

Examining the Outcomes of Sport Specialization for Individual Athletes and the Industry

BBA Honours Thesis

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Abstract

In North America, sport specialization for young athletes has become a prerequisite for sport achievement, but academics have yet to explore the effects that sport specialization has on athletes' consumption and participation patterns. Thus, this project explores the following research question: what are the effects of sport specialization on the individual volleyball athlete in terms of: i) patterns of participation in sport (past, present, and future); and ii) consumption patterns in the sport industry? The methodological approach was to interview current and retired volleyball players aged 18 to 30 in Calgary, Alberta. The questions were designed to ask participants how they spend their time and money during and after sport specialization. The findings indicate that early specialization in volleyball directly impacts an athlete's patterns of participation and consumption in the sport of volleyball and the sport industry broadly. Many participants articulated that due to specialized training they became lost in the identity of a "volleyball player," and when they ceased participation in the sport they found that they had not been participating for their own intrinsic values but for extrinsic values placed on them by their coaches, parents, teammates, and other invested stakeholders. Participants also indicated that their specialization years developed specialized knowledge in sport, a unique analytical consumption experience that influences present and future sport consumption. The findings are a call to action for the volleyball industry to evaluate the participation and consumption patterns in specialized volleyball training and implement changes to benefit specialized athletes and the industry.

Key words: *sport specialization, participation, consumption, sport industry, volleyball*

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Introduction

Specialization

The term *specialization* holds various definitions that are dependent on the context of use. For the entirety of this thesis, the term specialization will refer to the context of sport and athletics, at the individual and industrial level. As well, the term *specialization* will be utilized interchangeably with the term *sport specialization*. It has been determined, through a review of the literature, that there is not a fixed definition of sport specialization (Jayanthi, LaBella, Fischer, Pasulka, & Dugas, 2015, p. 795). As a result, key authors in the field have crafted working definitions for sport specialization. A definition of sport specialization proposed by Jayanthi, Pinkham, Dugas, Patrick, & Labella defines the term sport specialization as “intense, year-round training in a single sport with the exclusion of other sports” (2013, p. 252). Laprade et al. identify criteria that embodies the term sport specialization: “Participation in intensive training and/or competition in organized sports greater than 8 months per year (essentially year round);” and “Participation in one sport to the exclusion of participation in other sports (limited free play overall)” (2016, p. 1). A 2009 review by Côté, Lidor, and Hackfort defines the term “deliberate practice” as the ultimate purpose of intensive training for improved performance, in comparison to “deliberate play” which describes activity enjoyment (Jayanthi et al., 2013, p. 252). Specialization holds true the idea of “deliberate practice” in the sense that there is an expectation in youth athletics that practice is a designated time for improving skills, developing strategies, and executing game-like scenarios.

In order to ascertain a definition of sport specialization, it is suggested that sport specialization be viewed as a continuum (Jayanthi et al., 2013, p. 252). There is variation among young athletes in the degree to which they specialize in sport. Some young athletes endure high

volume, single sport, intensive training during season, and participate in various other sports in the offseason (Jayanthi, 2013, p. 252). Other young athletes participate in large volumes of specialized intense sport training while participating in other sports on days off (Jayanthi, 2013, p. 252). It is important to note that these examples do not cover every aspect of the specialization continuum and are only provided as a framework to explain the variance in the term specialization. For the purposes of this research proposal, the specialization focus is young athletes who endure high volumes of year-round intensive training in one sport. Thus, the term *early sport specialization* will parallel the *specialization*, and *sport specialization* terminology previously identified; providing a term for the sport specialization of young athletes. Sport specialization at later ages is common in society as sport preference, expectations and time commitments become more clear (Jayanthi et al., 2013, p. 252). However, sport specialization for young athletes remains a controversial topic as key stakeholders in the sport industry continue to contemplate the positive and negative outcomes of *specialization*.

Specialization: A Positive Phenomenon

On the one hand, sport specialization can offer young athletes a positive experience. For example, the Committee of Sport Medicine and Fitness argues that specialization offers athletes the opportunity to compete at a level that parallels their abilities, aspirations, and goals (Committee of Sports Medicine and Fitness, 2000, p. 156). Sport specialization is designed to provide athletes with a repertoire of information and a toolbox of skills for future endeavors in sport. Specializing early sets young athletes up for success in their later years as they are put into motivational environments that promote cognitive, physical, and psychosocial development (Jayanthi et al., 2013, p. 255). The high calibre of strength and fitness training associated with sport specialization is designed to condition the athletes' bodies for peak performance on the

court, pitch, or rink. A 2006 review by Finley suggests there is an increase in the number of children, parents, and coaches that believe the best young athletes are a product of sport specialization where they play one sport year-round from an early age (Malina, 2010, p. 364). This suggests that many people across the athletic community believe in the idea of sport specialization and link it to athletic success.

