on Facebook in the setting of sport teams (Vale & Fernandes, 2018).

Although the scale of social media engagement developed by Vale and Fernandes (2018) is well-conceptualized through the engaged activities on Facebook, a debate exists regarding the characteristics of engagement for sport consumers. First, Vale and Fernandes' social media engagement conceptualization is primarily appropriate for Facebook interfaces. According to Gantz and Lewis (2014), multiplatform and various social media apps among contemporary consumers are the key points. In this regard, reflection on various kinds of social media such as Twitter or YouTube in the sport media activities is required (Chan-Olmsted & Kwak, 2020). Secondly, Vale and Fernandes' social media engagement construct primarily encompasses personal activities rather than covering interactions with sport teams or others. Chan-Olmsted and Kwak (2020) described that social media with an interactive and networked interface is a great tool for reinforcing sport experiences. Taken together, a specific construct assessing multiple social media websites and interactive features on social media engagement should be adjusted in sport management literature.

To investigate social media engagement with multiple social media websites and interaction exchanges, the measurement of consumer engagement developed by Santos et al. (2019) was chosen in this present study. Three dimensions of social media engagement are: fan-to-fan relationship, team-to-fan relationship, and fan co-creation engagement. *Fan-to fan relationship* is defined as interactivity among consumers that strengthens an individual's welfare by offering aid without any reward in return (Thompson et al., 2016). *Team-to-fan relationship* refers to the interaction and relationship between sports teams and sports fans as well as inducing positive behaviors toward sports organizations (Santos et al., 2019). *Fan co-creation* is the

benefit gained through the integration of resources and interactions with other sports fans (Uhrich, 2014). Overall, Santos et al. (2019) contributed to better encapsulating social media engagement in the context of sports fan engagement. In the present study, social media engagement was measured by multidimensional components using the theory of consumer engagement developed by Santos et al. (2019).

<div align="center">**Perceived Value**</div>

The definition of perceived value is the benefits consumers perceive themselves to acquire from a service provider's offering (Sigala, 2006; Yen, 2013). Perceived value is an individual's completed evaluation of a product or service, formed by their perceptions of what is received (Zeithaml, 1988). A consumer would compare the cost and the benefits to assess the perceived value (Kwon et al., 2007). Consumers' perceived value is what they can get (e.g., benefits, perceived quality, worth, and utility) from the use of a service or a product compared with what they pay (Kwon et al., 2007). To assess consumer value in sports, it is crucial to understand that value is based on the *specific context* (Woratschek et al., 2014). Chandler and Vargo (2011, p. 40) defined *context* as a "set of unique actors with unique reciprocal links among them." Thus, it is important to understand perceived value depending on different sport consumption contexts.

Perceived Value in Sport

In the context of sports attendance, perceived value is regarded as the discrepancy between what a customer gets from a product or service versus its costs (Byon et al., 2013). Perceived value plays a mediating role between service quality (e.g., core service and peripheral service quality) and sporting events consumption behaviors (Byon, et al., 2013). In Byon et al.'s (2013) study, the items of perceived value were measured using a 5-point scale and were

assessed with the following statements: "the game experience was fairly priced," "the game experience was reasonably priced," and "the game experience was economical" (Byon et al., 2013). In their study, perceived value was assessed by a unidimensional construct, as recommended by previous scholars (Kwon et al., 2007). In sports attendance, the conceptualization of perceived value is mainly associated with the disparity between sports attendance experiences versus sports consumers' ticket-purchasing cost.

To investigate the perceived value of licensed sports merchandise, utilitarian perspectives and symbolic perspectives are needed (Kwon & Armstrong, 2006; Sheth et al., 1991). Utilitarian perspectives concentrate on the functional value formed by the consumers (Sheth et al., 1991). The symbolic perspective relates to what the product indicates to the customer, as well as what the consumer expects the product to appear to others (Sheth et al., 1991). Typically, sports consumers tend to buy team licensed products for their symbolic value rather than for utilitarian values (Kwon & Armstrong, 2006) because the symbolic properties of licensed sports products can affect a sports customer with regard to associating a higher value with a product in relation to a sports team than an analogous product without symbolic value (Kwon et al., 2007). The items of perceived value for sports merchandise are: "what I get from the apparel is worth the cost," "all things considered (price, time, and effort), the apparel is a good buy," and "compared with other apparels, the item that I see in the slide provides good value for money" (Kwon et al., 2007). Taken together, the perceived value in a sport-licensed merchandise setting, the notion of perceived value is focused on purchase activities for sport merchandise products versus sport consumers' payment or effort.

Concerning value in the sports context, various actors operate alongside each other, co-exist, and then co-create perceived value; the actors consist of sports-related brands, sports stars,

and sports media, sponsors, or fan communities (Kolyperas et al., 2019). Aligning with the trends in the sports setting, perceived value should take varied shapes and forms, since value co-creation is related to facilitating multiple exchange channels for sports fans, such as multiplatform media (Kolyperas et al., 2019). Therefore, in order to understand the perceived value associated with the interaction of fans, it is necessary to recognize certain perceived values based on different types of sports consumption. In existing sports literature, although the constructs of perceived value have been developed for sports attendance and licensed sports products, very little research has been conducted on the specific constructs of perceived value as reflected by the attributes of media consumption surrounding sports.

To fill this gap in sports literature, the use of perceived value concerning digitalized engagement is required to better understand the sports technology consumption process. Behnam et al. (2020) attempted to investigate perceived value in the setting of consumer knowledge management actions (i.e., exploring consumers' preferences and desires in sport organizations). To identify consumers' involvement and their perceived value, a four-item scale suggested by Zeithaml (1988) was selected to explore consumers' own value as compared with the programs and services of sport organizations (Behnam et al., 2020). Behnam et al. stated that sport organizations obtain information from consumers, understand their needs, and utilize the information to consumers' benefit, whereby products and services can take greater personal meaning and perceived value can be strengthened. In terms of identifying psychological involvement and the information-searching process among sport consumers, the constructs of perceived value used by Behnam et al. (2020) and Zeithaml (1988) can better assess sport consumers' needs and values in the sport digitalized media environment.

Flourishing

Origin of Flourishing

The concept of flourishing is equated to the Aristotelian eudaimonia paradigm, which refers to human flourishing and is distinguished from the hedonic perspective of happiness (Kingdon et al., 2016). Particularly, all of Aristotle's Nicomachean Ethics were focused on the good life, something that is directly associated with the concept of flourishing (Kingdon et al., 2016). Aristotle's emphasis was on seeking contemplative questions regarding everyday life and thus considering the relevance of something connected with daily life, not confined abstruse language or a formal system in a society (Kristjánsson, 2014). The approach of individuals' everyday life is appealing in terms of the elaboration of human flourishing and a universal notion (Kristjánsson, 2014). Aristotle's work is related to having reasons to enjoy a resurgence in daily lives and living well (Kingdon et al., 2016).

With perspectives of positive psychology, Seligman (2011) defined human flourishing as well-being (Kingdon et al., 2016). For over 20 years, he has developed the positive psychology field by exploring the topic of well-being. Nearly two decades ago, Seligman and Csikszentmihalyi (2000) highlighted the development of a new social science called positive psychology with respect to human flourishing, happiness, and optimal human functioning (Noddings, 2012). Particularly, regarding human flourishing, Seligman stated the following:

> I used to think that the topic of positive psychology was happiness. I now think that the topic of positive psychology is well-being, that the gold standard for measuring well-being is flourishing, and that the goal of positive psychology is to increase flourishing. (p. 13)

The notion of flourishing has been expanded and developed in contemporary societies considering the term well-being.

Flourishing and Well-being Theories

The concepts of happiness, well-being, and quality of life are intercorrelated with various emotional and behavioral components (Compton & Hoffman, 2020). Even the definitions of positive psychology imply multiple meanings (Compton & Hoffman, 2020). Flourishing must both be reflected upon *eudaimonic* theories with objective viewpoints and be considered in *hedonic* theories with subjective perspectives (Kingdon et al., 2016). As such, the most frequently used categories in explaining differences in flourishing and well-being divide the ways in which individuals pursue their emotions and meanings in their lives in accordance with the two main perspectives: eudaimonic and hedonic theories (Compton & Hoffman, 2020; Ryan & Deci, 2001). Compton and Hoffman (2020) suggested the two theories (e.g., *hedonic well-being* [HWB] and *eudaimonic well-being* [EWB]; Ryan & Deci, 2001).

One of the oldest perspectives for assessing a good life is hedonic theories (Compton & Hoffman, 2020). The approach of hedonism in well-being is that well-being involves individual sensual pleasure or positive feelings (Kingdon et al., 2016). Although the single-perceived pursuit of positive feelings is one of the oldest concepts of a good life, this hedonic theory has been considered as self-defeating as well as an unworkable notion in most societies (Compton & Hoffman, 2020). Self-sensual pleasures are short-lived, leading to a constant struggle to repeat the sensual pleasures, spending time thinking only about the present, and producing no personal growth (Baumeister et al., 2013; Compton & Hoffman, 2020). Thus, a socially responsible form of hedonic perspectives has been focused on, explaining that sensual feelings require positive social relationships with those who are close, such as family and the society at large, being

engaged in civic involvement (Compton & Hoffman, 2020). Based on hedonic viewpoints, a good life is related to inducing a high level of happiness, contentment, or satisfaction for oneself and other people (Compton & Hoffman, 2020). The approach of HWB focuses on an individual's own evaluation of how well their life is going and whether they are experiencing what they want in life, including more pleasure and less pain. Tov (2018) stated that HWB is equated with the notion of *subjective well-being* (SWB).

Eudaimonic theories are concerned with fulfilling an individual's potential and developing an individual's skills or talents (Ryan & Deci, 2001). This eudaimonic approach is also related to finding an individual's true nature as well as exploring an individual's true self (Ryan & Deci, 2001). Deci and Ryan (2008) argued that EWB involves the overall processes that include one's living well, especially, actively seeking to achieve goals to enhance one's real self. Aligned with this EWB approach, human beings will live well if they have a sense of inner peace, a sincere appreciation of their lives, a sense of connection with others, and a sense that life "feels right," while a hedonic approach to life follows the "feel good" approach (Compton & Hoffman, 2020). As such, EWB is concerned with attaining a psychological nature because it fulfills certain needs that are important for one's psychological growth (Ryan & Deci, 2001). *Psychological well-being* (PWB) has been equated with EWB (Diener et al., 2018; Tov, 2018). Taken together, EWB is related to activities that people perceive and express as valuable (McGregor & Little, 1998).

Based on the different theories of well-being, scholars have explored which perspectives are reflected on flourishing. Schotanus-Dijkstra et al. (2016) attempted to compare flourishing with either hedonic well-being or eudaimonic well-being. The findings indicate that flourishing has high levels of both EWB and HWB (Huppert & So, 2013; Keyes, 2002). Schotanus-Dijkstra

et al. stated, "we found considerable overlap when we compared the characteristics of flourishers with the characteristics of either high hedonic or high eudaimonic well-being" (p. 1367). Similarly, flourishing characterizes a mixture of HWB and EWB (Tov, 2018). An examination including both hedonic and eudaimonic well-being offers more insight into multidimensional well-being (Henderson et al., 2013; Huta & Ryan, 2010; Schotanus-Dijkstra et al., 2016; Seligman, 2011). Taken together, flourishing is underpinned by better explaining being healthy, having emotional property, and socio-psychological property (Diener et al., 2010; Kingdon et al., 2016).

Flourishing in Marketing

Both scholars and practitioners in the business sector have increasingly been interested in consumers' well-being as desirable outcomes (Falter & Hadwich, 2020). Consumers' well-being is referred to as transformative service, which helps consumers in "creating uplifting changes and improvements in the well-being of consumer entities" (Anderson & Agarwal, 2011, p. 3). Despite concerns about consumers' well-being, existing studies indicate problematic issues with the measurement of consumer well-being and, particularly, related to service industries in the service industries (Falter & Hadwich, 2020). A majority of studies include a single viewpoint of well-being, such as life satisfaction, subjective well-being, or happiness, rather than perceived overall well-being (Friman et al., 2017; Sirgy et al., 2006; Zhong & Mitchell, 2012). Taken together, a limited number of studies have focused on consumers' flourishing state and the assessment of consumer well-being driven by service delivery in various business fields.

Recently, Sirgy (2019) highlighted a new application of well-being for consumers, establishing emerging concepts of well-being to further describe consumer psychological benefits. Using eudaimonic perspectives and the social components of well-being can provide an

in-depth description and a conceptualization of consumers' positive psychology (Sirgy, 2019, 2021; Sirgy et al., 2020). The extant constructs of consumer positive psychology have mainly focused on materialism concerning products and services (Sirgy, 2021). Such emphasis on products and services with materialistic aspects causes adverse impacts on consumers' well-being (Malhotra, 2006; Sirgy et al., 2020). Thus, it is important to include reciprocal concepts between consumers and service providers beyond consumption, and underscore the significance of consumer well-being. Limited research has focused on the management of human flourishing and well-being (Vada et al., 2020). Thus, a wide construct of flourishing for consumers will offer a theoretical foundation to better assess consumers' perceived benefit or meaning from consumption and guide further marketing strategies.

Reflecting upon various well-being perspectives, people can accomplish an optimum state of positive emotions and function, which is called flourishing (Keyes, 2002; Seligman, 2011). Keyes (2002) described flourishing as symptoms of positive feelings and positive functioning in one's life. The concept of flourishing has been addressed in the literature, since measuring well-being solely with one perspective is bound to fail (Delle Fave et al., 2016; Huppert & So, 2013; Huta & Ryan, 2010). Scholars have realized the need to measure well-being and flourishing through multidimensional perspectives (Delle Fave et al., 2016; Diener et al., 2010; Scorsolini-Comin et al., 2013; Seligman, 2011). To better assess flourishing for consumers, Shu et al. (2020) defined flourishing of consumers as "well-being from the perspective of consumer perception and believes that well-being includes material satisfaction, emotional happiness, and the pursuit of meaning" (p. 413). Based on a multidimensional approach to flourishing, Shu et al. included multidimensional components of flourishing: individual well-being and social well-being.

The main premise of consumers' flourishing is that involvement with brands can result in a psychological attachment with service providers and play a role in revitalizing one's life sphere (Shu et al., 2020). *Individual well-being* encompasses functional benefits and emotional pleasure, which can be viewed as a hedonic perspective due to features of affective states. *Social well-being* is defined as social rewards and interpersonal harmony as a result of engaging with the brand; this concept can be aligned with the eudaimonic approach (Gallagher et al., 2009). With the application of individual and social well-being, in the current study, I substituted the brand word in each construct as fantasy baseball in each construct and examined sports fans' flourishing state. By doing so, this current research explored the flourishing state using two well-being approaches.

Flourishing in Sport

Contemporary literature in sports management points to the need to consider the significance of contributions to well-being outcomes (Inoue et al., 2020). The theoretical and empirical understanding of individuals and collective well-being advances the role of sports services in the sports industry (Inoue et al., 2020). The relatively few studies have attempted to examine topics concerning sports consumers' well-being and sports services (Inoue et al., 2017; Jang et al., 2017; Kim & James, 2019; Paek et al., 2021). Inoue et al. (2020) stated, "due to the absence of a coordinated effort to synthesize this line of research, it has not reached its full potential to make a distinctive contribution, as indicated by a lack of reference to sport services" (2020, p. 285). Although studies on the hedonic well-being and social well-being of sport consumers have been conducted (Inoue et al., 2020; Jang et al., 2017; Kim & James, 2019; Kim et al., 2017), less attention has been paid to assessing the mixture of well-being from sports services (Inoue et al., 2020). Encompassing only one component of well-being would limit the

understanding of sports consumers' multiple dimensions of well-being. To further explore the state of sports consumers' optimal psychology, the current study included the notion of flourishing, through which it helped develop an understanding of sports consumers' well-being.

Hypotheses Development

Previous studies have highlighted the significance of engaged activities, perception of value, and flourishing, but in-depth discussion about these three components is still limited and not substantiated in sport management literature. In particular, research on sport consumers' digitalized engagement and flourishing is limited. This section consists of two main sections: (1) Research Hypotheses with Single Group and (2) Research Hypotheses with Multiple Groups. In the first section, to further explain the dynamics of the RET approach, hypotheses were developed to elucidate the relationship with fantasy sport engagement, social media engagement, perceived value, and flourishing. As an extension of the RET theoretical model, the decision-making process (i.e., pre-consumption, mid-consumption, and after-consumption) is implemented among multiple groups in the second section. Research hypotheses with multiple groups were developed to explore the manner in which the sport-engagement journey is differently associated with sport consumers' psychological states based on media use before, during, and after sporting events.

Research Hypotheses with Single Group

Based on RET, the strength of engagement means to enhance an activity, to concentrate on it, or to immerse oneself in it (Higgins, 2006). The strength of engagement alone does not render something attractive or repulsive (Higgins, 2014). Rather, the strength of engagement contributes to the "magnitude of attraction or repulsion"; the role of engagement is to intensify the force either positively, toward something, or negatively, away from it (Higgins, 2014). On

the contrary, value is equivalent to a force experience that includes direction and intensity (Higgins, 2014). Thus, value plays a crucial role in demonstrating the relationship between engagement and the desired outcome, such as wellbeing.

Lee et al. (2013) argued that fantasy sport participants can intrinsically have their own benefits or rewards such as hedonic value while they can perceive extrinsic rewards such as the chance to exchange knowledge or to prove competition. When fantasy sport participants select a player in competitive aspects, they tend to learn via real game statistics, which in turn offer them valued social interaction and reinforce their interests in other sporting events (Lee et al., 2013). By participating in fantasy sports, users can get implicit motivations such as entertainment value, group affiliation, or attachment to the sport (Lee et al., 2013). Additionally, Dwyer, Drayer, and Shapiro (2019) proposed that fantasy sport engagement can be associated with normative values that "include the regulatory system through which our past experiences impact our current perceptions" (Dwyer, Drayer, & Shapiro, 2019, p. 178). Drayer et al. (2010) suggested that fantasy football engagement influenced general NFL consumption. Although engagement had relatively insignificant effects on consumption of NFL games and to purchase merchandise, fantasy sport participants indicated a stronger affinity to mediated consumption (Drayer et al., 2010). Overall, fantasy sport participants can enhance their values throughout social interactions and shared cultures in their favorite teams or communities.

H1   Fantasy sport engagement of sport consumers is positively associated with their perceived value.

The assessment of consumer engagement can capture various nontransactional responses, which can produce an optimal state for the creation of value propositions between consumers and service providers (Hoyer et al., 2010). Social media can facilitate sport consumers' chances to express their fandom symbolically in personal and preferred ways (Stavros et al., 2014). As a

unique platform, social media can be regarded as a promising indication since enthusiastic engagement on social media can create greater interaction and higher value creation in the sport context (Williams & Chinn, 2010). Lee et al. (2014) revealed that social network involvement is positively associated with multidimensional perceived values (i.e., social, experiential, informational, and transactional). The results of Lee et al.'s study imply that the social media service can strengthen consumers' valuable attribution concerning the services of a company, in the context of Facebook users. In another study, engaging or having associations with Olympic rowing athletes encouraged sport consumers to integrate their value creation process with the athletes' (Mulcahy & Luck, 2020). However, in-depth empirical descriptions of sport fans' valuation from engaging with social media is limited in sport literature. Considering previous studies, I proposed the following hypothesis:

> H2 Social media engagement of sport consumers is positively associated with their perceived value.

The pursuit and accomplishment of positive objective agencies (e.g., value goals, mental health functions, or psychological activities) are in accordance with deep value creation and are antecedents of well-being (Raibley, 2012).

> The paradigm case of the flourishing agent is a person who successfully realizes their values and is stably disposed to do so. This person must have values, must desire to realize these values, and must possess a body and mind that are suitable for efficacious action on behalf of these values. Furthermore, this person must actually pursue and realize these values through their own effort—and experience appropriate emotional feedback on this entire process. (Raibley, 2012, p.1116)

Therefore, the agents of flourishing can be valuational and motivational processes (Kashdan et al., 2008). To bring some order to the interrelations between value and well-being, Jayawickreme et al. (2012) developed the engine model of well-being, which involves the following input-process-outcome. In this model, *inputs* are factors involving preexisting conditions to an individual. The components of input in the engine model can be genetics, financial factors, or one's personality. *The process* is called internal states, which affects the choices an individual makes, consequently stimulating the state of well-being, which can be self-regulated states or core values. *The outcome* in the engine model is defined as voluntary attitudes that an individual selects in the pursuit of searching for the state of well-being. Examples of outcomes can be the relationship quality with others, a good balance between work and leisure activities, and how an individual thinks about the future. Compton and Hoffman (2020) stated that the engine model of well-being contributed to expand the classification of the well-being framework and how a state of well-being is established. Particularly, this model sheds light on distilling and capturing enormous activities of individuals to integrate well-being into the few manageable components (Compton & Hoffman, 2020). In the engine model of well-being, the value cues of internal state create the state of well-being.

In the sport literature, the value of sport services accounts for the way sport consumers feel about their lives (Kim et al., 2017). Kim et al. (2017) argue that the value of sport services evaluated by sport consumers' feelings over time can reinforce perspectives of well-being creation. Such impact can determine how intertwined sport consumers' perceptions of value are with well-being through sports (Kim et al., 2017). During sport-consumption activities, fans can perceive psychological rewards or values within the sense of belonging (Wann et al., 2011) in pursuit of relational involvement with teams and consumers (Wann et al., 2011). The

relationships with sport activities can promote perceived value in sport actions, in turn, reinforcing well-being (Inoue et al., 2017). As suggested by previous studies, the delivery of sport services can contribute to value creation and well-being enhancement driven by sports experience (Mulcahy & Luck, 2020). Thus, the following hypothesis was proposed:

H3   Perceived value of the sport consumer is positively associated with their flourishing.

Two mediation hypotheses were included in the current study to explore the underlying relationships of the hypothesized model. Based on RET, the value creation process is a significant point in how the engaged activities of individuals can be related to a positive state of their lives and enhance their perceived well-being (Higgins, 2014). There are possible technology-driven engaged activities in the virtual environment that can induce autonomous attitudes aligned with the personal goals and values of individuals, consequently connecting the meaning and purpose of their life spheres (Peters et al., 2018). Although significant attention has been paid to navigating engagement, values, and well-being in virtual interactions, scholars and managers have challenges connecting a bridge between the digital impetus and the state of flourishing (Peters et al., 2018). The mediating role of perceived value between virtual activities and digital well-being has been proposed in some conceptual studies (Finsterwalder et al., 2017; Peters et al., 2018). Empirical approaches to the value creation framework in the digital context should be explored concerning the RET.

Perceived value as a mediator between sport purchase activities and attitudinal outcomes has been examined in several sport literature studies (Byon et al., 2013; Kwon et al., 2007). Regarding fantasy sport users, Jang et al. (2020) proposed that fantasy involvement is positively related to vitality and energy gain in the psychological state of users. The amount of energy can generate various types of well-being (Jang et al., 2017, 2020). More intensified happiness

through valuation for perceived social connectedness may be brought by fantasy sport engagement, keeping up with trends and more autonomous activities with freely drafted sport teams daily. However, the conceptual framework of fantasy sport in mental health has not been statistically examined. Therefore, it is necessary to empirically investigate the mediating effect of perceived value on the association between fantasy engagement and flourishing. Based on previous studies, I developed the following hypothesis:

      H4   The relationship between fantasy sport engagement and flourishing will be mediated by perceived value.

Within business literature, life experiences, self-valuation, and overall subjective well-being may be connected to social media activities (Berezan et al., 2018). Recently, the assessment of social media engagement and well-being outcomes has been focused on sport management literature. Inoue et al. (2020) proposed that understanding digital applications, such as social media usage, can be an innovative approach to building value creation into well-being. As antecedents of the well-being of sport fans, social media usage should be considered alongside fantasy sport involvement (Chan-Olmsted & Kwak, 2020; Kesler & Wann, 2020). Unique experiences in the context of social connections/social interaction should be scrutinized in future studies to explore the fandoms of fantasy sport consumers (Kesler & Wann, 2020). Interacting with sports, teams, or athletes can be a potential route to enhance social rapport and potentially positively associated with their life satisfaction and mental health (Kesler & Wann, 2020). Individuals actively involved with fan discussions on social media may display a similar pattern of well-being (Kesler & Wann, 2020). Researchers have implied that engagement in social media can generate a state of well-being through self-value images (See Figure 2.2). Therefore, the following hypothesis was proposed:

H5   The relationship between social media engagement and flourishing will be mediated by perceived value.

Figure 2.2

Proposed Theoretical Model for Single Population
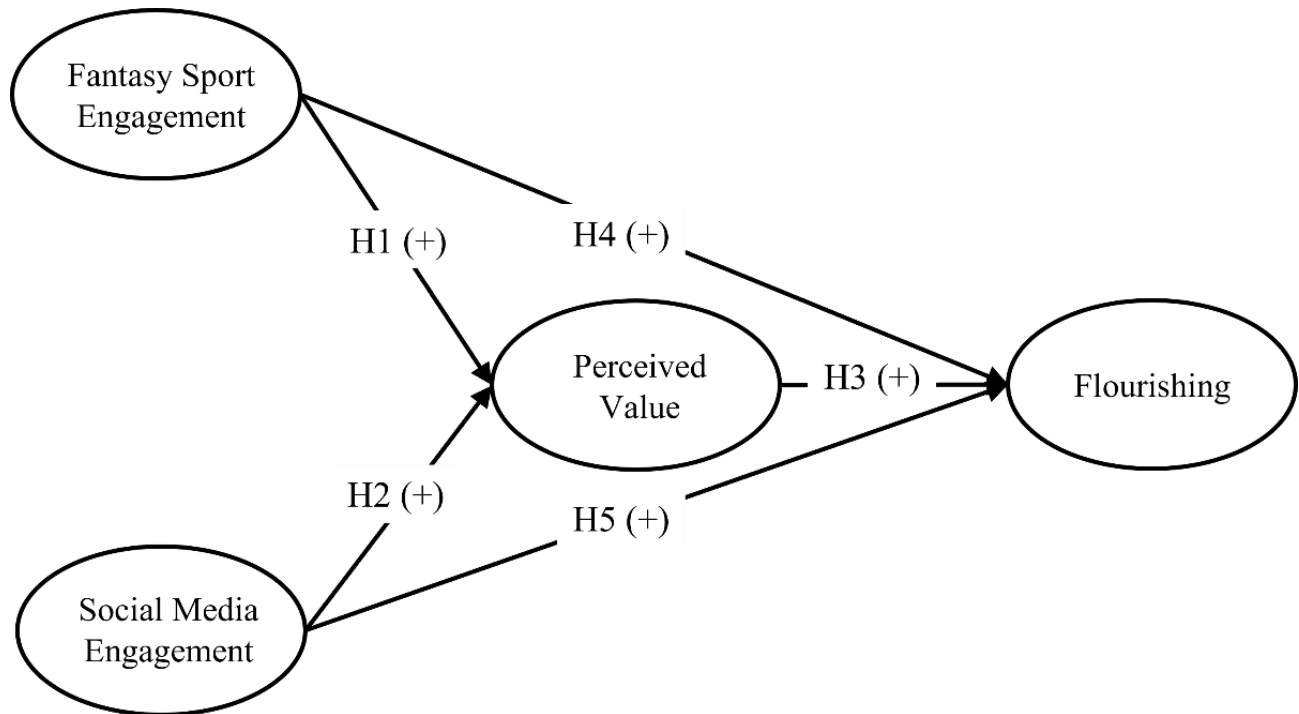
**Research Hypotheses with
Multiple Groups**

According to a previous study, "differences have been reported between the factors considered in making an actual decision and those involved in a hypothetical decision" (Um & Crompton, 1990, p. 433). This argument implies that consumers are involved with various responses or activities when they encounter actual consumption and a hypothesized activity such as before or after the purchase. Several scholars have attempted to differentiate the three phases in a decision process using terms such as before, during, and after the consumption in tourism

industry literature (Fotis, 2015; Fotis et al., 2012) and sport literature (Chan-Olmsted & Kwak, 2020). Such an approach is particularly limited with regard to sport consumers' digitalized engagement (Chan-Olmsted & Kwak, 2020; Shabazz, 2019). Taken together, in this current dissertation, I attempted to investigate whether sport consumers' positive psychological benefits can be differently shown, based on the comparisons with a time framework of their fantasy sport engagement and social media involvement.

In the context of fantasy sports, patterns of media usage are rapidly transforming and significantly influencing how sport consumers acquire sport content through media formats (Larkin & Fink, 2016). Additionally, the attraction to team performance and individual player performance alike has encouraged more social media interaction between athletes and fantasy sport users (Chan-Olmsted & Kwak, 2020). Despite the rapid shift in media use in fantasy sports, the media journey of fantasy sports has not been considered in depth in sport literature. Chan-Olmsted and Kwak (2020) first examined fantasy sport users' multiplatform media usages in comparison to their media journey (before, during, and after a sporting event). The findings indicated that differences were discovered in the usage of mobile phones, websites, apps, online streaming, and YouTube across three different groups. Interestingly, Facebook use showed a limited role in fantasy sport participation compared with Twitter, YouTube, and websites throughout a fantasy sport consumption. Additionally, television consumption before the fantasy sport event was found to be related to the fantasy sport event, not during or after sporting events (Chan-Olmsted & Kwak, 2020). By successfully identifying grouped participants and various media usage patterns in fantasy sport, the research facilitates examining the role of fantasy sport in consumers' perspectives as an outcome in order to better understand the media usage journey.

To further explore the impact of multiplatform usage on psychological outcomes, the following hypotheses were suggested:

H6   The relationship between fantasy sport engagement, perceived value, and flourishing is different across the three distinguished groups (i.e., before, during, and after watching sporting events).

H7   The relationship between fantasy sport engagement, perceived value, and flourishing is stronger before sporting events.

To facilitate consumer experiences, exploring the role of mediated tools, particularly, social media, is important. Cox et al. (2009) maintained that a consumer's journey of buying before, during, and after consumption has limited consideration in academic literature. To identify the role of social media use in the decision-making process, Fotis et al. (2012) developed different levels of social media usages in the tourism setting. Each stage indicates different reasons (e.g., planning, connecting, or sharing) and different time points (e.g., before, during, and after the trip) that take place on social media websites. Before their holiday trip, social media users searched for information on the intended trip or other selections. During the trip, social media users are likely to use social media for connecting with friends and to offer reviews or comments. After the trip, users shared their experiences through social media and also sought ideas for the next trip (Fotis et al., 2012).

According to Funk (2017), sport consumer behavior scholars ought to account for the particular features of sport to offer sport teams with manageable and actionable strategies. The delivery of sport experiences to satisfy sport consumers' needs has contributions in the context of the strategic management of sport teams, in that the objectives of the sport organizations are to offer sport consumers pleasurable memories and experiences (Funk, 2017). Since the nature of sport services is primarily subjective and relates to interaction between individuals and the sport atmosphere, "academic research has to account for a vast array of psychological and

physiological needs and responses that occur before, during, and after the use or anticipated use of a sport experience" (Funk, 2017, p. 146). Funk, Alexandris, and McDonald (2016) stated that sport consumers' beliefs and emotions involve psychological traits linking before, during, and after sporting events.

Aligned with the need for the decision-making process in mediated sport consumption, Twitter reported users' attitudinal characteristics in the setting of sports content (Twitter, 2020). According to the report, interaction of sport consumers has increased on Twitter. For example, the total minutes of Twitter use during the NFL draft increased 13%. In this regard, almost half of sport consumers (48%) preferred to have social interactions in person with others or mediated communication methods (e.g., phone, social media, or multiple methods) during viewing the Super Bowl telecast (Shabazz, 2019). Although Shabazz (2019) has not compared the group differences of social interactions in sport media based on timeline, the highest proportion of social interaction during the Super Bowl viewing experience has been discovered. The usage timeline can be a great indication to further understand social media users during sporting events (See Figure 2.3).

> H8   The relationship between social media sport engagement, perceived value, and flourishing is different across the three distinguished groups (i.e., before, during, and after watching sporting events).

> H9   The relationship between social media engagement, perceived value, and flourishing is stronger during sporting events.

Figure 2.3

Proposed Theoretical Model for Multiple Groups
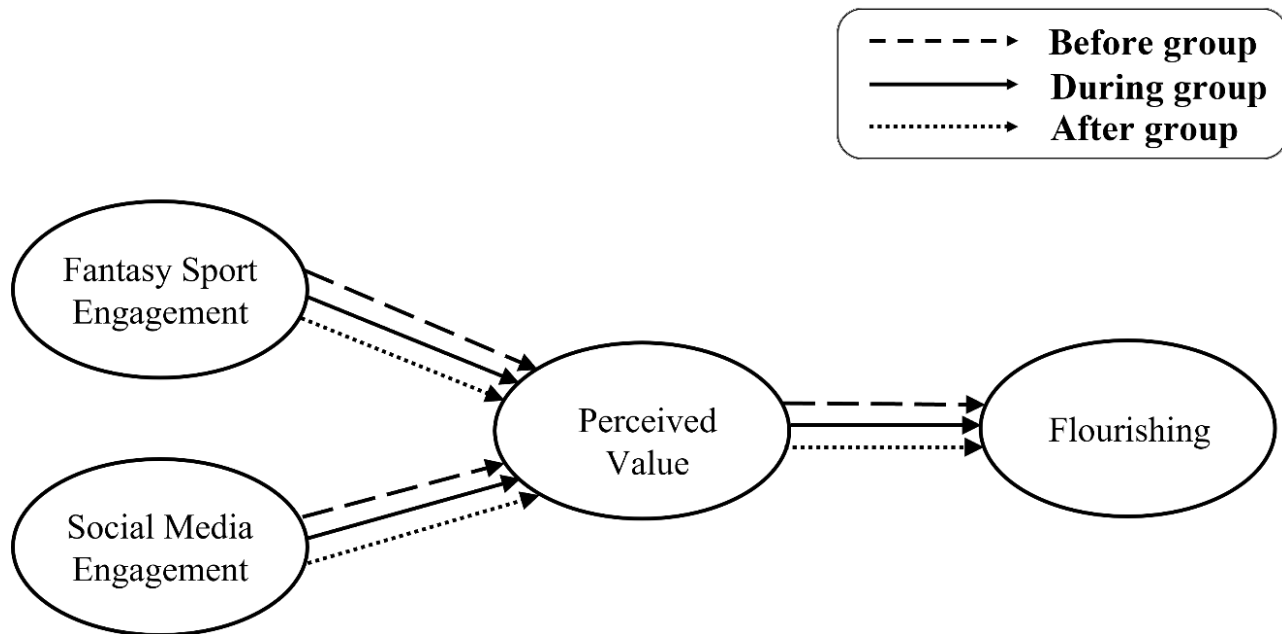
Chapter Summary

Considering the above, I hypothesized that sport consumers' fantasy sport engagement is positively associated with the perceived value of sport services and, in turn, that sport consumers' perceived value is positively associated with their flourishing state. Additionally, I hypothesized that sport consumers' social media engagement is also positively indicated across groups, which were before, during, and after watching sporting events on television. The research hypotheses were driven by the theoretical basis provided by RET and the theoretical framework of the decision-making process.