Specialization: A Negative Phenomenon

On the other hand, there are negative repercussions associated with high single sport intensive training for young athletes. In the unfortunate reality of competitive sport, adults often encourage young athletes to specialize early in hopes the child may achieve success in later years. Robert Malina powerfully refers to young athletes as “pawns in a complex matrix” of parents, coaches, media, and the sport industry (2010, p. 369). However, few athletes who specialize early make it to high levels and receive the rewards (economic and social) associated with the achievement of success (Malina, 2010, p. 369). World-class athletes are more likely to have competed in various sports throughout their early-years and specialize late in life than they are to have participated in early sport specialization (Jayanthi et al., 2013, p. 252). This may lead the sport industry to consider the idea that sport specialization negatively impacts the long-term career of a young athlete.

An important question many researchers are asking is “exactly how much is the child enjoying their participation in early sport specialization?” Unfortunately, many parents do not mirror the interest of researchers and are not asking their young athletes this question. Early sport specialization is considered to conflict with the required enjoyment level for prolonged athletic participation, desire, and commitment (Baker, 2003, p. 88). An important consideration for parents, coaches, and the sport industry is the degree to which young athletes enjoy the sport they

participate in. If the athlete's desire to continue training at a high level diminishes, the idea of sport as a fun, passionate, and competitive activity may lose all meaning. As well, there are potential risks (physical, cognitive, and psychosocial) associated with high volumes of sport participation that young athletes and parents are often unaware of (Post et al., 2017, p. 1405). These associated risks of sport specialization will be elaborated on in the following section of this literature review.

Outcomes of Specialization

Specialization is a multifaceted phenomenon determined to be both positive and negative in nature, and many individuals view specialization from the perspective of either camp. Specialization allows young athletes the opportunity to learn one singular sport from physical and theoretical practice, gaining an understanding of not only the technical aspect, but the logic and reasoning in the sport. This may be viewed as positive by coaches, players, and parents who have aspirations of high-level career success as the participant trains with a focused, goal-driven mentality. Alternatively, it may be viewed negatively by coaches, players, and parents who hope that the participant is capable of long-term performance and avoiding the potential negative outcomes of sport specialization. Regardless of the camp in which you find yourself, there are three prominent outcomes of sport specialization that are important to take into consideration: injury, burnout, and career path.

Injury

The first outcome of specialization to be discussed in this literature review are overuse injuries. Brenner defines injury as "micro-traumatic damage to a bone, muscle, or tendon that has been subjected to repetitive stress without sufficient time to heal or undergo the natural reparative process" (Brenner, 2007, p. 1243). There are four stages of overuse injury

classification: Pain following physical activity; pain during physical activity (performance not impacted); pain during physical activity (performance impacted); and consistent chronic pain (Brenner, 2007, p. 1243). The risk of injury is determined to be a result of many contributing factors: competitive level; pubertal stage of maturation; and training volume (however, this is not an exhaustive list of the potential factors of injury) (Brenner, 2016, p. 5). Although the prevalence of overtraining and overuse injury is difficult to assess (due to a lack of aligned literature on the topic), injury is determined to be a negative outcome of sport specialization (Brenner, 2016, p. 2). Injury is an epidemic in youth athletics, resulting in numerous hospitalizations every year. A statistical analysis proves this theory by outlining the sport injury hospitalizations in Canada from 2016 to 2017 (CIHI, 2018). Over the period of one fiscal year, 5,261 children ages 5 to 17 were hospitalized due to an injury suffered in sport (CIHI, 2018). Of this number, approximately thirty-three percent are young female athletes, and the remaining seventy-seven percent are male (CIHI, 2018). This emphasizes the importance of understanding the impact sport specialization has on the physical well-being of young athletes.

In the 2017 review, Post et al. study the correlation between sport specialization and injury in youth athletes (2017, p. 1406). The secondary purpose of the study determines the relationship between recommendations of sport volume and injury history (Post et al., 2017, p. 1406). The methodology consists of young athlete participants ages twelve to eighteen who completed a questionnaire surrounding their sport specialization, sport participation volume, and history of injury (Post et al., 2017, p. 1405). The results suggest a strong association between sport specialization and overuse injuries (Post et al., 2017, p. 1408). According to Post et al., there are significant differences in injury categories and specialization volumes in a comparison

of male and female athletes (2017, p. 1408). Specialization rates peak at age fifteen, with female athletes being considered more highly specialized than male athletes (Post et al., 2017, p. 1408).