CHAPTER III

METHODS

Chapter 3 describes the organization of the research, research participants, procedure, and data analysis. The main purpose of this chapter is to: (1) address the details of the research design, (2) explain how data were collected, and (3) address the analysis of data. The survey method was used to empirically explore the associations with fantasy sports, engagement, SNS engagement, value, and flourishing across multiple groups. Participants reported their digitalized consumption before, during, and after Major Baseball Leagues (MLB) sporting events as well as their perception of value and the flourishing state. Data analysis was conducted utilizing confirmatory factor analysis (CFA), structural equation modeling (SEM), measurement invariance, and multi group structural equation modeling (MGSEM) as presented in Figure 3.1. Once the measurement and structural models were statistically supported, multiple groups (e.g., before, during, and after groups) were compared through invariance testing using MGSEM. In testing for measurement and structural invariance, a baseline model was established in each group and was compared to the constrained models in order to evaluate the equivalence across groups and to test structural paths.

Figure 3.1

Overview of the Research Process

<div align="center">

Research Participants

</div>
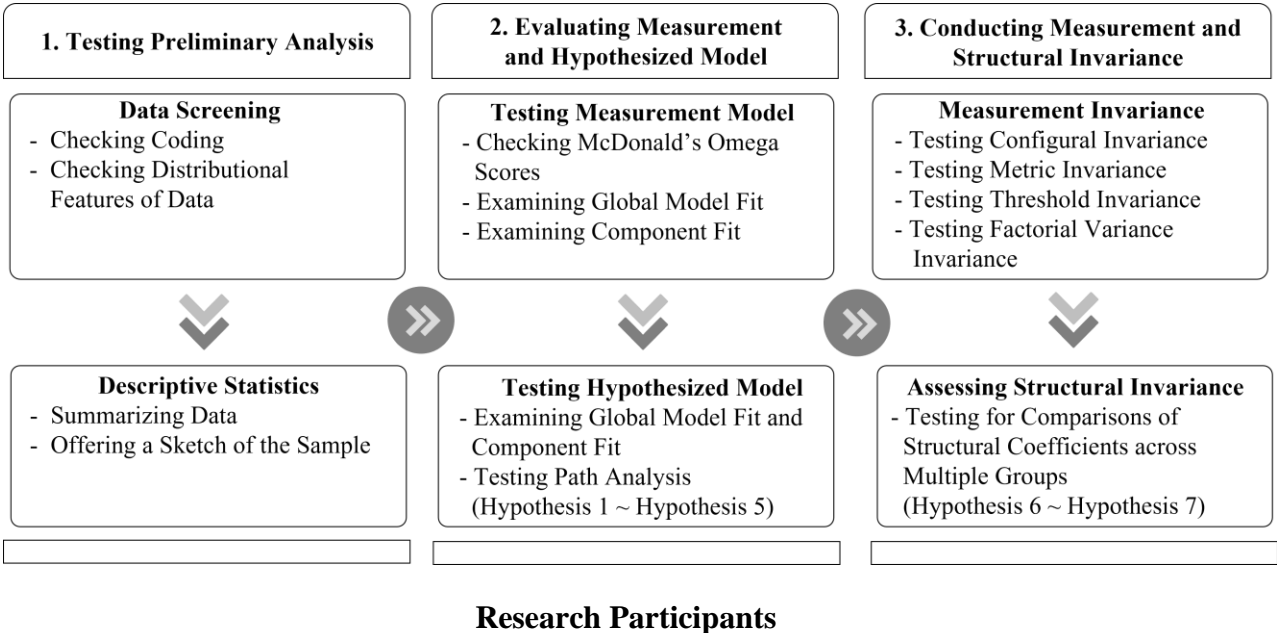
Target Population

The theoretical population of the present study comprised current sport fans aged 18 years or older in the United States (U.S.) who regularly play fantasy baseball and utilize social media to follow MLB teams while viewing MLB games on television given the timing of data collection. Sport media consumption can be categorized into direct (live game viewing) and indirect (gathering information from online settings) engagement. For example, sport fans engage in fantasy sport and/or or social media while watching games on television (Kupfer & Anderson, 2021). To ensure the inclusion of participants who engage in digital MLB activities while watching MLB on television on a regular basis, the sample was recruited from sport consumers who (1) identify as a sport fan, (2) have played 2021 fantasy baseball, (3) regularly use social media to follow their favorite MLB team, and (4) have watched 2021 MLB games on

television. The survey participants were asked to recall and rate their multiplatform digital habits when viewing MLB games on television.

Sampling Method

Data were collected for the present study during the 2021 MLB season between May and June. Respondents were recruited via Qualtrics panel solicitation through an online survey protocol, and those who completed the survey received a small incentive. Qualtrics is considered the most demographically and politically representative source compared with Facebook and MTurk (Boas et al., 2020). Qualtrics recruitment uses an invitation-only protocol to weaken self-selection, offers a cross-section of respondents, and reinforces representativeness (Dwyer, Drayer, & Shapiro, 2019). Screening questions and attention checks were included in the first part of the online questionnaire. To offer target objects in sporting experiences, the respondents were asked to specify their favorite MLB team for fantasy sport involvement. Recruitment of survey participants took approximately 25 days. The quota sampling technique was used to recruit participants based on the predetermined features of the target sample (Im & Chee, 2011; Sedgwick, 2012; Taherdoost, 2016). With this technique, the researcher offers data collectors a specific number (quota) to be chosen for each group based on whether they meet certain criteria (quota controls; Daniel, 2012).

There are six major steps in conducting quota sampling (Daniel, 2012): (a) define the target population, (b) identify inclusion criteria for the population, (c) determine the quota controls, such as attitudinal or behavioral characteristics, (d) determine the total sample size, (e) determine the category of each quota control, and (f) select the targeted number of each sub-target population. In this study, (a) the target population is sport fans and MLB fans; (b) sport fans were recruited sport consumers who actively use television, fantasy sports, and social media

to follow MLB; (c) social interactions in fantasy baseball and social media in terms of viewing MLB games on television were checked during the progress of the quota controls; (d) a total of 629 participants were recruited (i.e., before $n = 211$, during $n = 212$, and after $n = 206$); (e) three groups based on a timeline framework, including before (those who use fantasy sports and social media prior to watching MLB games), during (those who use fantasy sports and social media while watching MLB games), and after (those who use fantasy sports and social media after watching MLB games), were established.

I included screening questions for identifying a sports fan, MLB fan, television viewer of MLB games, and social media user of fantasy baseball (Paek et al., 2021). Two baseball quizzes were also included (Dwyer, Larkin & Goebert, 2019). Respondents who answered the screening questions affirmatively and chose the correct answers in the baseball quiz moved to the next grouping questions. In these questions, quota functions for three timelines concerning digital involvement were applied (see Figure 3.2). Respondents who chose an option (condition before, during, or after) moved to the next questions because Clavio et al. (2012) reported that sport consumers engaged in interactions on social media before, during, and after intercollegiate sporting events. To quantify the timeline questions, respondents were asked to state the points of time at which social interactions occurred (Shabazz, 2019). Disproportionate quota sampling was adopted to explore the subgroups separately and to obtain more precise findings for the oversampled subgroups (Remler & Van Ryzin, 2015).

Figure 3.2

Setting Quotas in Qualtrics Survey

Sample Size

For structural equation modeling (SEM) analysis, a large sample is required for statistical

inference and model estimation; however, the specified model and associated parameters are

appropriate only if the sample size is large enough (Lei & Wu, 2007; Pendergast et al., 2017). In

addition, for scholars conducting invariance analyses, they must ensure enough subjects are

collected to accurately assess measurement invariance and overall model testing (Chen, 2007;

Lubke & Muthén, 2004). The use of CFA with multiple groups generally requires a minimum of

400 responses (e.g., 200 samples per group for CFA with multiple groups; Pendergast et al.,

2017). A study with fewer than 150 subjects per group can be prone to errors and have less

accurate model fit indices (Chen, 2007; Pendergast et al., 2017). Given that this study included

three groups, at least 600 participants needed to be recruited to guarantee adequate power in

measurement and structural invariance testing. Previous studies have consistently reported that the weighted least squares mean and variance (WLSMV) estimator performs well with a small sample such as less than 200 (Holtmann et al., 2016; Sass, 2011; Schmitt, 2014). The data analysis in the current study used the WLSMV estimator; therefore, the sample size of over 200 per group was not a concern.

Instruments

The survey questionnaire is classified into four main sections, for a total of 54 items: screening and grouping questions (9 items), demographic characteristics (11 items), and assessment of major variables, such as fantasy sports engagement (14 items), social media engagement (11 items), perceived value (3 items), and flourishing (6 items). The average amount of completion time to complete the online survey was 14 minutes. The participants' completion time ranged from 5 to 25 minutes.

Screening and Grouping Questions

Nine screening questions were included in the first section for recruiting participants. Potential participants were first asked about general sport behavior, such as whether they identify as a sport fan, the name of their favorite team, their television viewing experience, and their sport-related social media usage (Yim et al., 2021). Given the distinctive features of fantasy sport involvement, screening questions were developed to ensure the inclusion of knowledgeable fantasy baseball respondents (Dwyer, Larkin, & Goebert, 2019; Dwyer et al., 2021). The initial screening questions were included to exclude respondents who might not consider themselves a sport fan or those who do not regularly watch, read, or listen to sport-related content in the digital context. Respondents who answered the screening questions affirmatively moved to the next section (see Table 3.1).

The next screening questions are about grouping by timeframe (before, during, and after watching sporting events). In the survey, respondents chose the one time point that seemed to apply more to their fantasy sport and social media engagement. Respondents were only allowed to select one or none of the three time points: "I most often engage in fantasy sport and related social media prior to watching an MLB game," "I most often engage in fantasy sport and related social media while watching an MLB game," "I most often engage in fantasy sport and related social media after watching an MLB game," or "None of the above." When respondents selected one of the first three options, they were asked to select further timeframe information, such as "How many days before a game do you engage in fantasy sport and related social media?" (Shabazz, 2019; see Appendix 1). The rationale for using time points was derived from prior research conducted in the sport management literature (Shabazz, 2019).

Table 3.1

Screening Questions for the Online Survey

Screening question	Answer
Do you identify as a sport fan?	Yes
Which MLB team do you most strongly support or follow?	Short Answer
Have you ever watched MLB games on television?	Yes
Do you use social media (Twitter, YouTube, or Facebook) to follow or support your favorite MLB team?	Yes
Have you played fantasy baseball this (2021) season?	Yes
As it relates to fantasy baseball, what does WHIP stand for? (a) Walks+Home runs per innings pitched; (b) Wins+Hits per innings played; (c) Walks+Hits per innings pitched; (d) Walks+Home runs per innings played	(c) Walks+Hits per innings pitched
In the game of professional baseball, how many players are in the outfield? (a) three (b) four (c) five (d) eight (e) nine	(a) three

Demographic Characteristics

In the demographic section, 11 items were related to gender (1 = male, 2 = female), age (dropdown functions in individual ages), annual income (ranging from $10,000 to $100,000), ethnicity (1 = African American, 2 = Hispanic, 3 = Caucasian, 4 = Asian American, 5 = Native American, 6 = South Asian/Indian Subcontinent, 7 = Multi-racial, 8 = Other, please specify), educational level (1 = Some high school or less, 2 = High school diploma or equivalent, 3 = Some college, 4 = College diploma, 5 = Some graduate school, 6 = Graduate degree, 7 = Choose not to identify), and marital status (1 = Single [never married], 2 = Married, 3= Divorced/separated, 4 = Widowed, 5 = Choose not to identify, 6 = Other, please specify). Respondents could choose multiple options or the other option, which allows for additional description (see Appendix 1). Frequency of media usage such as television, social media, and fantasy baseball were also measured in the demographics section (1 = Never, 2 = Once a week, 3 = 2–3 times a week, 4 = 4–6 times a week, 5 = Once every day, 6 = 2–3 times per day, 7 = 4 or more times per day). Spending on fantasy baseball participation was also checked, from less than $25 to $1,000 (1 = $0, 2 = Less than $25, 3 = $25–$49, 4 = $50–$99, 5 = $100–$149, 6 = $150–$249, 7 = $250–$499, 8 = $500–$999, 9 = $1,000 or more).

Fantasy Sports Engagement

The instrument of fantasy sports engagement was chosen based on previous studies in the context of fantasy baseball participants (Points of Attachment of Index; Shapiro et al., 2014). The construct of fantasy sport baseball participation consists of subscales for attachment to a team (three items), attachment to players (three items), attachment to community (three items), attachment to sports (three items), and attachment to fantasy (two items) for a total of 14 items. Each item was measured on a seven-point rating scale (e.g., 1 = strongly disagree to 7 = strongly

agree). The individual items of fantasy sport engagement were used to measure the latent variables of fantasy sport engagement.

In prior research, the values of Cronbach's alpha for scores on the sub-constructs of the constructs exceeded .77 based on 253 fantasy baseball users in North America (Shapiro et al., 2014). The fantasy baseball involvement scores showed acceptable internal consistency in a study by Shapiro et al. (2014). The values of average variance extracted (AVE) in a previous study were greater than 0.5, ranging from .68 to .76 (Shapiro et al., 2014). Scores obtained on the construct of fantasy sport involvement from a sample of fantasy baseball participants in a previous study suggested acceptable reliability and good construct validity based on responses to the Points of Attachment Index. The psychometric support for this current study is presented in Chapter 4.

Social Media Engagement

The construct of social networking service (SNS) engagement was measured with 11 items (Fan Engagement through Social Media; Santos et al., 2019). The three sub-constructs included the fan-to-fan relationship (four items), the team-to-fan relationship (four items), and fan co-creation (three items). Respondents were asked to respond on a seven-point Likert-type scale (1 = strongly disagree to 7 = strongly agree). Santos et al. (2019) argued that scores based on a measure of sports consumer engagement on social media showed acceptable reliability and construct validity in their study of 425 college students in a mid-sized Portuguese university. Scores from the scale indicated acceptable internal consistency, with a Cronbach's alpha greater than .7 (Santos et al., 2019). Acceptable convergent validity was demonstrated in the same study; the values of the standardized factor loadings were statistically significant and were greater than .5, ranging from .65 to .87 (Santos et al., 2019). Santos et al. discovered evidence of good

convergence validity with the scores of AVE for the three sub-constructs (ranging from .58 to

.64). The measure of this construct was developed for individuals who follow their favorite team

accounts on social media. Although no studies had used this construct before, Ströbel et al.

(2021) proposed that the features of social media engagement are reflected in sports fans' digital

transformation. The individual items of social media engagement were used to measure three

latent variables of social media engagement. The psychometric evidence of reliability and

validity for scores on social media engagement in fantasy baseball participants is presented in

Chapter 4.

Perceived Value

The perceived value included a four-item measure used by Behnam et al. (2020). For

each item, the respondents rated to how they perceived aspects of value for their favorite fantasy

baseball team on a seven-point Likert-type scale (1 = strongly disagree, 2 = disagree,

3 = somewhat disagree, 4 = neither agree nor disagree, 5 = somewhat agree, 6 = agree, and

7 = strongly agree). In a previous study with a sample of 686 consumers in sports organizations,

the standardized factor loadings were statistically significant ($p < .01$) and greater than .55

(ranging from .85 to .88), indicating acceptable convergent validity. Behnam et al. found good

convergent validity with an AVE value of .74 and CR value of .92. The newly adopted measure

of perceived value was considered appropriate to examine perceived value states in the

assessment of MLB teams, despite only having been used in one prior study. Four items as

indicator variables were used to measure a latent variable of perceived value. Psychometric

evidence of reliability and validity of scores on perceived value in the present study is reported in

Chapter 4.

Flourishing

The flourishing scale included six items (three items in individual well-being and three items in social well-being) to assess functional benefits, emotional pleasure, social rewards, and interpersonal harmony (Shu et al., 2020). Respondents rated each survey item based on how they felt it applied to their lives on a Likert-type scale (from 1 = strongly disagree to 7 = strongly agree). In Shu et al.'s (2020) study, the values of AVE for all subscales were greater than .50 (ranging from .54 to .64), and scores on this flourishing scale showed acceptable convergent validity in a sample based on 389 Chinese consumers in general business sectors. Shu et al. further found good convergent validity with CR values for individual and social well-being scales, ranging from .80 to .88. Cronbach's alpha values for all subscales in the flourishing measure exceeded .70 (individual well-being = .82; social well-being = .80). Scores from the scale of flourishing based on Chinese consumers presented acceptable internal consistency reliability (Shu et al., 2020). Psychometric support of reliability ad validity for scores on flourishing in this current study is presented in Chapter 4. The individual items of flourishing were used to measure two latent variables of social media engagement (See Table 3.2).

Table 3.2

Dimensions and Scale Items

Dimension	Items
Fantasy Sport Engagement (Shapiro et al., 2014)	***Attachment to Team*** I consider myself a participant of fantasy baseball. I would experience a loss if I had to stop playing fantasy baseball. Being a fantasy sports participant is very important to me. ***Attachment to Players*** I am a fan of a specific player within my fantasy baseball leagues. I follow my fantasy baseball team(s) because I like their players. I consider myself to be a fan of players rather than a fan of fantasy baseball.
Fantasy Sport Engagement (Shapiro et al., 2014)	***Attachment to Community*** I feel connected to numerous aspects of the fantasy baseball community. I feel a part of the fantasy baseball community. I support the fantasy baseball community in which a desire exists to have interactions with fantasy baseball users. ***Attachment to Sport*** I consider myself, first and foremost, a baseball fan. Baseball is my favorite sport. Of all sports, I prefer baseball. ***Attachment to Fantasy*** Fantasy baseball is the reason for my interest in MLB. I would experience a loss if I could not play fantasy baseball.
Social Media Engagement (Santos et al., 2019)	***Fan-to-fan Relationship*** I am willing to help and share information with other users of fantasy baseball on social media. Even if it may cost time and money, I am willing to assist other members of fantasy baseball accounts on social media. Fantasy baseball accounts on social media allow for the development of social bonds with other fans. I feel great pleasure when interacting with other fans through fantasy baseball accounts on social media. ***Fantasy Baseball Interface-to-fan Relationship*** I think fantasy baseball accounts on social media are cool. The fantasy baseball accounts on social media have an exceptional design. The fantasy baseball accounts on social media meet my expectations. I feel that the information offered by fantasy baseball accounts on social media is perfectly clear.

Table 3.2, *continued*

Dimension	Items
Social Media Engagement (Santos et al., 2019)	*Fan Co-creation* I spend time posting photos/videos about fantasy baseball on social media. I share information/comments/photos/videos about fantasy baseball on social media. I add hashtags about fantasy baseball on social media.
Perceived Value (Behnam et al., 2020)	The programs and services of fantasy baseball have great value. What I get from fantasy baseball and what it costs offers me value. In general, the value of the programs and services in fantasy baseball is high.
Flourishing (Shu et al., 2020)	*Individual Well-being* Being involved with fantasy baseball can satisfy my private feelings. I feel happy when involved with fantasy baseball. Being involved with fantasy baseball has improved my life satisfaction. *Social Well-being* By being involved with fantasy baseball, I can better integrate into my friends/family. Playing fantasy baseball adds fun to my time with friends/family. Talking about fantasy baseball brings me closer to my friends/family.

Design and Procedures

Design

Along with conducting an online survey, a non-experimental cross-sectional design was selected for the current study. Non-experimental cross-sectional design studies include one observation; "the observations of *X* and *Y* are made at one point in time for each person observed, and all persons are observed at roughly the same point in time" (Dwyer, 1983, p. 18). Thus, I utilized a self-report survey method including individual items and constructs.

Procedures

Prior to collecting survey data, Institutional Review Board approval was obtained. Data were collected from one source via Qualtrics panels, an online survey platform that runs a database of a million U.S. residents. Respondents in Qualtrics panels voluntarily participate in periodic online survey research. Due to the efficiency of Qualtrics panels, online survey panels have previously been adopted to recruit targeted sports consumers (Dwyer et al., 2021; Hwang et al., 2020). As described above, I used the quota sampling method to select respondents who fill the eligibility criteria of the current study based on levels and patterns of digital consumption. Panel members received an email invitation with an attached hyperlink for the online survey page, which included an informed consent form describing the study's purpose and procedures and offered warning messages regarding the screening process (i.e., the possibility of not being selected as a participant; Bryan et al., 2020). Respondents who completed the survey received a small financial incentive to which they agreed when they initially joined a panel. Dwyer et al. (2021) identified 1,000 potential fantasy sports participants in the Qualtrics panels. Prior successful data collection from fantasy sports users and social media users among sports consumer groups (Dwyer et al., 2021; Hwang et al., 2020; Paek et al., 2021) led to the choice of Qualtrics panels for recruitment in the current study.

Regarding the quota sampling process, Im and Chee (2011) proposed several practical issues that researchers commonly encounter in the online setting. The first issue is the manipulated responses form respondents who were rejected from the screening questions and rejoined the project with false answers. This issue can cause operational problems whether the target population responds to online surveys or not. This situation can appear when the study relates to monetary incentives for respondents (Im & Chee, 2011). Thus, I checked completed

responses and historical IP addresses daily to determine whether the participants were authentic.

The next issue is resentment toward the research project and/or researchers due to rejection (Im

& Chee, 2011). Because of setting quotas and quota controls, some respondents were

automatically rejected. In such cases, participants have shown hostile attitudes toward

researchers or boards of research directors at universities (Im & Chee, 2011). Thus, a warning

message was included and highlighted in red stating that respondents can be rejected if their

responses do not meet the criteria (Im & Chee, 2011).

Data Analysis

Statistical analyses were conducted using SPSS version 21 to calculate descriptive

statistics, and M*plus* 7.11 (Muthén & Muthén, 2013) was used to examine the hypothesized

structural equation model. The WLSMV estimator, which is theoretically and statistically

appropriate for use with ordinal and categorical data, was applied (Boie et al., 2013; DiStefano &

Morgan, 2014; Flora & Curran, 2004; Lubke & Muthén, 2004). Three main steps in data analysis

were completed to support reliability and validity as well as to test the research hypotheses,

including (a) a preliminary analysis, (b) SEM, and (c) invariance testing. A preliminary

examination was conducted to check for outliers and internal consistency (Hair et al., 2019). To

test the hypotheses, a second-order SEM was used to evaluate the measurement model through

CFA and to conduct a latent variable path analysis (Kline, 2016). In invariance testing, there are

two main components: measurement invariance is used to test the relationships of observed

scores to latent variables, and structural invariance is used to test the relationships of latent

variables to one another (Vandenberg & Lance, 2000).

Preliminary Analyses

Researchers need to evaluate and interpret the basic features of data using multivariate techniques (Hair et al., 2019). Preliminary analyses for data screening behoove researchers to scour their data (e.g., identify outliers and examine distributional characteristics of the data) before testing a specified model (Tabachnick & Fidell, 2012).

Descriptive Statistics

As the first step, I checked for coding errors or malfunctions concerning the data transition from the respondents' answers to the numerical data. Descriptive statistics, which were conducted using SPSS software version 21, provided the basic characteristics of the data, such as summaries about samples and measured items. Descriptive statistics allow researchers to compare respondents or other units by checking central tendencies, such as mean, median, and dispersion of data, such as the standard deviation and range (Trochim & Donnelly, 2008). The descriptive statistics' findings helped me summarize and simplify the large amount of collected data (Trochim & Donnelly, 2008).

Assessment of Measurement and Structural Models

In SEM analysis, the examination of two models was used: a measurement model by conducting confirmatory factor analysis (CFA) and a structural model by using latent variable path analysis. CFA is regarded as evaluating a measurement model "for the direct impacts of the factors on the measured variables, the covariances among the factors, and the errors of measurement" (Klem, 2000, p. 247). Path analysis is concerned with the predictive sequences of measured variables (Klem, 2000), and the measurement model and hypothesized structural model were evaluated separately using a two-step approach (Anderson & Gerbing, 1988).

Testing the Measurement Model

To examine the psychometric features of the measurement model, I applied several single-factor models as well as second-order factor models using M*plus* 7.11 software (Muthén & Muthén, 2013). After conducting descriptive statistics, the values of McDonald's omega (ω) were calculated to measure internal consistence reliability which indicates the degree to which of the responses are consistent across the measured items (Hayes & Coutts, 2020). Although there is no standard cutoffs for the McDonald's omega (ω) reliability estimate, the recommended thresholds of McDonald's omega (ω) testing are .70 or higher (Karr et al., 2022). Based on the cutoff of McDonald's omega (ω), internal consistency for constructs was assessed.

Global fit is assessed by how well the theoretical model fits the data (Kline, 2016; Schmitt, 2014; Sun, 2005). To check the adequacy of fit in the context of global fit, the following goodness-of-fit indices were reviewed: the root mean square error of approximation (RMSEA; Steiger, 1990), the standardized root mean square residual (SRMR; Bentler, 1990), the Tucker–Lewis index (TLI; Tucker & Lewis, 1973), and the comparative fit index (CFI; Bentler, 1990). Researchers need to understand the different thresholds of fit indices and whether the measurement and structural model fit the data (Hair et al., 2019). The selected indices in this present study have been recommended to evaluate goodness-of-fit assessment (Sun, 2005). RMSEA statistic less than .08 indicated acceptable level in the current study. SRMR less than .11 was used to indicate acceptable model fit (Beauducel & Wittmann, 2005). TLI and CFI statistics should be higher than .95 (Heene et al., 2012; Hu & Bentler, 1999). Based on the criteria of model indices, global model fit was employed to assess the fit between a theoretical model and the sample.

If the aspects of global model fit were not satisfied, post hoc model modification was performed to develop more acceptable fit; this approach can produce a less parsimonious model. First, the values of standardized factor loadings (whether they were greater than .5) and the statistical significance ($p < .001$) of the standardized factor loadings were reviewed in terms of relationships between observed and latent variables. If the values of standardized factor loadings are not statistically significant or lower than .5, the items were removed. In addition, if the overall model fit was poor and there were relatively large values of modification indices associated with adding correlated residuals to the model, I considered modifying the model by allowing the estimation of correlated residuals in cases where items on the same latent variable showed similar wording. After the correlated residuals of the items were estimated and the model rerun, if justified, the respecified model was reviewed again in terms of overall model fit and all values of standardized factor loadings.

Component fit refers to assessment of parameter estimates as well as particular components in the model (Kline, 2016; Schmitt, 2014). Concerning component fit, the factor loadings of all items and R-squared values were assessed. The magnitude (greater than .5) and statistical significance ($p < .01$) of the standardized factor loadings were reviewed (Anderson & Gerbing, 1988). For assessing the reliability and validity of scores on the constructs, the values of composite reliability (CR) and the average variance extracted (AVE) were calculated. The thresholds of CR above .7 and the AVE value greater than .5 were used to assess evidence of good reliability for scores obtained on the scales (Kline, 2016). In the assessment of reliability, McDonald's omega (ω) was calculated for scores on each latent variable. Additionally, two subsequent methods were employed to assess evidence of discriminant validity: (1) checking that the value of interfactor correlations is lower than .85 (Lei & Wu, 2007) and (2) examining

whether a squared correlation between two variables is lower than the values of the AVE for each variable (Fornell & Larcker, 1981).

In the single-factor model, the construct of perceived value consisted of three indicators to measure a latent variable. Figure 3.3 shows the single-factor model, in which one latent variable enclosed in circles (i.e., ξ_1) represents the perceived value whereas the observed variables (i.e., x_1–x_3) enclosed in boxes represent the three items of the perceived value. The latent variables are unobserved variables that are used to explain the covariances in the observed variables. The factor loadings (i.e., λ_{11}–λ_{31}) represent the paths between the latent variable and the three observed indicators. The measurement errors of the observed variables are denoted by δ_1–δ_3.

Figure 3.3

A Sample of a Single-factor Confirmatory Factor Analysis Model
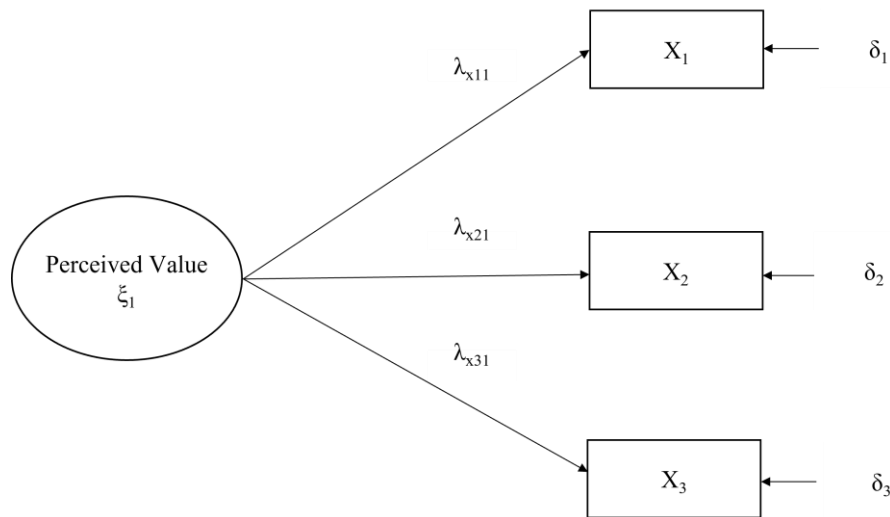
A second-order CFA model was examined with more general second-order factors that include more specific, first-order factors. In the second-order factors, the first-order factors are treated as indicator variables for the second-order factor models and the observed indicator

variables only apply to the first-order factors (Wang & Wang, 2020). Further, a previous study

noted that "the first-order factors are linear combinations of second-order factors, plus a unique

variable for each first-order factor" (Rindskopf & Rose, 1988, p. 55). For example, a second-

order factor model consists of two main structures: (1) the observed indicators (i.e., y_1–y_6) are

indicators of two first-order factors (i.e., η_1 and η_2) and (2) the two first-order factors relate to

second-order factors (i.e., ξ_1). The covariances of the first-order factors are not perfectly

represented by the second-order factor; thus, each first-order factor contains errors (i.e., ς_1 and

ς_2). The observed indicators of the first-order factors are regarded as endogenous indicators (i.e.,

y_1–y_6), and their residual terms are denoted as ε_1–ε_6 (see Figure 3.4). The symbols of the

parameters (i.e., γ_{11}–γ_{21}) represent the paths between a second-order factor and two first-order

factors (Bagozzi & Yi, 2012). The constructs of fantasy sport engagement and social media

engagement were also implemented based on the same principles as those of the second-order

approach.

Figure 3.4

A Sample of a Second-order Confirmatory Factor Analysis Model
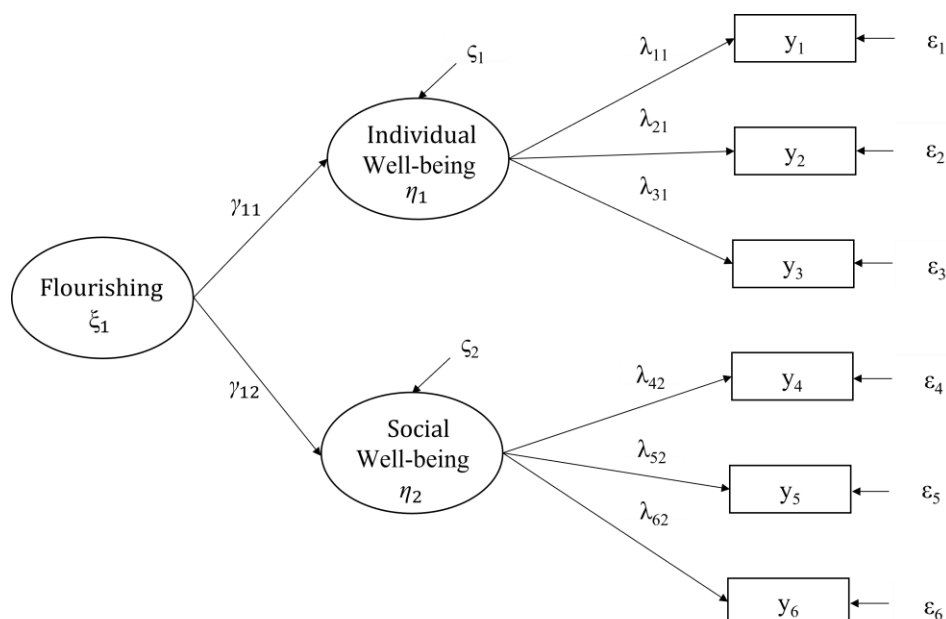
Testing the Structural Model

With the acceptable measurement model, analyses were next conducted to check whether the structural model fit the data well for the whole sample. The overall model fit was assessed using the same goodness-of-fit indices and associated cutoff values used for testing the CFA model: RMSEA, SRMR, TLI, and CFI. During assessment of a full structural model, when unacceptable overall fit is identified, relating the indicator to a different factor or deletion of the indicator from the model was used (Anderson & Gerbing, 1988). After obtaining acceptable model fit indices in the full structural model fit, the path coefficients were assessed (Kline, 2016) in terms of statistical significance, magnitude, and direction (See Figure 3.5). There are three direct paths (fantasy sport engagement → perceived values; SNS engagement → perceived value; perceived value → flourishing). Additionally, the mediating effects analysis was conducted to establish theoretical indirect relationship among constructs or factors to address research hypotheses 4 and 5. In this current study, the construct of perceived value was hypothesized to mediate the relationship digitalized engagement (fantasy sport or social media) and flourishing. Two indirect impacts were analyzed to investigate the research hypotheses (fantasy sport engagement → perceived values → flourishing; social media sport engagement → perceived values → flourishing). To examine the mediating role of perceived value in the relationship between digital engagement and flourishing among sport consumers, the bootstrapping method was employed to measure the statistically significant direct and indirect paths simultaneously (Cheung & Lau, 2008).