Regardless of specified sport, high volumes of athletic training increase the potential risk for injury in athletes (Jayanthi et al., 2013, p. 255). This may be a result of predisposed injury risk; however, it is more likely a result of overuse or trauma during sport participation. This idea is supported by the statistical data that overuse is the reason for approximately half of the injuries suffered by young athletes (Merkel, 2013, p. 154). Highly intensive overload or excessive stress often lead to injury and tissue breakdown (Committee on Sports Medicine and Fitness, 2000, p. 155). Common overuse injuries for children and adult athletes include: Osgood-Schlatter disease, medial epicondylitis (Little League Elbow), tendinitis, stress fractures, and vertebral apophysitis (Committee on Sports Medicine and Fitness, 2000, p. 155). Notably, these examples do not encompass every possible overuse injury a young athlete may suffer during their career. The purpose of providing examples is to reinforce the idea that overuse injuries do not follow one common trend, instead, overuse injuries extend over a wide range of potential injuries.

Burnout

Burnout is the second outcome of sport specialization, viewed to be a negative repercussion of the athletic phenomenon. Burnout is the exhausted behaviour of young athletes “characterized by a loss of motivation and especially have decreased intrinsic motivation, a lack of enjoyment, high perceived stress and anxiety, ineffective or limited stress coping strategies, and mood disturbances” (LaPrade et al., 2016, p. 3). Hormone levels, physiological and psychological changes are contributing factors to burnout (Brenner, 2007, p. 1243). The result of burnout in young athletes is often withdrawing themselves from the sport altogether (LaPrade et al., 2016, p. 3). This is tied to the idea that a young athlete’s athletic desire slowly diminishes

over time (Malina, 2010, p. 368). It is important to recognize that burnout is a negative effect of sport specialization and overuse (Brenner, 2007, p. 1243). It often leads to young athletes choosing to allocate their time and effort into a different sport or removing themselves from sport altogether.

Sport specialization leads to two forms of burnout. The first type of burnout surrounds the psychosocial nature of young athletes (LaPrade et al., 2016, p. 3). Factors that can be attributed to the psychosocial nature of burnout include the perfectionist behaviour of young athletes, or performance pressure by parent or coach (LaPrade et al., 2016, p. 3). Sport specialization may become an exhaustive activity for many young athletes to participate in. Repetitive high intensity practice and performance may be incredibly frustrating and potentially result in agitation, anxiety, or depression (Malina, 2010, p. 368). Additionally, burnout may be attributed to missed social or educational opportunities, or family life interruptions (Committee on Sports Medicine and Fitness, 2000, p. 156). This is an unfortunate reality for many young athletes as a passion they once had is extinguished by the extensive demand of sport specialization. The second type of burnout centers around physical factors associated with the negative sport specialization outcome (LaPrade et al., 2016, p. 3). Contributing physical factors may include lack of sleep, overtraining, and acute injuries (LaPrade et al., 2016, p. 3). These contributing factors of high-level intensive sport specialization lead to exhaustive behaviour by the participating young athlete. Burnout, regardless of type, is an unfortunate negative outcome of sport specialization that inevitably reduces youth participation in athletics.

The literature for burnout associated with sport specialization analyzes preventative measures that should be considered to prevent athletic burnout during early years of sport participation. Ericsson et al. determine that an athlete requires ten thousand hours of practice or

competition over the span of ten years to achieve success (Brenner, 2016, p. 5). However, the media has misrepresented this study of chess players as a “formula” for athletic success and excellence (Brenner, 2016, p. 5). Athletes have proven to be more successful with less than ten thousand hours when compared to athletes who have achieved a minimum of ten thousand hours of practice and competition (Brenner, 2016, p. 5). LaPrade et al. highlight four recommendations for burnout avoidance (2016, p. 2). Adults involved in youth sport should avoid extreme time commitments and overscheduling activities, monitor athletic burnout, emphasize the importance of athletic skill development and long-term physical fitness and activity skills, and implement fun into sport related training (LaPrade et al., 2016, p. 2). This idea suggests that athletes who abide by the aforementioned preventative measures of burnout are more successful than those who fail to take into account the same preventative measures.

Career Path

The final outcome of specialization to be discussed in this literature review is the career path decisions of young athletes. Specialization during early years can be detrimental for the future cognitive, physical, and emotional health and well-being of the athlete (LaPrade et al., 2016, p. 6). This directly relates to the career path opportunities for young athletes and often dictates the decision the athlete will make. “Career path” is an umbrella that encompasses many different potential outcomes of athletic endeavours. These endeavours include but are not limited to the following: professional career, varsity career, recreational participation, coach, official, or retirement.