Figure 3.5

A Full Structural Model
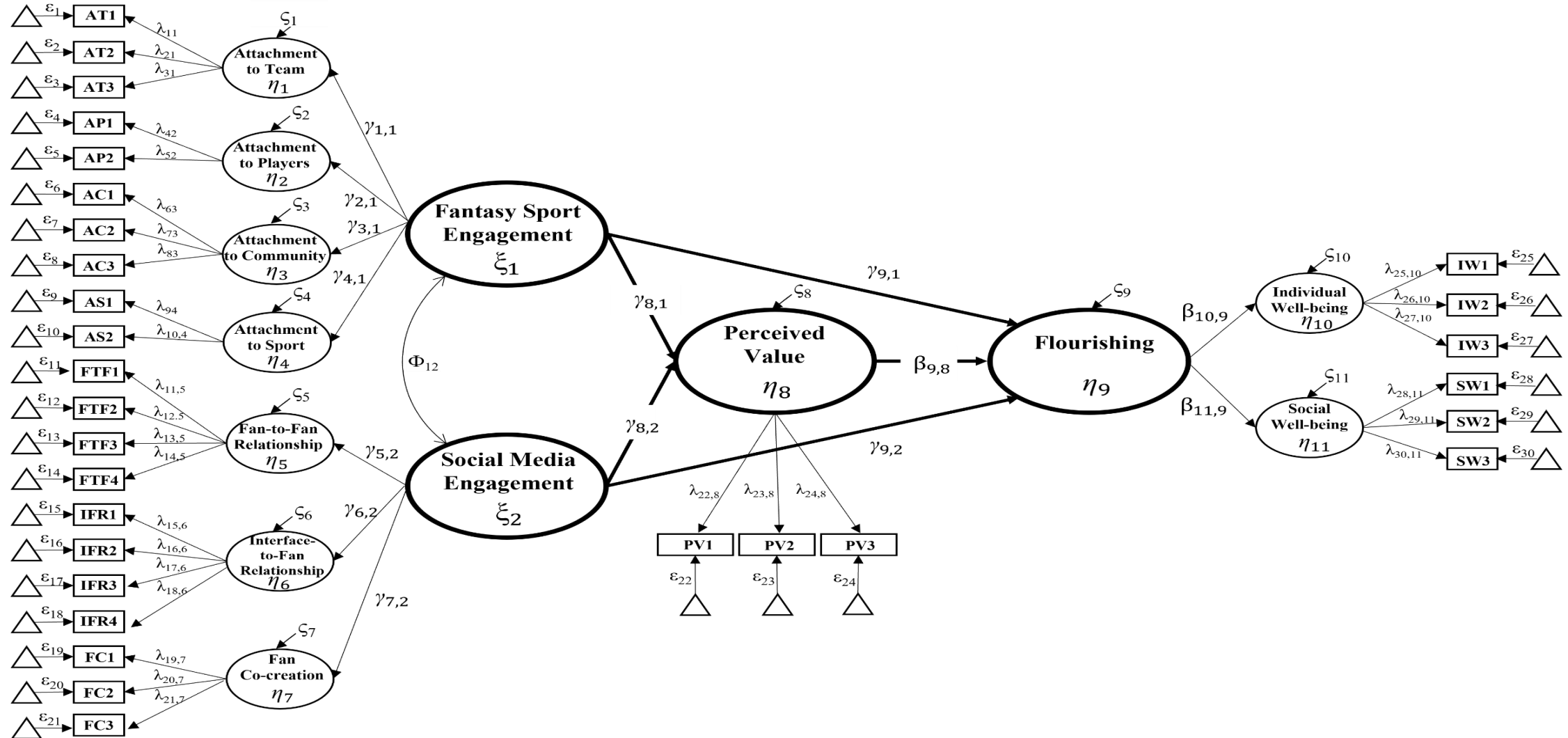
Notes: ξ: latent exogenous variables, η: latent endogenous variables, γ: parameters relating the endogenous variables, λ: vectors of factor loadings, Φ: the correlation between two exogenous variables, ζ: measurement of error, ε: measurement errors, β: petameters from the endogenous variables to other endogenous variables

**Assessment of the Invariance Testing
in Structural Equation Modeling**

Measurement invariance testing is used to evaluate the psychometric equivalence of each construct across groups (Putnick & Bornstein, 2016). To check whether the measured constructs are differently perceived across groups or not, the measurement invariance procedure was carried out to determine whether there is a difference in responses among before, during, and after groups. If there is a difference, it may be that the same measurement tool is responded to differently across the groups; in such a case, it could mean that a researcher fails to obtain data invariance and can create spurious group differences and misleading results (Putnick & Bornstein, 2016). The invariance testing used in the current study consisted of two parts: (1) measurement invariance and (2) structural invariance. If non-invariance was detected, analysis proceeded by conducting tests of partial invariance (Brown, 2015; Sass & Schmitt, 2013). Partial measurement invariance relaxes some equality constraints on the measurement parameters when full measurement invariance is not met (Muthén & Muthén, 2013; Steenkamp & Baumgartner, 1998; Vandenberg & Lance, 2000). The types of measurement invariance considered in the current study included (1) configural invariance, (2) metric invariance, (3) threshold invariance, and (4) invariant factor variance/covariance (Kline, 2016; Steenkamp & Baumgartner, 1998). Structural invariance is the examination of group comparisons for structural coefficients and thus is used to evaluate differences in the structural aspect of models (Hair et al., 2019).

The measurement invariance testing enables researchers to compare model(s) across different groups. The grouping of fantasy sports and social media engagement was used for the general verification of respondents' engagement with sports consumers' regular habits before, during, or after watching sporting events. When using multiple groups for invariance tests, it is vital to understand whether the groups are from a single homogeneous population. To do so,

analysts need to divide the overall sample into relevant sub-groups (Liu et al., 2017; Lubke & Muthén, 2004). Although Chan-Olmsted and Kwak (2020) attempted to group fantasy sports participants into three groups (before, during, and after concepts), a theoretical framework to classify the three groupings has not been developed, such as adding the description of a particular timepoint. In the sports management literature, such classification has not been specifically addressed; hence, the grouping classification in the current study was selected and modified based on previous studies in the business literature (Cox et al., 2009; Fotis, 2015; Lee et al., 2013; Oh et al., 2017).

Testing Measurement Invariance

For testing measurement invariance testing, M*plus* 7.11 software was used (Muthén & Muthén, 2013). The WLSMV estimator was selected based on the theoretical and statistical appropriateness for the ordered categorical data (Boie et al., 2013; Lubke & Muthén, 2004). The WLSMV estimator in M*plus* does not allow for a direct comparison among models based on $\Delta\chi^2$, ΔCFI, ΔTLI, and ΔRMSEA; however, using the DIFFTEST function with the WLSMV estimator in M*plus* allows for the estimation of a robust $\Delta\chi^2$ (Liu et al., 2017; Sass, 2011). In addition to examining the chi-square difference test, the descriptive fit indices of the nested measurement models can be assessed for measurement invariance by examining ΔCFI, ΔTLI, and ΔRMSEA values (Chen, 2007) though their use is not supported with WLSMV as the estimator (Sass et al., 2014).

Criteria for Assessing Invariance
Model Fit

The first step of the measurement invariance test is to assess the model fit separately within each group (Sass & Schmitt, 2013). This step ensures that the dataset fulfills the assumptions of the theoretical model, and that each subgroup has a sufficiently large sample (Pendergast et al.,

2017). Overall goodness-of-fit indices were assessed, including the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the Tucker–Lewis index (TLI), and the comparative fit index (CFI). The cutoff criteria for goodness-of-fit were (1) RMSEA values below .08, (2) SRMR values of .08 or less, and (3) CFI or TLI values above .95 (Hu & Bentler, 1999). If the model fit indices show an acceptable model fit for each subgroup separately, the steps for testing measurement invariance can be then carried out. The model fit for baseline models should be similar but not necessarily identical across groups (Wang & Wang, 2020). However, if the model fit for each subgroup is not adequate at this level, conducting measurement invariance testing is not viable, and between-group comparisons would not be appropriate (Vandenberg, 2002; Vandenberg & Lance, 2000).

The fit statistics for metric, scalar, or other further invariance models were assessed by comparing the fit of two nested models that are invariant, except for a target set of constraints in one model (Putnick & Bornstein, 2016). To evaluate measurement invariance, the significance of a change in χ^2 was classically used for two nested model comparisons (Byrne et al., 1989). Nonsignificant chi-squared difference testing ($\Delta\chi^2$) means that the difference between groups is minimal (Vandenberg, 2002; Vandenberg & Lance, 2000). Since χ^2 is sensitive to sample size, other alternative fit indices (e.g., ΔCFI, ΔTLI, ΔSRMR, and ΔRMSEA) were employed in the current study, along with the testing of $\Delta\chi^2$. Acceptable cut-off levels in the invariance testing for configural and metric invariance testing when using maximum likelihood estimation are ΔCFI $\geq$ -.02, ΔTLI $\leq$ .01, and ΔSRMR $\geq$ .030, ΔRMSEA $\leq$ .05 (Chen, 2007; Cheung & Rensvold, 2002; Rutkowski & Svetina, 2017; Sass et al., 2014), though research by Sass et al. (2014) did not support these values when conducting invariance analysis with ordinal data based on WLSMV estimation. For scalar and any other further invariance models, acceptable cutoff values are ΔCFI

$\geq$ -.01, ΔTLI $\leq$ .01, ΔSRMR $\geq$ .010, and ΔRMSEA $\leq$ .01(Chen, 2007; Cheung & Rensvold, 2002; Rutkowski & Svetina, 2017; Sass et al., 2014).

Configural Invariance

After assessing the baseline model's global and component fit statistics, the next step is testing configural invariance, which is called the least restrictive level of measurement invariance (Kline, 2016). Configural invariance is used to demonstrate equivalent factors and patterns of factor loadings and to describe the variance–covariance matrices related to the responses across groups (Brown, 2015; Steenkamp & Baumgartner, 1998; Vandenberg, 2002). This test is crucial for setting a baseline by which more restrictive models can be compared because all subsequent tests in measurement invariance can be performed with increasingly more restrictive levels (Sass et al., 2014). When configural invariance is obtained, it implies that equivalent factors are manifested similarly across each group (Brown, 2015). Failing to achieve configural invariance is undesirable because the groups may not be comparable (Vandenberg, 2002). A non-significant chi-square test and other model fit indices were examined, using the same criteria for model evaluation as indicated earlier in this chapter in the section on Testing the Measurement Model, to satisfy the simultaneous assessment of equal form (Vandenberg, 2002). When configural invariance is not met, redefining the construct (e.g., deleting one or more items and retesting the model) was used in the current study as a partial invariance approach at the configural invariance level (Putnick & Bornstein, 2016).

Metric Invariance

Metric invariance tests the equivalence constraints on the factor loadings in each group (Kline, 2016). Model fit indices, including the change in chi-square statistic, were assessed to verify metric invariance (Boie et al., 2013). When the items meet the requirement of metric

invariance level, then the degree of the relationships among items and the latent factors are the same across the groups (Pendergast et al., 2017; Steenkamp & Baumgartner, 1998). When relationships among items and factors show significant differences across the groups, then the construct is regarded as metrically non-invariant which means the intensity of the relationship between the indicator variables and the underlying constructs differs across groups (Pendergast et al., 2017; Rocabado et al., 2020). Non-invariant metric invariance would be problematic since the failure to establish the metric invariance model across groups implies that respondents differently interpret one or more items of the underlying constructs from self-report instruments. If the lack of a metric invariance model was identified, the partial invariance approach was applied (Putnick & Bornstein, 2016; Sass et al., 2014).

Threshold Invariance

Threshold invariance evaluates the equivalence of observed variables' metric thresholds across groups when ordered categorical data are used as the indicator variables (Sass & Schmitt, 2013). The threshold invariance model is used to run a model where factor loadings and thresholds are constrained to be equal across the subgroups (Pendergast et al., 2017). When the threshold invariance model's fit is not significantly different from the fit of the metric-invariant model, the threshold invariance is supported, meaning that members of the groups have an invariant probability of shifting among the response options for the underlying constructs, such as from strongly agree to strongly disagree (Kim & Yoon, 2011; Vandenberg & Lance, 2000). For example, in evidence for threshold invariance, the similar range of response options can be illustrated for the underlying latent variables across subgroups. A true score of 5 (*somewhat agree*) on the underlying latent variable might lead to a 6 response (*agree*) across all subgroups (Bowen & Masa, 2015).

When the threshold invariance model is not supported, members of multiple groups respond differently to the underlying trait on one or more items. For example, some culture in Latin American tend to use extreme end points of a scale whereas Asian cultures tend to favor neutral middle points of the underlying scale (Saris, 1988). As another example, a different range of true scores may correspond to strongly disagree. In the female group, a true score of 1 (strongly disagree) on the underlying latent variables might lead to a 2 response (disagree). In the male group, a true score of 1 (strongly disagree) on the underlying latent variables might lead to a 3 response (somewhat disagree). If full threshold invariance is not retained, partial invariance testing should be considered by identifying which parameters (e.g., thresholds) differ across groups and allowing them to be freely estimated in each group (Sass & Schmitt, 2013). The application of the partial threshold invariance model allows some thresholds, but not all thresholds, to be freely estimated within groups on the noninvariant items and some to be constrained across subgroups.

Factor Variance Invariance

Invariant factor variance indicates the equality of variances among latent variables across groups (Boie et al., 2013; Kline, 2016; Steenkamp & Baumgartner, 1998) whereas invariant factor covariances represent equivalence of relationships among the underlying latent variables in a confirmatory factor model (Dimitrov, 2010; Vandenberg & Lance, 2000). Regarding construct validation, the decision of whether to conduct invariant factor variance should depend on whether "the variability of target constructs and/or correlational relationships among them are deemed relevant to the generalizability aspect of validity" (Dimitrov, 2010, p. 125). If the invariant factor variance model is not retained, a partially invariant model can be applied by

setting constraints on noninvariant variances only (Pendergast et al., 2017). All parameters of each step in the assessment of measurement invariance are summarized in Table 3.3.

Table 3.3

Steps of Measurement Invariance (Dimitrov, 2010)

Model	Parameters Constrained to be Equal
Configural Invariance	None (unconstrained model)
Metric Invariance	Factor Loadings
Threshold Invariance	Factor Loadings and Item Thresholds
Factor Variance Invariance	Factor Loadings, Item Thresholds, and Factor Variances

Assessment of Structural Invariance

To follow up on the analysis of measurement invariance, the differences in structural model parameters (e.g., structural coefficients) among groups was assessed (Hair et al., 2019). To conduct a structural invariance test, each group's structural parameters were tested to determine whether the values of the path coefficients in the model are consistent. A structural invariance test was conducted to detect consistency of structural path coefficients, which I did by imposing equality constraints on the structural coefficients and then performing chi-square difference tests for the before, during, and after groups (Hakyemez & Mardikyan, 2021). If the finding of chi-square testing is not statistically significant, it indicates that structural invariance has been obtained (Boie et al., 2013). As represented in Figure 3.6, sequences of measurement invariance testing were conducted.

Figure 3.6

A Flowchart for Assessing Measurement
 and Structural Invariance
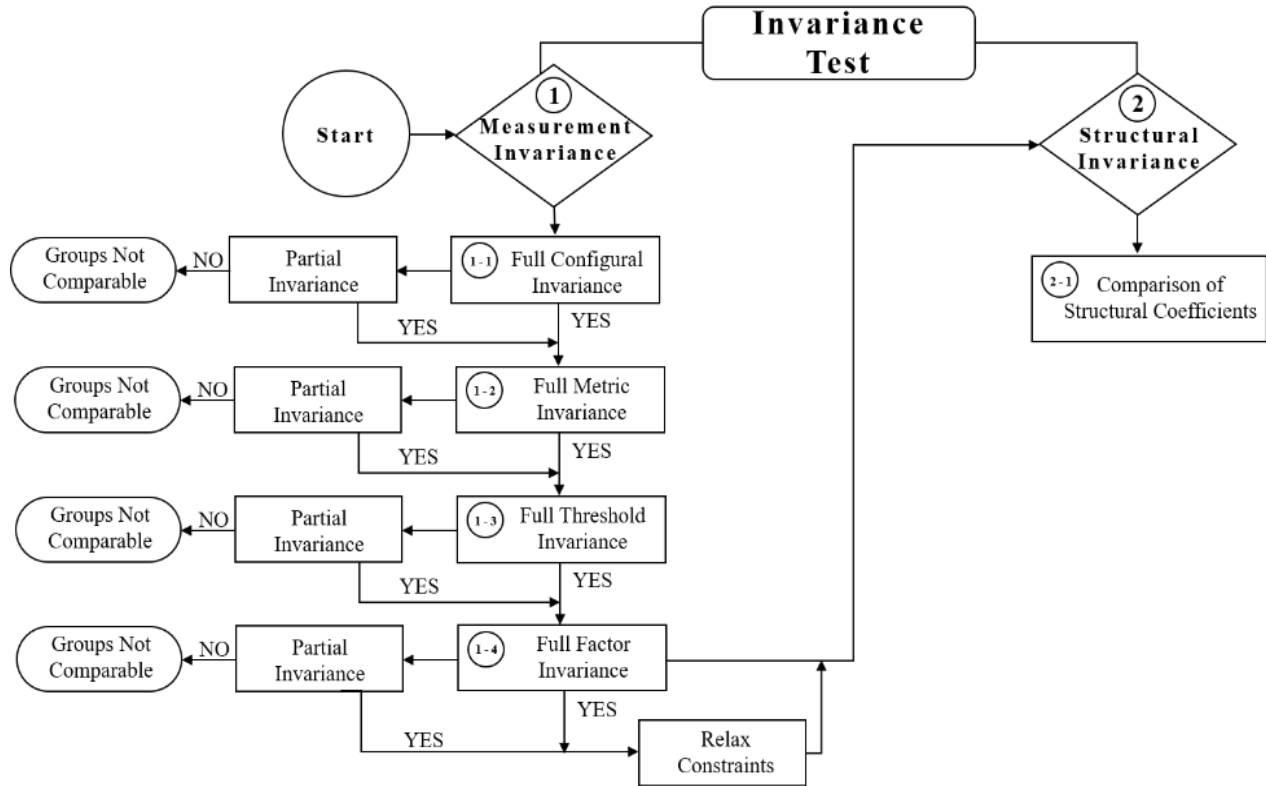
Chapter Summary

The target sample contains sport fans aged at least 18 years who use digital services (e.g.,

fantasy sport, social media, and television). To recruit this target sample, quota sampling was

applied with the following condition: regular use of fantasy sport and social media before,

during, or after watching MLB games on television. The sample was recruited from a Qualtrics

panel of US residents who voluntarily completed the online survey. Due to the use of the online

survey, a nonexperimental cross-sectional design was chosen in this study. The online survey

questionnaire consisted of screening questions, demographic questions, and items measuring

several constructs (e.g., fantasy sport engagement, social media engagement, perceived values, and flourishing). By using M*plus* software, confirmatory factor analysis (CFA) was used to establish a measurement model and mediation structural equation model (SEM) to test hypotheses for a single group. To explore the relationships across three multiple groups (before, during, and after group) and test hypothesized relations among the latent variables, measurement invariance and multigroup structural equation modeling (MGSEM) were conducted to assess the equivalence of each construct and to check the consistency of structural path coefficients among the three groups (before, during, and after groups).

CHAPTER IV

RESULT

This chapter presents the findings of sequential statistical testing. First, the characteristics of respondents, including demographic features and digital usages, are addressed with the means and standard deviations. Second, the findings of the confirmatory factor analysis are explained, including McDonald's Omega values, values of composite reliability, and averaged and extracted variance values. Structural equation modeling analysis with the overall sample is assessed for direct and indirect effects. The final section of this chapter includes the findings of measurement and structural invariance testing across three groups.

Participants

Using quota sampling, I collected data from 629 sports fans who regularly participate in fantasy baseball, use social media to engage with their favorite MLB teams, and watch MLB games on television. Of these research participants, 211, 212, and 206 reported that they mostly engaged in fantasy baseball and related social media *before*, *while*, and *after* viewing MLB games in the previous three months, respectively. The demographic features of the three groups are presented in Table 4.1. The specific composition of the *before* group was unevenly distributed by gender (150 males and 61 females). The mean age of respondents in the *before* group was 43 ($SD = 14.5$) years; approximately 60% of the respondents were 25–44 years old. Most of the respondents (78.7%) in the *before* group indicated that they had earned a degree in higher education from a college diploma (32.7%), whereas some earned college (24.7%) or graduate degree (21.3%). The participants were identified as Caucasian ($n = 165$, 78.2%),

Hispanic (*n* = 17, 8.1%), and African–American (*n* = 15, 7.1%). More than 40% of the research

participants in the *before* group earned a household annual income of $20,000–$39,999 (*n* = 47,

22.3%) and $40,000–$59,999 (*n* = 41, 19.4%).

Respondents of the *during* group included an unequal ratio of gender (153 males, 72.2%;

59 females, 27.8%). The average age of the group was slightly younger than that of the *before*

and *after* groups (39 years old, *SD* = 11.9 years); more than half of the research participants were

25–44 years old. The majority of the respondents (86.8%) received their degrees in higher

education with a college diploma (29.2%), whereas some had college (28.8%) or graduate

degrees (28.8%). Approximately 75% of respondents were Caucasian (*n* = 157, 74.1%), followed

by African–American (*n* = 26, 12.3%) and Hispanic (*n* = 11, 5.2%). Slightly more than 30% of

research participants reported having an income between $20,000–$59,999 ($20,000–$39,999,

n = 30, 14.2%; $40,000–$59,999, *n* = 39, 18.4%).

In members of the *after* group, the gender demographics indicated more male (*n* = 153,

74.3%) than female respondents (*n* = 53, 25.7%). The average age of the *after* group was 43 (*SD*

= 13.1) years; more than half of the respondents were 25–44 years old. More than four-fifths of

the respondents obtained their degrees in higher education with a college diploma (30.6%),

a graduate degree (33.4%), or a college degree (30.6%). A majority of research participants were

Caucasian (*n* = 174, 84.5%), followed by African–American (*n* = 16, 7.8%) and Hispanic

(*n* = 12, 5.7%). Concerning income, approximately 80% of respondents earned a household

annual income greater than $40,000.

Table 4.1

Demographic Profile of Research Participants
for Each Subgroup

Demographic Characteristics	Before Group (*n* = 211)		During Group (*n* = 212)		After Group (*n* = 206)		Chi-square Independence Testing
	n	%	n	%	n	%	
Gender							*p* = .76
Female	150	71.1	153	72.2	153	74.3	
Male	61	28.9	59	27.8	53	25.7	
Age							*p* = .44
18–24	6	2.9	17	8.1	7	3.4	
25–34	62	29.3	56	26.4	43	21	
35–44	60	28.3	80	37.7	77	37.3	
45–54	31	14.7	30	14.3	33	16	
55 and over	52	24.8	29	13.5	46	22.3	
Education							*p* < .05
Some high school or less	0	0	2	.9	0	0	
High school diploma	37	17.5	22	10.4	17	8.3	
Some college	52	24.7	61	28.8	49	23.8	
College diploma	69	32.7	62	29.2	63	30.6	
Some graduate school	7	3.3	4	1.9	8	3.9	
Graduate degree	45	21.3	61	28.8	69	33.4	
Choose not to identify	1	.5	0	0	0	0	
Ethnicity							*p* = .06
Caucasian	165	78.2	157	74.1	174	84.5	
African–American	15	7.1	26	12.3	16	7.8	
Hispanic	17	8.1	11	5.2	12	5.7	
Asian	7	3.3	9	4.2	3	1.5	
Native American	0	0	3	1.4	0	0	
South Asian/Indian	0	0	1	.5	0	0	
Multi-racial	7	3.3	5	2.3	1	.5	
Household Annual Income							*p* = .22
Under $19, 999	16	7.6	18	8.5	10	4.9	
$20,000–$39,999	47	22.3	30	14.2	27	13.2	
$40,000–$59,999	41	19.4	39	18.4	34	16.5	
$60,000–$79,999	24	11.4	33	15.5	30	14.5	
$80,000–$99,999	31	14.7	39	18.4	34	16.5	
More than $100,000	52	24.6	53	25	71	34.4	

Table 4.2 indicates research participants' digital usages for fantasy sport, social media, and television across the three subgroups. All three subgroups indicated similar patterns of digital consumption activities. More than 70% of the respondents among the three groups used Facebook, Twitter, or Instagram for their favorite fantasy sport teams. The most frequently used fantasy sports-related websites were MLB.com in the before group and espn.com in all three groups. More than half of the respondents in all three groups watch television at least two to three times a week for their favorite fantasy sport teams.

Table 4.2

Demographic Profile of Digital Consumption
for Each Subgroup

Demographic Characteristics	Before Group (*n* = 211)		During Group (*n* = 212)		After Group (*n* = 206)		Chi-square Independence Testing
	n	%	*n*	%	*n*	%	
Usage of Social Media Platform							$p < .05$
Twitter	70	33.2	78	36.8	68	33	
Instagram	26	12.3	46	21.7	29	14.1	
Facebook	80	37.9	72	34	86	41.7	
Snapchat	2	.9	1	.5	1	.5	
YouTube	33	15.7	13	6.1	20	9.7	
TikTok	0	0	2	.9	2	1	
Usage of Fantasy Sport Services							$p = .74$
MLB.com	75	35.5	78	36.8	89	43.2	
espn.com	75	35.5	79	37.3	71	34.5	
yahoo.com	52	24.6	47	22.2	41	19.9	
Other	9	4.4	8	3.7	5	2.4	
Frequency of TV viewing							$p = .24$
Less than once a week	8	3.8	5	2.4	8	3.9	
Once a week	35	16.6	28	13.2	43	20.9	
2–3 times a week	84	39.8	89	42	63	30.6	
4–6 times a week	51	24.2	49	23.1	43	20.9	
Once every day	19	9	18	8.5	23	11.2	
2–3 times per day	11	5.2	14	6.6	17	8.2	
4 or more times per day	3	1.4	9	4.2	9	4.3	

Chi-square independence testing was conducted to determine whether the demographic characteristics significantly differ across three subgroups (Franke et al., 2012). Findings of the chi-square independence testing indicated that there were no significant differences of the demographic characteristics across the three groups except education, frequency of social media platforms, and frequency of social media usage. The overall demographic characteristics of the research participants were relatively similar to the features of the target population. According to the Fantasy Sports & Gaming Association (2022) report, fantasy sport users displayed a high ratio of males (81%), an average age of 38 years, and a household income of more than $75,000 in about half of fantasy, which is similar to the demographic profile of research participants in this current study. The results align with information reported in Fantasy Sports & Gaming Association (2022).

Results of Confirmatory Factor Analysis

Correlations among all Variables

To check the characteristics of individual items, I first conducted a correlation analysis of items (see Table 4.3). In the *before* group, the highest correlation was between *fan-to-fan relationship* and *Fantasy baseball interface-to-fan relationship*, which was high ($r = .76$). The weakest correlation was indicated between *attachment to team* and *attachment to sports* ($r = .31$). In the *during* group, relatively high correlations ($r = .70$) were found among some constructs. The weakest correlation was found between *social well-being* and *attachment to sports* ($r = .28$). Regarding the *after* group, a relatively high correlation between *attachment to community* and *fan-to-fan relationship* was indicated ($r = .71$), whereas the weakest correlation was found between *attachment to sports* and *social well-being* ($r = .29$).

Table 4.3

Correlations among the Factors

						Before Group (*n* = 211)					
	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. AT	5.62	.93	1									
2. AP	5.50	.98	.47	1								
3. AS	5.62	1.14	.31	.33	1							
4. AC	5.34	1.06	.65	.46	.45	1						
5. FTF	5.33	1.04	.51	.50	.41	.69	1					
6. FIF	5.45	.90	.44	.51	.42	.70	.76	1				
7. FC	4.58	1.14	.46	.49	.38	.59	.73	.66	1			
8. PV	5.51	.95	.59	.48	.35	.68	.61	.62	.55	1		
9. IN	5.38	1.01	.65	.51	.41	.73	.61	.61	.60	.74	1	
10. SO	5.29	1.04	.50	.47	.26	.54	.61	.62	.60	.55	.63	1

						During Group (*n* = 212)					
	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. AT	5.53	.93	1									
2. AP	5.53	.97	.56	1								
3. AS	5.54	1.08	.41	.40	1							
4. AC	5.29	.97	.70	.57	.42	1						
5. FTF	5.20	.91	.51	.47	.34	.68	1					
6. FIF	5.31	.91	.47	.57	.38	.64	.70	1				
7. FC	4.69	1.38	.45	.37	.28	.65	.66	.68	1			
8. PV	5.39	.92	.52	.44	.37	.62	.59	.67	.59	1		
9. IN	5.21	.99	.57	.53	.35	.69	.61	.65	.63	.70	1	
10. SO	5.24	1.08	.48	.49	.28	.65	.56	.65	.59	.62	.70	1

						After Group (*n* = 206)					
	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. AT	5.40	1.05	1									
2. AP	5.47	1.05	.55	1								
3. AS	5.64	1.24	.40	.47	1							
4. AC	5.38	1.00	.75	.60	.49	1						
5. FTF	5.37	.97	.59	.53	.46	.71	1					
6. FIF	5.44	.84	.56	.59	.47	.68	.68	1				
7. FC	4.72	1.39	.61	.51	.46	.70	.69	.62	1			
8. PV	5.47	.91	.65	.60	.46	.69	.65	.73	.60	1		
9. IN	5.39	.93	.64	.55	.35	.72	.67	.64	.61	.68	1	
10. SO	5.26	1.11	.48	.43	.29	.56	.53	.63	.57	.62	.66	1

Notes: *: $p < 0.01$, *M* = Mean, *SD* = standard deviation, AT = attachment to team,
AP = attachment to player, AS = attachment to sports, AC = attachment to community,
FTF = fan-to-fan relationship, FIF = fantasy baseball interface-to-fan relationship,
FC = fan co-creation, PV = perceived value, IN = individual well-being, SO = social well-being

Internal Reliability among
all Variables

In the assessment of reliability, McDonald's omega (ω) was calculated for scores on each

latent variable. Based on each subsample (*before*, $n = 211$; *during*, $n = 212$; *after*, $n = 206$),

McDonald's omega reliability estimates on scores from the latent variables were assessed. All

values of McDonald's omega were higher than .70, implying that scores on all constructs

achieved internal consistency across the three groups (Hayes & Coutts, 2020). In the before

group, the McDonald's omega coefficients for each latent variable were ranged from .75 to .91.

In members of the during group, the McDonald's omega coefficients of all constructs were

ranged .79 to .89. In the after group, the values of McDonald's omega for all items were ranged

from .73 to .90. Although the range of McDonald's omega reliability estimates on scores from

attachment to players showed slightly different across three groups, the overall McDonald's

omega (ω) indicated similar reliability estimates across the three groups and ranged from .73 to

.91, denoting acceptable reliability (See Table 4.4).

Table 4.4

Reliabilities for Each Subsample

Constructs/Items	B ω	D ω	A ω
Fantasy Sport Engagement			
Attachment to Team	.80	.79	.83
I consider myself a participant of fantasy baseball.			
I would experience a loss if I had to stop playing fantasy baseball.			
Being a fantasy sports participant is very important to me.			
Attachment to Players	.75	.80	.73
I am a fan of a specific player within my fantasy baseball leagues.			
I follow my fantasy baseball team(s) because I like their players.			
Attachment to Sports	.86	.87	.90
I consider myself, first and foremost, a baseball fan.			
Baseball is my favorite sport.			
Of all sports, I prefer baseball.			
Attachment to Community	.91	.89	.90
I feel connected to numerous aspects of the fantasy baseball community.			
I feel a part of the fantasy baseball community.			
I support the fantasy baseball community in which a desire exists to have interactions with fantasy baseball users.			
Social media engagement			
Fan-to-Fan Relationship	.89	.84	.87
I am willing to help and share information with other users of fantasy baseball on social media.			
Even if it may cost time and money, I am willing to assist other members of fantasy baseball accounts on social media.			
Fantasy baseball accounts on social media allow for the development of social bonds with other fans.			
I feel great pleasure when interacting with other fans through fantasy baseball accounts on social media.			
Fantasy Baseball Interface-to-Fan Relationship	.88	.87	.86
I think fantasy baseball accounts on social media are cool.			
The fantasy baseball accounts on social media have an exceptional design.			
The fantasy baseball accounts on social media meet my expectations.			
I feel that the information offered by fantasy baseball accounts on social media is perfectly clear.			

Table 4.4, *continued*

Constructs/Items	B ω	D ω	A ω
Fan Co-creation	.89	.86	.86
I spend time posting photos/videos about fantasy baseball on social media.			
I share information/comments/photos/videos about fantasy baseball on social media.			
I add hashtags about fantasy baseball on social media.			
Perceived value	.83	.83	.86
The programs and services of fantasy baseball have great value.			
What I get from fantasy baseball and what it costs offer me value.			
In general, the value of the programs and services in fantasy baseball is high.			
Flourishing			
Individual Well-Being	.86	.85	.84
Being involved with fantasy baseball can satisfy my private feelings.			
I feel happy when involved with fantasy baseball.			
Being involved with fantasy baseball has improved my life satisfaction.			
Social Well-Being	.82	.85	.86
By being involved with fantasy baseball, I can better integrate into my friends/family.			
Playing fantasy baseball adds fun to my time with friends/family.			
Talking about fantasy baseball brings me closer to my friends/family.			

Note. ω = McDonald's omega reliability estimates; B = before group; D = during group; A = after group

**Factor Analysis among
All Variables**

Three separate CFA models were assessed for model fit across the three groups (see

Table 4.5). The standardized factor loadings across the three groups showed practical ($\lambda = .50$)

and statistical ($p < .001$) acceptability, except for one item related to *attachment to player*. Two

items in *attachment to fantasy sport,* one item in *attachment to sports,* and one item in

attachment to player indicated huge modification indices (664.13) for factor loadings on almost

all latent variables and their presence decreased model fit. Four items were therefore eliminated.

The AVE values of all constructs were above the threshold, ranging from .56 to .81, except for *attachment to sports* in the *during* group (.37). Although the construct reliability (CR) scores of *attachment to sports* in the *during* group was below .7 (.54), the CR values of all other constructs were above the recommended cut-off criteria, ranging from .71 to 93, showing convergent validity of all measures in each construct across the three groups. In addition, the examination of whether a squared correlation between two constructs was below the AVE values for each construct confirmed that the measurement model had discriminant validity.

CFA was conducted to analyze a global measurement model and to check the goodness of fit of the constructs (i.e., fantasy sport engagement, social media engagement, perceived value, and flourishing). In all three groups, the values of model fit indices indicated a satisfactory fit of the model to the data. Concerning the *before* group, the results showed that the model fit the sample well: $x^2(390, N = 211) = 773.95, p < .001$, CFI = .97, TLI = .97, SRMR = .05, and RMSEA = .06. For during group, the measurement model fit indices showed an acceptable fit: $x^2(390, N = 212) = 668.50.16, p < .001$, CFI = .98, TLI = .98, SRMR = .04, and RMSEA = .06. The measurement model of the *after* group fit the sample well: $x^2(390, N = 206) = 730.39, p < .001$, CFI = .97, TLI = .97, SRMR = .04, and RMSEA = .06.