Personal success and excellence in sport acts as a driver of athletes to participate in high volumes of intensive sport specialized training in their early years. Other forms of motivation such as the appeal of collegiate scholarship or professional career opportunities may propel

athletes to commit to sport specialization (Committee on Sports Medicine and Fitness, 2000, p. 154). These potential opportunities are not only appealing to the young athlete, but the parents as well (Committee on Sports Medicine and Fitness, 2000, p. 154). Many Olympic sports committees use early selection processes to identify potential future Olympic athletes, follow their sporting endeavours, and potentially provide specialized training (Committee on Sports Medicine and Fitness, 2000, p 154). Although this may be every young athlete's dream, the reality is the unrealistic probability of this scenario occurring. Brenner suggests that only 3.3% to 11.3% of high school level athletes make it to the National Collegiate Athletic Association (NCAA) level (2016, p. 3). Of this small percentage, only 1% of these high school athletes will be awarded scholarships to accompany their varsity career opportunity (Brenner, 2016, p. 3). Brenner further analyzed the professional career potential of high school level athletes and determined that only 0.03% to 0.5% will make it to the professional sports level (Brenner, 2016, p. 3). A common theme amongst these athletes is the influence of sport specialization acting as a determinant of their career path.

Unfortunately, young athletes who participate in high intensity, sport-specific training experience shorter athletic careers than young multi-sport athletes (Brenner, 2016, p. 5). This is often influenced by the outcomes previously discussed in this literature review: injury and burnout. The athletic stage of retirement or retraining occurs when athletes stop competing and potentially move into careers related to sport (Brenner, 2016, p. 3). These sport related careers may include officiating, coaching, or administration (Brenner 2016, p. 3). Careers related to sport provide retired athletes the opportunity to remain involved in the sport they were deeply passionate about. Some retired athletes may observe their coaching, officiating, or administrative

position as a channel for giving back to a sport that allowed them to express their competitive nature, learn life lessons, and form relationships with teammates and competitors.

The Sport Industry

The sport industry, although unique, shares many parallels with a diverse number of businesses and industries. The sport industry is comprised of two product categories: manufactured products that are transported to be purchased in retail stores by consumers; and products that are located and produced in one central location where the consumer must be in the immediate vicinity to consume (Lucian, 2014, p. 44). The primary focus for the remainder of this literature review is the latter of the two product categories: products located and produced in one location with the intention of requiring the consumer to be present in order for consumption to occur (Lucian, 2014, p. 44). Examples of products in this category are sporting events a consumer would watch in an arena or on television, or consumer participation in activities such as volleyball, basketball, working out at a recreation facility, rock climbing, or squash (Lucian, 2014, p. 44). Considering there are numerous sport businesses in the industry, one individual company must take the activities of other sport businesses into consideration (Lucian, 2014, p. 44). This creates an extremely competitive industry which is recognizable in the daily activities of the sport businesses. The environment of the sport industry involves a high number of influential aspects sport businesses must take into consideration: politics, economics, ethics, laws, and environmental concerns (Lucian, 2014, p. 47). These influential considerations may be attributed to the longitudinal success of the industry. However, it is not known what the impact of youth sport specialists is on the sport industry.

The long-term success of the sport industry depends on creating and maintaining consumers, and thus it should be concerned with the well-being of its athletes because they are

future consumers. The goals for the sport industry should be to promote youth sport participation, healthy and active lifestyle through physical and recreational activities, and utilizing the developed skills to participate in healthy competition (Brenner, 2007, p. 1244). This may be a difficult task for the sport industry as the competitive sport nature is to create an elite program with the intention of winning games and maintaining profitability. The industry must ensure that the athletic goals for the participant do not become heavily focused on sport specialization and potentially altered to fit the goals and aspirations of the adults involved (parents and coaches) (Brenner, 2007, p. 1244). Adults (parents and coaches) are incredibly passionate supporters of youth athletics. That being said, the sport industry must ensure that the goals of the programs within the industry parallel the best interest of the child, regardless of expectations of the adults involved (Committee of Sports Medicine and Fitness, 2000, p. 156). The sport industry has the opportunity of being a pivotal piece in controlling sport specialization, in turn, reducing the potential of sport specialization repercussions.

Participation and Consumption

The sport industry in Canada is a multi-billion-dollar industry. In 2017 alone, operating revenue of sport and fitness centres across Canada totaled almost 3.93 billion dollars (StatCan, 2019 - a). The wage and salary costs for sport and fitness centres in Canada during the 2017-year cost 1.58 billion dollars (StatCan, 2019 - b). The “sport and fitness centre” category included athletic clubs, gymnasiums, health and fitness centres and studios, and physical fitness facilities (StatCan, 2019 - a). These statistics lead to the idea that youth athletes act as both participants and consumers within the sport industry. The industry requires young athletes to participate to be profitable. As well, the industry looks to the parents of these young athletes to pay money for their children to participate in their sport. One can say that young athletes are products of the

sport industry, which looks to make a profit off both the athlete as an individual, and their success at the organizational level and beyond. Industry programs that primarily focus on early specialization are designed with the intended purpose of producing elite athletes (Brenner, 2016, p. 4). There are many goals associated with this primary focus, but first and foremost, the goal of the sport industry is to remain profitable.