Table 4.5

Summary of Confirmatory Factor Analysis
for Each Subgroup

	Before Group			During Group			After Group		
	λ	AVE	CR	λ	AVE	CR	λ	AVE	CR
Fantasy Sport Engagement									
Attachment to Team		.60	.82		.57	.79		.66	.85
AT1	.73			.57			.75		
AT2	.74			.79			.75		
AT3	.85			.87			.92		
Attachment to Players		.56	.72		.66	.76		.56	.71
AP1	.75			.73			.72		
AP2	.75			.89			.77		
Attachment to Sports		.61	.76		.37	.54		.67	.79
AS1	.67			.57			.78		
AS2	.88			.64			.85		
Attachment to Community		.81	.93		.76	.90		.77	.90
AC1	.90			.87			.86		
AC2	.90			.89			.90		
AC3	.90			.85			.87		
Social Media Engagement									
Fan-to-Fan Relationship		.71	.91		.61	.86		.67	.89
FFR1	.82			.82			.79		
FFR2	.86			.72			.81		
FFR3	.81			.84			.81		
FFR4	.87			.84			.86		
Interface-to-Fan Relationship		.69	.89		.68	.89		.64	.88
FIR1	.88			.85			.84		
FIR2	.88			.80			.80		
FIR3	.76			.81			.77		
FIR4	.79			.83			.79		
Fan Co-creation		.73	.92		.71	.88		.70	.88
FC1	.85			.83			.84		
FC2	.90			.87			.88		
FC3	.88			.82			.79		

Table 4.5, *continued*

	Before Group			During Group			After Group		
	λ	AVE	CR	λ	AVE	CR	λ	AVE	CR
Perceived value		.78	.92		.66	.85		.72	.88
PV1	.88			.86			.91		
PV2	.90			.78			.88		
PV3	.88			.79			.74		
Flourishing		.71	.88		.67	.86		.67	.86
Individual Well-Being									
IW1	.79			.79			.78		
IW2	.86			.86			.88		
IW3	.87			.82			.80		
Social Well-Being		.63	.84		.69	.87		.69	.87
SW1	.84			.80			.84		
SW2	.72			.82			.83		
SW3	.82			.87			.83		

Notes: λ = factor loadings, AVE = average variance extracted, CR = construct reliability

Results of Structural Equation Modeling Analysis

The hypothesized structural model reflected a good model fit: $x^2(392, N = 629) =$ 1301.83, $p < .001$, CFI = .97, TLI = .97, SRMR = .04, and RMSEA = .06. With statistically significant path coefficients, fantasy engagement and social media were positively associated with perceived value (standardized $\gamma = .40$, standard error [SE] = .11, $p < .001$ and standardized $\gamma = .50$, SE = .11, $p < .001$, respectively), supporting H1 and H2. The relationship between perceived value and flourishing was statistically significant and positive (standardized $\beta = .41$, SE = .09, $p < .001$), supporting H3. The analysis of mediating effects showed statistically significant relationships, supporting H4 and H5. Additionally, the direct relationship between fantasy sport engagement and flourishing was statistically significant (standardized $\beta = .30$, SE = .11, $p < .01$). The path to flourishing from social media engagement was statistically significant (standardized $\beta = .29$, SE = .12, $p < .01$). The hypothesized model appears that perceived value only partially mediates the relationships fantasy sport engagement and social

media engagement and flourishing. Based on the findings, perceived value as a mediator is likely

to carry the relationship between fantasy sport or social media engagement and flourishing.

(Figure 4.1).

Figure 4.1

Findings of the Hypothesized Model
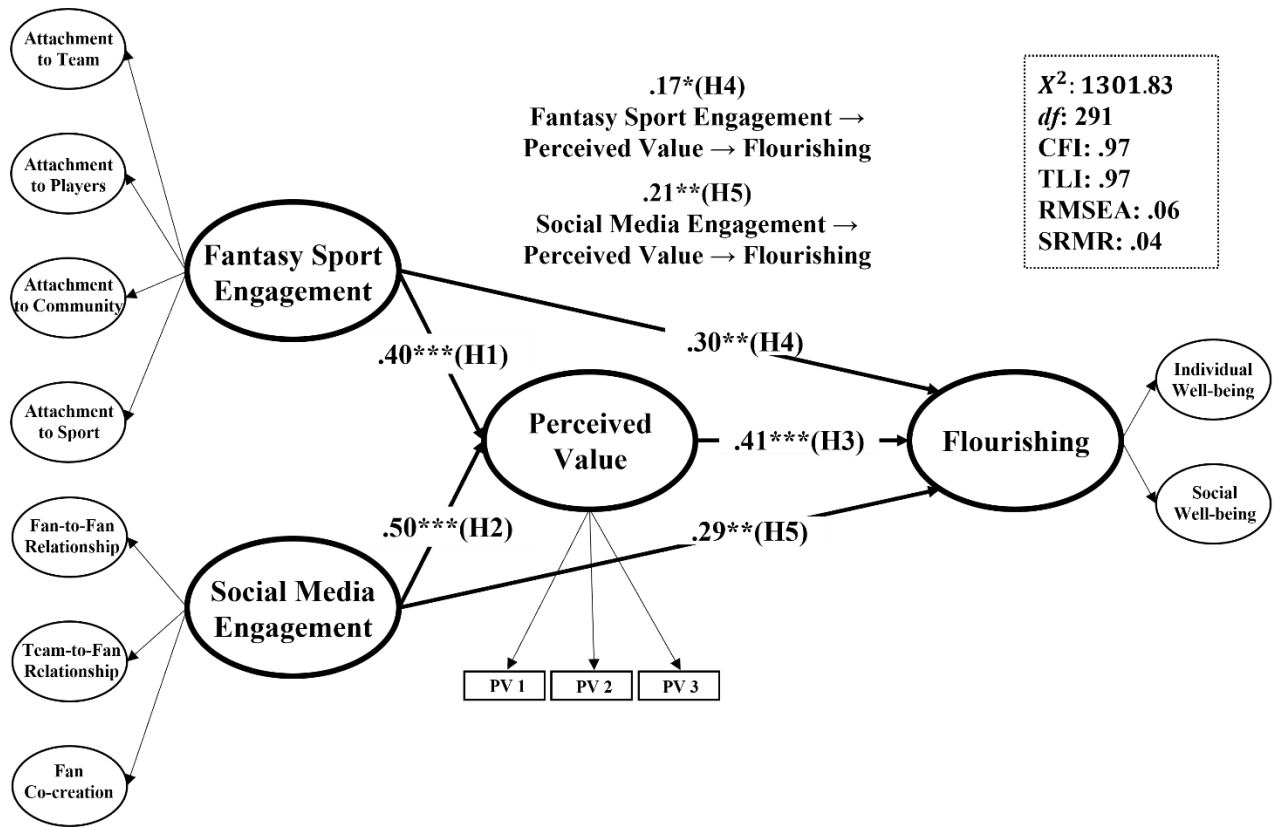
Note*: *p < .05, **p < .01, ***p < .001*

Results of Multi-Group Confirmatory Factor Analysis

The same overall measurement model was tested using CFA for each group separately (before, $n = 211$; during, $n = 212$; after, $n = 206$). As a prerequisite for testing measurement invariance, CFA was conducted for the overall sample, which showed that all standardized factor loadings were statistically significant and exceeded the minimum cutoff criteria of .50 (Kline, 2016), along with good model fit. Baseline models for first-order factors and second-order factors for each group showed large factor loadings and good model fit, respectively. These findings indicate that the preconditions for testing measurement invariance for a second-order MGCFA model were met for the *before*, *during*, and *after* groups.

In the first step of invariance testing, configural models for both first- and second-order factors demonstrated a good fit across the two groups (Table 4.7). The supportive configural invariance model showed that the factor structure and pattern of factor loadings for fantasy sport engagement, social media engagement, perceived value, and flourishing constructs were equivalent across the three groups. Metric invariance for first-order factors was examined, followed by testing the first- and second-order metric invariance model. A comparison of a second-order configural model with a second-order metric model showed no statistically significant increase in the x^2 nor noticeable decrements in fit based on the other model fit indices, suggesting that the same meaning was retained for all constructs across the two groups. The findings of the metric invariance models showed that similar relationships between latent variables and indicator variables were retained. After finding support for configural and metric invariance for the full first- and second-order CFA models, the same principles of testing intercept and threshold invariance were applied. For testing scalar invariance in the second-order model, there were no significant changes in fit based on comparing the fit of two nested models

(i.e., the scalar-invariant model versus the fit for the metric-invariant model). This means that the distribution of response cutoff points for first-order factors (e.g., three first-order factors for the perceived value construct) and the distribution of response cutoff points for the second-order factors (e.g., fantasy sport engagement, social media engagement, and flourishing, respectively) are equivalent across the three groups. In other words, the finding of scalar invariance suggests the members of three groups showed a similar range of the response options for the underlying constructs. This evidence of scalar invariance revealed that sport consumers' agreement level of fantasy sport and social media involvement corresponded to their agreement level of perceived value and flourishing before, during, and after viewing sports games.

After establishing configural, metric, and scalar invariance testing with first- and second-order factors across the three groups, the second-order latent factor variance invariance model was compared to the model fit of the scalar-invariant model. Consistent with previous levels of invariance testing, the model fit of the latent factor invariance model indicated an acceptable level across the three groups. Given that no statistically significant increase in x^2 and no noticeable decrements of the other model fit indices were observed; this testing showed no differences in factor variances for the three groups. The findings of this analysis imply that the amount of variability in the underlying constructs was similar for the three groups. The results of the measurement invariance testing revealed that all the unstandardized factor loadings, thresholds, and latent variances were equivalent across the three groups for first- and second-order factor models (see Table 4.6).

Table 4.6

Measurement Invariance for First-Order
and Second-Order Constructs

Model	x^2	df	Δx^2	Δdf	p	CFI	TLI	SRMR	RMSEA
Results of Measurement Invariance with First-Order Factors									
Baseline									
Before	612.99	314				.98	.97	.04	.07
During	541.65	314				.98	.98	.04	.06
After	626.09	314				.97	.97	.04	.07
Measurement Invariance									
1. CI	1994.48	1146				.98	.98	.04	.06
2. MI	1953.67	1186	39.02	40	.51	.98	.98	.04	.06
3. TI	2052.75	1340	164.32	154	.27	.98	.98	.04	.05
4. FI	1977.39	1360	21.76	20	.35	.98	.98	.04	.05
Model Comparison					Δ CFI	Δ TLI	Δ SRMR		Δ RMSEA
Configural vs. Metric Invariance					.00	.00	.01		.00
Metric vs. Threshold Invariance					.00	.00	.00		.01
Threshold vs. Factorial Variance Invariance					.00	.00	.00		.00
Results of Measurement Invariance with Second-Order Factors									
Baseline									
Before	773.948	390				.97	.97	.04	.07
During	668.496	390				.98	.98	.04	.06
After	730.389	390				.97	.97	.04	.07
Measurement Invariance									
1. CI	2220.783	1236				.98	.97	.05	.06
2. MI	2187.802	1276	39.15	40	.50	.98	.98	.06	.05
3. TI	2293.103	1430	164.42	154	.27	.98	.98	.05	.05
4. FI	2274.273	1435	6.70	5	.24	.98	.98	.05	.05
Model Comparison					Δ CFI	Δ TLI	Δ SRMR		Δ RMSEA
Configural vs. Metric Invariance					.00	.01	.01		–.01
Metric vs. Threshold Invariance					.00	.00	.00		.00
Threshold vs. Factorial Variance Invariance					.00	.00	.00		.00

Note: CI = configural invariance, MI = metric invariance, TI = threshold invariance, SI = structural Invariance, FI = Factorial Variance Invariance

Results of Multi-Group Structural
Equation Modeling Analysis

After obtaining acceptable evidence of measurement invariance, the structural model fit

was tested for each group separately, which indicated that the three models fit the data well, with

small differences observed among the groups (Table 4.7). The outcome of the baseline model

reflected its statistical appropriateness for use in assessing the invariance of the path coefficients.

The findings indicated that the unstandardized structural coefficients were equivalent across the

groups, implying that the relationships among the latent variables were not moderated by the

grouping of the participants under the before/during/after timelines. In addition, due to the

evidence suggesting invariant structural coefficients, the results suggest that the relationships

among the latent variables were similar across the three time-based groups. Hence, H6, H7, H8,

and H9 are unsupported.

Table 4.7

Structural Invariance for the Hypothesized Model

Model	x^2	df	Δx^2	Δdf	p	CFI	TLI	SRMR	RMSEA
Baseline									
Before	769.32					.97	.97	.05	.07
During	687.09	392				.98	.98	.05	.06
After	729.67	392				.97	.97	.04	.07
Invariance of the SEM									
1. CI	2205.65	1230				.98	.97	.05	.06
2. MI	2171.41	1270	39.13	40	.51	.98	.98	.05	.06
3. TI	2275.66	1424	164.34	154	.27	.98	.98	.05	.05
4. SI	1977.39	1360	21.76	20	.35	.98	.98	.04	.05
Model Comparison				Δ CFI		Δ TLI	Δ SRMR		Δ RMSEA
Configural vs. Metric Invariance				.00		.01	.00		.00
Metric vs. Threshold Invariance				.00		.00	.00		-.01
Threshold vs. Structural Invariance				.00		.00	-.01		.00

Note: CI = configural invariance, MI = metric invariance, TI = threshold invariance, SI = structural Invariance

Chapter Summary

In this chapter, the results of the data analysis were presented from the online survey. To check the characteristics of the data and internal consistency reliability, I conducted descriptive analysis, correlation analysis, and McDonald's omega analysis across the three groups. Findings of preliminary analysis indicated adequate internal consistency reliability. Using separate CFA models across three groups, the results of the CFA showed that discriminant validity and convergent validity were retained across the three groups. As a next step, the structural model with the overall sample was assessed. The results indicated that fantasy sport and social media engagement are positively associated with perceived value and flourishing. Furthermore, the mediating role of perceived value was discovered in the relationship between digitalized engagement and flourishing. After conducting measurement invariance testing, the findings indicated that the underlying constructs obtained full metric, scalar, and factor variance invariance across three groups. In the structural invariance testing, the results indicated that the relationships among the underlying constructs were not moderated by the three groups (e.g., before, during, and after viewing sports games).

CHAPTER V

DISCUSSION

The main purpose of this study was to assess whether the relationships between fantasy sport engagement and social media engagement among sport consumers are associated with psychological rewards and to determine how the relationships can differ across time points in terms of sport fans' digital touchpoints (e.g., before, during, or after watching sport games). The results offer theoretical and practical implications that advance the understanding of how participation in a multitude of digital sport engagement avenue generates positive psychological viewpoints, as well as how time-related engagement in sport activities can be applied to research in virtual sport settings.

Theoretical Implication

Similar to prior investigations that employed the RET framework (Higgins, 2006), the present study indicated that regular participation in fantasy sport was associated with flourishing. Moreover, the relationship between fantasy sport engagement and flourishing was partially mediated by perceived value. Roche (2022) argued that the fantasy sport format can increase fans' subjective well-being by fulfilling basic needs (e.g., the need to belong arising from increasing social connection, power needs gained from inspiring resourcefulness and self-worth competence in team victories, and freedom-related requirements emerging from the ability to freely assemble or change one's own team). This finding can be explained by the broaden-and-build theory: experiences accompanied by positive emotions not only indicate individual

well-being but also reinforce future well-being as catalysts of the resource accrual that facilitates an upward spiral leading to flourishing (Denovan & Macaskill, 2017). The results also implied that regular fantasy sport consumers who are attached to teams, athletes, sports, or other fans are more likely to generate positive feelings and a sense of belonging in their lives when they experience psychological benefits from digital activities (Wilkins et al., 2021).

Based on the dynamics underlying the RET framework, the positive association between sport social media engagement—social actions with fans, interface experiences, and individual activities—and flourishing occurred through perceived value. The value of sport, as assessed by consumers, can promote positive feelings over time—a dynamic that can serve as the "arbiter" of the extent to which intercession can occur to reinforce well-being through sports (Testoni et al., 2018). The conclusions drawn from the findings maintain that an enhancement of an individual's current environment can be attributed to value creation and an improvement in well-being in the individual's situation (Ströbel et al., 2021). Although the respondents played fantasy sport games on corresponding applications, most of their time was spent engaging in fantasy sport discussions on social media interfaces (Wilkins et al., 2021). Therefore, my results are congruent with those of previous research that argued that engagement on social media in relation to fantasy sport can be a vital factor for positively or negatively impacting users' mental health (Wilkins et al., 2021).

To further describe the relationships between digitalized engagement in fantasy sport and social media and flourishing, I examined the mediating effect of sport consumers' value perceptions on this association. The findings consistently support the benefits of perceived value in mediating the relationship between sport game engagement and flourishing (Byon et al., 2013; Kim et al., 2017; Kwon et al., 2007; Shapiro et al., 2019). Engagement with an experience can intensify evaluative reactions, and this subjective likelihood enhances the establishment of

motivational forces called value experiences, which, in turn, contribute to strengthening overall well-being (Higgins, 2014). The findings of the present study are consistent with previous studies that showed sport consumers' perceived values can be predictors of consumers' positive consumption outcomes (Byon et al., 2013; Kim et al., 2017; Kwon et al., 2007; Shapiro et al., 2019). My research shows that perceived value driven by digital activities in fantasy sport and social media can engender sport consumers' well-being. This finding can be extended to conclude that sport fans' positive emotions about their digital engagement can trigger their judgments about pleasant values; that is, the judgments reinforce their ability to establish meaningful engagement with fantasy sport and social media resources to flourish in their lives.

Sport consumer flourishing was discussed as a concept and empirically elaborated on under the broader category of sport mediated consumption in this present study. Previous well-being studies of sport consumers were rooted in hedonic aspects (positive emotions or life satisfaction; Kim et al., 2017) or one element of eudaemonic theories (social well-being; Kim & Kim, 2020). In a deeper examination of digital well-being, flourishing for sport consumers was successfully integrated with both hedonic and eudaemonic approaches. The results of the current study are consistent with those of Shu et al. (2020) in determining a comprehensive approach with individual and social facets of well-being from brand involvement. The finding that sport consumers' flourishing plays an important role helps to better understand and broaden responsive appraisals of sport digital usages and more systematical value creation processes. The construct of flourishing reflects a desirable outcome for sport media consumption. Contributing to the literature on sport fans' well-being, this research offers a systematic foundation for raising awareness of flourishing and assessing flourishing in sport marketing literature.