Literature Gap

The researcher searched for literature on the relationship between sport specialization and the sport industry, specifically the participation and consumption patterns of athletes who chose to specialize in sport. However, after reviewing numerous sport management journals and seeking assistance from academics within Mount Royal University, the researchers were unable to locate research on the effect of sport specialization on the participation and consumption patterns of athletes in the sport industry. Research has been conducted on various definitions of the word consumption in respect to athletes. Stevens, Lathrop, and Bradish of Brock University examined the consumer behaviour of athletes based on gender and physical activity level to identify consumer profiles for sport marketers (2005, p. 254). Erdman, Tunnicliffe, Lun, and Reimer evaluate the food consumption patterns of elite athletes in Canada (2013, p. 210). Wiens, Erdman, Stadnyk, and Parnell conduct a study to analyze Canadian youth athletes' consumption patterns of dietary supplements, sources of information on the topic, and motivation to consume (2014, p. 613). To date, researchers are asking what the effects of sport specialization are on the sports industry.

The research question in the current project is unique and needs to be asked. The concepts of time and money are incredibly important and are critical pieces for every industry. Time and money are two valuable aspects of any successful business and therefore are

fundamentally important to this research project. The research project surrounds the question of the influence sport specialization has on the sport industry. This research is important to the sport industry as it provides insight into the impact of time and money on the success of the industry. The findings from this study help us to understand if the sport industry is benefiting from supporting early sport specialization, or if an alternative business model should be developed.

Methodology

This project was developed with the intention of answering the research question: What are the outcomes of sport specialization for individual athletes and the sport industry? Specifically, the study examines the effects of sport specialization on the individual athlete in terms of: i) patterns of participation in sport (past, present, and future); and ii) consumption patterns in the sport industry. In what follows, this section will provide a detailed explanation of the data collection, participants, and measures.

Data Collection

Primary data was collected from semi-structured interviews with 17 participants who met the requirements explained in detail in the following section. Research conducted in the athletic community required thorough consideration of potential ethical and political implications of the study (Christians, 2018, p. 66). The primary researcher of the study is actively involved in the Calgary, Alberta athletic community and was committed to ensuring ethical and political considerations were front of mind throughout the data collection process.

Participants were recruited through external organizations in the volleyball community and varsity programs. The organizations and varsity programs were strategically selected as their programs are comprised of individuals who encompass the criteria required for participation in this study. The original recruitment email was distributed to organizations in the volleyball

community. The contacts at the organizations were asked to email a recruitment email template created for the purposes of this project, as well as asked to display a recruitment poster if applicable to their organization. Two versions of the recruitment poster were created and used for recruitment purposes. After this project received approval from the Human Research Ethics Board of Mount Royal University, organizations who confirmed their support were asked to distribute the email to their distribution lists and hang posters in their facilities. The call for participants was constructed to ensure participants in the study were those who specialized in volleyball for at least one year, or those who classify their involvement in the sport of volleyball to be specialized training. The recruitment email defined the term “sport specialization” (aligned with the terminology used in this research study), asked the individual if this defines their athletic experience, and asked the individual if they agree to participate in the study. In addition, an age constraint was clearly outlined in all recruitment materials.

A secondary recruitment strategy was applied to the study after the initial recruitment emails and posters were distributed. Informal recruitment through social media platforms was utilized in order to expand the pool of potential participants. The primary researcher posted three tweets on their Twitter account, one Facebook post, and one Instagram story over one and a half months. Social media recruitment messages were posted on different days of the week and at different times with the objective of expanding the potential target audience. As well, snowball recruiting was a recruitment piece that significantly increased communication about this study in the volleyball community.

Semi-Structured Interviews

Semi-structured interviews were selected as the data collection technique for this study. The questions for the semi-structured interviews were designed with reference to The SAGE

Handbook of Qualitative Research (Denzin & Lincoln, 2018). Semi-structured interviews provide the framework of a structured interview to standardize the questions (Brinkmann, 2018, p. 579). Contrary to a structured interview format, semi-structured interviews are designed to encourage dialogue that creates more knowledge and value in the participant answers (Brinkmann, 2018, p. 579). The interviewer was offered more freedom to participate in the interview dialogue than they would in a structured interview (Brinkmann, 2018, p. 579). As a result, the interview between the participant and researcher was a conversation that allowed the participant to explore their youth sport and athletic specialization experiences. Successful interview questions were created to stimulate descriptive answers from participants that focus on the how, why, and what behind the topic of each question (Brinkmann, 2018, p. 579). This allows participants to provide sound primary data that the participant has deemed important, valuable, and relevant to the study (Brinkmann, 2018, p. 579).

The semi-structured interview questions were designed to identify common themes between the participants who specialized in sport from an early age. Interview questions were designed to ask participants important questions relevant to the research questions. The theme of the interview questions is relative to past, present, and future participation in sport and focuses on the participation in and consumption of sport (Appendix A). These questions ranged from topics of their interpretation of their individual athletic career, involvement in sport present day, and experiences of professional volleyball and other sports (Appendix A). The term “other sports” referred to in the interview questions encompassed any additional sport the participant participates in, consumes, or invests in (Appendix A). These sports can include basketball, volleyball, soccer, baseball, or any other sport mentioned by the participant and the questions required participants to explain the monetary amount they invest into sport participation both in

terms of volleyball and other sports (Appendix A). These questions focused on past and present costs associated with recreation and professional participation, as well as consumption of professional sports leagues (Appendix A).

After participants provided their informed consent, the primary researcher audio-recorded the semi-structured interviews which averaged 31-minutes and 10-seconds. The interviewer made additional notes throughout the interview when notable ideas were mentioned. However, these notes were minimal to prevent distraction from the interview questions. This process was relevant and valuable for determining key themes and common ideas that developed across the 17 interviews. The questions were specifically arranged to create a thorough examination of the participant's athletic career and experiences (Appendix A). As well, the questions were carefully ordered to create seamless transitions between questions and answers. Following the major questions were probing questions for the interviewer to ask, should they feel the initial question did not receive a sufficient response (Brinkmann, 2018, p. 579). Following the conclusions of the semi-structured interview, participants were asked to respond to a series of demographic questions. These demographic questions included sex, age, ethnicity, and highest level of education completed (Appendix B). To reimburse participants for their time and involvement in the study, each participant received a \$10.00 coffee gift card to Starbucks.

Participants

The project was designed to interview participants who identify as volleyball athletes. This participant criterion provides a unique angle to the project. Specialization in the sport of volleyball is an extension of the gap in the literature surrounding this research study. Sport specialization has been extensively researched with a focus on a variety of other sports. However, there is very little literature on the effect of participating in volleyball and sport

specialization, especially in terms of early sport specialization. The selection of volleyball participants created a defined scope for the project. It provided an opportunity for the comparison of the results of participants who have completed similar high intensity sport specialized training regimes.

The participants involved in this study were recruited from the pool of volleyball players in connection with the athletic community in Calgary, Alberta. The study was interested in the immediate time in and around specialization, as well the post-specialization period. Therefore, it was appropriate to have the sample frame for participants consist of current and retired athletes aged 18 to 30. The age range was selected to ensure participants were able to consent to participation in the study. The sample frame ensured that participants would have completed their youth specialization phase prior to the interview for this project. The study specifically focused on athletes that specialized in the sport of volleyball. Athletes may have participated at the varsity, collegiate, or professional level. However, for the purposes of this study, this was not a participant requirement. Participants were required to have participated in youth volleyball in some capacity to ensure the participant provides relevant answers to the interview questions (Appendix A). However, during the recruitment process, it was not made a requirement for participants to have specialized as a youth volleyball player.

Data Analysis

Data analysis officially began by transcribing the interview recordings with the assistance of the online software Otter.ai. Otter.ai transcribed the interview and provided keywords that provided additional context to the notes section of each transcription document. Two documents were created with each transcription: a transcription document and a transcription note document. After downloading the Otter.ai transcription, the primary researcher would review

each transcript and edit to ensure the transcript matched each interview. The data analysis and transcription process faced a roadblock as the recording device used for the interviews did not have a way to upload to a computer. As a result, the primary researcher recorded each interview onto an application on their phone prior to uploading the files to a computer. This temporary setback did not compromise the main researcher's ability to transcribe each interview.

Transcriptions and notes were printed and stored in a master binder in order of participant number. The primary researcher highlighted and colour coded themes as they emerged. A master document with the transcription notes, transcriptions, and coded themes (as they emerged in the binder) matched the binder as a backup.

Results

Participants

Ultimately, 9 women and 8 men participated in the current project. Participants ranged from age 18 to 29, ($M = 23.47$ years, $SD = 3.20$ years). Seventeen of 17 participants classified their ethnicity on the demographic survey as White, however, 3 of the participants identified as mixed ethnicity (Appendix B). Seven participants live with their parents, while 10 participants have moved away from home. Thirteen of 17 participants have achieved an undergraduate degree as their highest level of education, while 4 participants have completed a high school diploma. Fifteen of 17 participants participated in youth sport in Calgary, Alberta, Canada. Two of the participants have ties to the Calgary, Alberta volleyball community, but did not specialize in the city.