Congruent with the results of prior studies, fantasy sport users in the present study showed active consumption of media, such as social media and television, before, during, and after MLB sporting events (Chan-Olmsted & Kwak, 2020; Clavio et al., 2012; Shabazz, 2019). Concerning the disparate roles of fantasy sport and social media in positive reward acquisition, the structural invariance of the hypothesized model revealed that the relationships among the latent variables indicated a lack of differences among the before, during, and after groups. These findings may be explained by evidence that supported the findings of recent research (Livas et al., 2022). Livas et al. (2022) acquired evidence of the likely absence of disparities among digital touchpoints in consumers' digitalized engagement. The reliance of consumers on digital touchpoints (e.g., the extent to which they engage in information searching, evaluate alternative options, make purchasing decisions, and assess post-purchase experiences) does not appear to represent highly differentiated stages during the buying process (Livas et al., 2022). The overlapped digital usages related to viewing sporting events may be explained by the lack of disparate effects that social media and psychological rewards have on fantasy sport. The analyses from the current study did not detect significant differences among the digital touchpoints in the participants' sport media consumption or significant differences in the positive psychology induced by digital consumption.

Practical Implication

This study illuminated how digital consumption applies in sport and expands existing information on enhancing positive fan experiences for the strategic management of future digital usage in sport. Given the favorable role that digital services play in supporting mental health, the clarification achieved in this work provide sport practitioners with further insights into the importance of interactive activities on digital devices and the effects of omni-channel use on the rewards generated by sport consumers themselves.

The first practical contribution of the current study suggests that social media managers should optimize and leverage social media features to favor the perception of value and well-being status. To encourage sport consumers' positive psychological states, sport managers should consider ways to enhance the designs of engaging activities on social networks. As part of the optimized effort, sport managers should understand fans' social media engagement journeys on various social media interfaces and the multiple touchpoints along those journeys using a variety of electronic devices. For example, further data concerning fan experiences on social media should be collected—such as data on the devices that are most often connected with sport team accounts, the amount of time spent on social media apps, and the distribution of daily activities (text messaging, watching video content, uploading personal posts or comments, creating hashtags, or getting sports team news) on social media—for their favorite sport team to examine how sport customers engage their time and effort. Such an approach would contribute to better quantifying sport fans' engagement with social media by assessing the interactions between sport fans and sport teams (Barker et al., 2017; Quesenberry, 2018). Consequently, a focus can be placed on developing platforms to encourage sport consumers' engagement, thereby

placing consumers in a position to participate in engaging activities and contribute to enhancing their perception of the value of their favorite teams.

The results of the current study revealed the construct of flourishing for sport consumers in the digital setting. Although the singly perceived pursuit of positive feelings has been in focus as one of the oldest concepts of a good life, this hedonic theory also has been considered self-defeating as an unworkable notion in most societies (Compton & Hoffman, 2020). Self-sensual pleasures are short-lived, leading to a constant struggle to repeat the sensual pleasures and to spending time thinking only about the present, while producing no accumulated evaluation of daily activities (Baumeister et al., 2013; Compton & Hoffman, 2020). Systematically capturing consumers' well-being and a multidimensional perspective of flourishing both provides sport practitioners with a way to effectively evaluate the well-being of sport consumers and reflects the needs of sport fans' welfare in the setting of the virtual consumption process. Given the increasing attention paid to mental health in fantasy sport, access to flourishing as a tool, as described in this study, would serve as a great resource and provide a clear guideline on the facets of well-being that should receive focus and how sport managers can measure the notion of flourishing in fantasy sport.

In the partially mediated model, sport consumers' digitally engaged activities were discovered to have indirect impacts on positive psychological outcomes through consumers' positive beliefs about the services of fantasy sport. Perceived value is the most interesting determinant of sport consumers' flourishing when engaging with fantasy sport. This result provides sport practitioners with further insight into the importance of omni-channel approaches to sport digital consumption. While watching sport games on television, fantasy users actively employ social media simultaneously. With respect to exploration of the value process, sport

managers need to be aware of the value components aligned with consumers' sport media habits and the digital platforms they use to be able to reach them in diverse ways. By understanding various digital sources in sport, sport practitioners can better obtain them to find extended revenue sources beyond onsite performance. Fantasy sport-related platforms and websites can provide interesting digital marketing management tools with immense potential impact and positive psychological benefits. Given the need for digital marketing, sport managers should consider how sport consumers experience real-time interactions with others and involve live sport experiences in virtual settings in the context of omni-channel usages.

The present study provides a range of digital touchpoints for assessing categorizations of sport-mediated experiences before, during, and after consumption. Given the similar roles of digital engagement in enhancing positive benefits across timepoints, sport practitioners can develop data management that highlights the entirety of digital engagement around live sporting events. As an interesting avenue, sports practitioners should consider the possibility that sports consumers collect and evaluate information to leverage in succeeding sport games, even after sporting events, which, in turn, affects psychological benefits. To maintain positive relationships with sport fans, sport practitioners should investigate sport consumers' reliance on digital touchpoints. More specifically, sport managers in fantasy sport or professional teams need to monitor traffic volumes and transactions, particularly how long it takes for sport fans to participate in activities or what drives them to be involved in such occupations before, during, and after sport games. This strategy will enable sport practitioners to better reach fans online and design high-quality content.

Future Research Direction

The first is related to the criteria used in the grouping process. The three sport consumer groups were segmented based on habitual digital reliance (e.g., one day before, during, and one day after watching a sporting event). This grouping approach can be delimited to reflect the attitudinal features of sport-mediated consumption. To establish a theoretical framework of a group classification for auxiliary consumption activities in sport, future research can adopt additional relevant research designs. For example, scholars can explore distinctive motivations or the tendency to use certain multi-platform media to view sporting events in lieu of focusing on one single time-based digital consumption. The concept of digital usage with groupings for before, during, and after timepoints has been developed in the tourism literature (Cox et al., 2009; Fotis et al., 2012; Oh et al., 2017). Groupings identified in the tourism literature, which were arranged according to major needs (information search need, evaluation of alternatives, or post-purchase evaluation) at each stage of the generic purchase decision process, were extrapolated based on sources of inspiration for trips (Fotis et al., 2012). Addressing the various needs of a theoretical framework would be helpful to strengthen the identification of the three groups (before, during, and after groups for digital services) to demonstrate the distinctive characteristics of digital usage.

Future research might compare the various categories of fantasy sport users and sport gamblers. Thus, a comparison of motivations, perceived control, or level of fandom among these three groups in relation to enhancing psychological benefits would be intriguing. Such an approach would clearly define fantasy users and any potential threats or disruptive characteristics of fantasy sport. Additionally, the intensity of fantasy sport participation can be further considered. For example, fantasy sport participants with high levels of engagement improve their

mental health through appropriate coping mechanisms or psychological distancing concerning game outcomes (Ruihley & Chamberlin, 2020; Wilkins et al., 2021). Other scholars can illustrate different degrees of digitalized engagement in fantasy sport to show how the levels of fantasy sport and social media engagement can engender favorable health outcomes. Furthermore, empirically elucidating different fantasy sport formats (e.g., traditional fantasy sport and daily fantasy sport) would enhance the body of knowledge on addressing how individual and collective well-being can be reinforced by a range of sport services (Inoue et al., 2020).

Several empirical studies have examined well-being or flourishing with negative outcomes, which are necessary to address as well (Denovan & Macaskill, 2017; Fredrickson & Losada, 2005). According to the RET framework, engagement activities can produce results in an attractive or repulsive direction, depending on the consumer's own evaluative responses (Higgins, 2006; Higgins & Scholer, 2009). Additionally, the broaden-and-build theory explains that daily events in life facilitate positive or negative emotional responses in the human psychological state (Denovan & Macaskill, 2017; Fredrickson, 2001; Kim & James, 2019). Navigating the distinct components of negative elements in the setting of well-being allows for the restraining of relevant actions or the discovery of available recourses or coping strategies for human adaptation (Fredrickson, 2001). Having coped successfully, people feel positive and learn how they can manage similar situations in the future (Denovan & Macaskill, 2017). Further research is needed to consider such negative psychological components in order to broadly describe sport consumers' mental health.

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APPENDIX A

SURVEY INSTRUMENT

\<Screening Questions\>
- Do you identify as a sports fan?
- Which Major League Baseball (MLB) team do you most strongly support or follow?
- Have you ever watched MLB games on television?
- Have you played fantasy baseball this (2021) season?
- What service do you use for your fantasy sports league?
  \<drop down menu\>
  Ex.) MLB.com.
  espn.com
  yahoo.com
  Other, please specify: _____
- Do you use social media (Twitter, Instagram, Facebook, Snapchat, YouTube, TikTok, etc.) to follow or support your fantasy baseball team?
- As it relates to fantasy baseball, what does WHIP stand for?
  (a) Walks+Home runs per innings pitched; (b) Wins+Hits per innings played;
  (c) Walks+Hits per innings pitched; (d) Walks+Home runs per innings played
- In the game of professional baseball, how many players are in the outfield?
  (a) three (b) four (c) five (d) eight (e) nine

\<Grouping questions\>
- Please indicate which of the following stories is mostly true regarding your fantasy sports and sports-related social media engagement:
  o I most often use fantasy sports and social media prior to watching MLB games. (Yes or No)
  o I most often use fantasy sports and social media while watching MLB games. (Yes or No)
  o I most often use fantasy sports and social media after watching MLB games. (Yes or No)
  o None of the above
  \< Piped text functions will be applied in the next section.\>

- ***Story 1–Before***
  On average, approximately how many days before an MLB game do you use fantasy baseball and social media for the fantasy baseball?
  More than a month
  One month
  Two weeks
  One week
  One day
  Other, please specify: _____

- *Story 2–During*

  During the game, how do you use fantasy baseball and social media for the fantasy baseball? (Please choose all methods that you use.)

  -For fantasy sports

  Computer

  Laptop

  Tablet

  Cell phone

  Other, please specify: _____

  -For social media

  Computer

  Laptop

  Tablet

  Cell phone

  Multiple (   )

  Other, please specify: _____

- *Story 3–After*

  On average, approximately how many days after a game do you use fantasy baseball and social media for the fantasy baseball?

  One day

  Two days

  Three days

  Other, please specify: _____

<Demographic questions>

- What is your gender?

  Male

  Female

  Choose not to identify

  Other, please specify: _____

- What is your age? (   )

  <drop down menu>

- What is the highest level of education you have completed?

  Some high school or less

  High school diploma or equivalent

  Some college

  College diploma

  Some graduate school

  Graduate degree

  Choose not to identify

- What is your marital status?
  Single (never married)
  Married
  Divorced/separated
  Widowed
  Choose not to identify
  Other, please specify: _____

- What is your total annual household income?
  $10,000 or less
  $10,001–$20,000
  $20,001–$30,000
  $30,001–$40,000
  $40,001–$50,000
  $50,001–$60,000
  $60,001–$70,000
  $70,001–$80,000
  $80,001–$90,000
  $90,001–$100,000
  More than $100,000

- What is your ethnicity?
  African American
  Hispanic
  Caucasian
  Asian American
  Native American
  South Asian/Indian Subcontinent
  Multi-racial
  Other, please specify: _____

- How often do you watch MLB games on television?
  Never
  Once a week
  2–3 times a week
  4–6 times a week
  Once every day
  2–3 times per day
  4 or more times per day

- How often do you view official MLB team accounts (or official MLB teams) on social media per week?
  - Never
  - Once a week
  - 2–3 times a week
  - 4–6 times a week
  - Once every day
  - 2–3 times per day
  - 4 or more times per day

- Which social media platform do you normally use to engage with your favorite MLB team?
  - Twitter
  - Instagram
  - Facebook
  - Snapchat
  - YouTube
  - TikTok
  - Other, please specify: _____

- How often do you play fantasy baseball per week?
  - Never
  - Once a week
  - 2–3 times a week
  - 4–6 times a week
  - Once every day
  - 2–3 times per day
  - 4 or more times per day

- This year, approximately how much money have you spent playing in your most preferred fantasy baseball league (i.e., league fees, magazines, etc.)?
  - $0
  - Less than $25
  - $25–$49
  - $50–$99
  - $100–$149
  - $150–$249
  - $250–$499
  - $500–$999
  - $1,000 or more

\<Fantasy sport engagement\>

For this construct, a 7-point Likert scale will be used: (1) strongly disagree, (2) disagree, (3) somewhat disagree, (4) neither agree nor disagree, (5) somewhat agree, (6) agree, and (7) strongly agree.

Attachment to a

I consider myself a participant of fantasy baseball.

I would experience a loss if I had to stop playing fantasy baseball.

Being a fantasy sports participant is very important to me.

Attachment to Players

I am a fan of a specific player within my fantasy baseball leagues.

I follow my fantasy baseball team(s) because I like their players.

I consider myself to be a fan of players rather than a fan of fantasy baseball.

Attachment to Sport

I consider myself, first and foremost, a baseball fan.

Baseball is my favorite sport.

Of all sports, I prefer baseball.

Attachment to Fantasy

Fantasy baseball is the reason for my interest in MLB.

I would experience a loss if I could not play fantasy baseball.

Attachment to Community

I feel connected to numerous aspects of the fantasy baseball community.

I feel a part of the fantasy baseball community.

I support the fantasy baseball community in which a desire exists to have

Interactions with fantasy baseball users.

\< Social media engagement\>

For this construct, a 7-point Likert scale will be used: (1) strongly disagree, (2) disagree, (3) somewhat disagree, (4) neither agree nor disagree, (5) somewhat agree, (6) agree, and (7) strongly agree.

Fan-to-fan Relationship

I am willing to help and share information with other users of fantasy baseball on social media.

Even if it may cost time and money, I am willing to assist other members of fantasy baseball accounts on social media.

Fantasy baseball accounts on social media allow for the development of social bonds with other fans.

I feel great pleasure when interacting with other fans through fantasy baseball accounts on social media.

Fantasy Baseball Interface-to-fan Relationship

I think fantasy baseball accounts on social media are cool.

The fantasy baseball accounts on social media have an exceptional design.

The fantasy baseball accounts on social media meet my expectations.

I feel that the information offered by fantasy baseball accounts on social media is perfectly clear.

Fan Co-creation

      I spend time posting photos/videos about fantasy baseball on social media.

      I share information/comments/photos/videos about fantasy baseball on social media.

      I add hashtags about fantasy baseball on social media.

<Perceived value>

For this construct, a 7-point Likert scale will be used: (1) strongly disagree, (2) disagree, (3) somewhat disagree, (4) neither agree nor disagree, (5) somewhat agree, (6) agree, and (7) strongly agree.

      The programs and services of fantasy baseball have great value.

      What I get from fantasy baseball and what it costs offers me value.

      In general, the value of the programs and services in fantasy baseball is high.

<Flourishing Scale>

For this construct, a 7-point Likert scale will be used: (1) strongly disagree, (2) disagree, (3) somewhat disagree, (4) neither agree nor disagree, (5) somewhat agree, (6) agree, and (7) strongly agree.

Individual Well-being

      Being involved with fantasy baseball can satisfy my private feelings.

      I feel happy when involved with fantasy baseball.

      Being involved with fantasy baseball has improved my life satisfaction.

Social Well-being

      By being involved with fantasy baseball, I can better integrate into my friends/family.

      Playing fantasy baseball adds fun to my time with friends/family.

      Talking about fantasy baseball brings me closer to my friends/family.

APPENDIX B

INSTITUTIONAL REVIEW BOARD
APPROVAL LETTER

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

Date:	05/06/2021
Principal Investigator:	Bomin Paek
Committee Action:	**IRB EXEMPT DETERMINATION – New Protocol**
Action Date:	05/06/2021
Protocol Number:	2102022452
Protocol Title:	Flourishing for sport consumers: The case of fantasy baseball and social media engagement
Expiration Date:	

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(702) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:

**UNIVERSITY OF
NORTHERN COLORADO**

Institutional Review Board

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).

- You make changes to the research personnel working on this study (add or drop research staff on this protocol).

- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.

- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole.morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - http://hhs.gov/ohrp/ and https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/.

Sincerely,

Nicole Morse

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784

Carter Hall 3002 | Campus Box 143 | Greeley, CO 80639 | Office 970-351-1910 | Fax 970-351-1934

APPENDIX C

MPUS SYNTAX FOR MCDONALD'S
OMEGA TESTING

```
TITLE:    Omega testing;
DATA:        FILE IS before.dat;
VARIABLE:      NAMES ARE
           quota at1r at2 at3r ap1 ap2r ap3 as1r as2r as3r
           af1 af2 ac1 ac2r ac3r ftf1r ftf2r ftf3r ftf4r
           ttp1 ttp2r ttp3r ttp4r fc1 fc2 fc3 pv1 pv2r pv3r
           in1 in2r in3 so1 so2r so3;


USEVARIABLES ARE
           at1r at2 at3r;
CATEGORICAL ARE
      all ;


MODEL: ATT by at1r* (at1r)
        at2 (at2)
        at3r (at3r);

        at1r (e1); at2 (e2); at3r (e3);

MODEL CONSTRAINT:
    new sumload2 sumevar omega;
    sumload2=(at1r+at2+at3r)**2;
    sumevar=e1+e2+e3;
    omega=sumload2/(sumload2+sumevar);

  ANALYSIS:ESTIMATOR=WLSMV;
  PARAMETERIZATION=THETA;
```