In the analysis stage, there were no significant differences identified in the participation and consumption patterns in the experiences of volleyball specialization between participants who identified as either a man or a woman. Thus, gender was not a significant contributing factor

to participation and consumption patterns and is not discussed further. Participants will be referred to by number (for example, “Participant 1” or “Participant 5”). That number was assigned to the participant in the order that they were recruited (the first participant who contacted the primary researcher received the title “Participant 1”). Thus, participant numbers extend beyond 17.

Participants defined sport specialization differently depending on their experiences in youth sports and volleyball specialization. The majority of participants experienced sport specialization in volleyball during their youth (through club, junior high, and high school) and continued with specialization beyond youth volleyball. Other participants classified their sport specialization as the volleyball experience succeeding their youth athletic participation. In these cases, participants explored various sports prior to selecting volleyball as their main sport once they reached the collegiate level.

Some of the participants have been members of high-performance varsity programs such as USPORTS or the Canadian Collegiate Athletic Association. The varsity leagues in Alberta and Canada are highly recognizable to high performance, elite athletes in Calgary and across the country. Many young athletes are motivated to play in these highly esteemed Canadian Leagues. The USPORTS league is the organization that unites four conferences and 56 universities in competitive athletics across Canada (USPORTS, 2019 – a). The conferences include: Canada West, OUA (East and West), AUS, and RSEQ (USPORTS, 2019 – b). USPORTS was re-branded in 2016, thus some participants may recognize the league as Canadian Interuniversity Sport (CIS) (USPORTS, 2019 – a). The Canadian Collegiate Athletic Association (CCAA) unites five conferences: PACWEST, ACAC, OCAA, RSEQ, and ACAA (Canadian Collegiate Athletic Association, 2019). The Canadian Collegiate Athletic Association is the collegiate sport

equivalent of USPORTS. In addition, some participants extended their athletic careers to European professional leagues or the Canadian National Team. In sum, participants in the current project were elite volleyball players who specialized in the sport from a young age.

Analysis

The analytic strategy was a manual process that presented the primary researcher with the ability to comb through data and connect overarching themes. As explained previously, each interview transcript was manually analyzed by the primary researcher. The primary researcher categorized each interview into six primary areas related to the interview topics: History of volleyball, history of other sports, specialization decision, participation, opinions of specialization, and consumption. As themes surrounding the research question emerged from the data, the primary researcher highlighted, colour coded, and noted the theme. The master document with the transcription notes, transcriptions, and coded themes were updated as themes emerged in the binder to ensure the master document and binder were kept in sync.

The analysis is structured as follows: Past participation themes (under the “Past” header) referenced any previous experience that the participant had with specialized volleyball and were easily identifiable. However, present and future participation themes were difficult to distinguish. This is likely because participants varied in current career position; some participants are currently participating at the collegiate or professional level, while other participants are not actively participating or have completed their volleyball career. As a result, the header “Present and Future” encompasses participants’ current and future participation patterns. Consumption patterns emerged from the data in a clear pattern and, as a result, have been organized by theme.

Participation

Past

Specialization and Socialization. A theme that emerged from past participation in volleyball was the impact of specialization on the social lives of participants. Many participants explained that their specialization in volleyball is rooted in social influences. Socialization is positioned in both the positive and negative areas of volleyball specialization. While some participants spoke to the idea that it was beneficial to some areas of their past participation, they also illustrated how it was detrimental to other areas.

For many athletes, participation in specialized volleyball was due to the influence their network had on their athletic pursuits. Some participants began their specialization journey because of a connection to the sport of volleyball. Many participants had a previous relationship to volleyball which was commonly explained as having been developed through family or friends. Some participants spoke to the reality that their parents or siblings were involved in the sport of volleyball. For some participants, this familial connection to the sport propelled their participation in the sport and later the decision to specialize.

Many participants recounted that a beneficial aspect of past participation in specialized volleyball was socialization. Participants said that the social skills they learned from past participation in specialized training translated to present day (for example, the ability to deeply commit to their work or leisure activities). Many participants explained that their social groups from past participation are people they still connect with to the present day. For example, Participant 10 said, “For most people in volleyball I know that everyone’s kind of got like a volleyball group. So, you’ll see people are still connecting even though they stopped doing

volleyball a while ago.” Many participants explained that they have made some of their closest friends through their participation in volleyball.

While specialization can be beneficial in some aspects of an athlete’s social life, it can also be disadvantageous for young athletes. Participants spoke to the idea that volleyball socialization was predetermined for them. When volleyball athletes involved themselves in high performance sport, their volleyball society became their social lives. Some participants found that socialization was limiting in the sense that they felt as though they only had the sport of volleyball and their volleyball friends. For example, Participant 11 said, “I struggled just because, like specializing in like there’s not room for other things. So, if there’s nothing else to really lean on, if you know if volleyball wasn’t going great one week or something, or if I wasn’t feeling as sharp or wasn’t motivated, if there wasn’t like other things to distract yourself with.”

Several participants described their social lives as simple because they did not have to actively search for friends, rather friends were predetermined by the team they were a part of.

However, participants suggested that although this may seem beneficial, it was detrimental in other social settings outside of volleyball (for example, school). Some participants are under the opinion that specialization distances athletes from friends who aren’t participating in the same sport as them. Unfortunately, participants believe that volleyball organizations don’t understand the social impact that specialization has on volleyball athletes. One participant explained that volleyball organizations told them that family comes first, when in reality, the unspoken expectation is that they put their team before their family. Ultimately, several participants recalled that they had limited free time to allocate to family or non-volleyball friend groups.

In some cases, participants explained that their commitment to specialization resulted in trade-offs related to other aspects of their social life. For example, many participants spoke to the

idea that specialization degraded the kinds of social well-being associated with school, sleep, stress, and overall health. However, the relationship between specialization and socialization can be viewed as a grey area. As Participant 8 said, “Some people say... you have to sacrifice so much... but I wouldn’t say it’s sacrifice. Sacrifice is like a word that means, like, you don’t like what you’re doing. You’re sacrificing something. Because you don’t like what you’re doing so. Really, it’s not it’s a choice.” In some cases, the reality is specialization influences socialization extensively as many participants suggested that it dictates the personal lives of young athletes.

Goal Oriented. A theme that emerged surrounding past participation is that specialized athletes had a goal oriented focus towards future participation. Many athletes reflected on their past participation in volleyball as being driven by scholarship, varsity, and professional opportunities. In what follows, this project examines the ways in which goal oriented participation influenced their past participation in volleyball. However, it is important to note that goal oriented participation for young athletes can be negative because some participants began to view sport as a job and their goals as obligations rather than enjoyment.

Goal oriented participation of young athletes is driven by motivational milestones such as receiving scholarships or the desire to play at the next level (post-secondary or professionally). With these goals in mind, many specialized athletes refrain from participation in other sports because of the associated risk of perceived injury that comes from multi-sport participation. It is an unspoken expectation that specialization is a requirement for young athletes who are motivated to get to the next level. Participant 8 said, “You have to have that edge because the second you take a month off, Susie over there is not taking a month off and she’s going to be that much better than you.” This idea was presented by other participants who said that their goal oriented training gave them insight into where they are in comparison to other athletes in their

age group. The pressure participants experienced from skill level and performance comparisons added to the pressure of not changing sports. Young athletes are developing younger, getting stronger, and training harder, and as a young specialized athlete they cannot afford to miss a training opportunity. However, some participants spoke to this as a positive of specialization as this intensive goal oriented training can be beneficial when looking to participate at a higher level of volleyball.

Goal oriented participation in volleyball allows specialized young athletes to focus their energy. It encouraged participants to work towards accomplishing something. Participant 11 spoke to this idea by saying “just trying to perfect one thing can be rewarding.” In addition, participants said that having a goal-oriented focus created routine in their days and is associated with many positive attributes of specialization. Some participants explained that goal oriented desire to compete can be incredibly beneficial for people. It teaches young people how to commit to something they believe in. Participant 8 explained that goal oriented specialized participation leads to athletes wanting to be the best that they can be. This relates to Participant 36’s theory that youth participation in volleyball specialization leads to goal oriented personal growth. Goal oriented participation in volleyball develops commitment and value that athletes feel towards something that is important to them. It is a motivational piece that young athletes learn early and they implement later in life.

Sport as an Identity. One theme that emerged was the idea that sport frames an identity for an athlete. Participating in specialized volleyball training gives a person access to an identity as a “volleyball player.” Being an athlete who specializes in volleyball means there are standards in order to maintain your volleyball identity. In a sense, as a specialized athlete you have grown and trained in an environment where you are constantly working to satisfy your parents, coach,

recruiter, or yourself. As a result, you are constantly searching for affirmation that what you are doing is purposeful, meaningful, and you're doing it better than the average individual.

Participant 14 spoke to this idea: "A lot of athletes that have that deep ridden self identity where you're just not good enough for you can get to there and I feel like with specialization, as many years as you have that gets more and more ingrained and you really struggle to figure out who you are and who and what you're actually good at, and that you are enough no matter what. And I think that that's probably one of the bigger downsides of sport specialization." Following sport specialization, many athletes continue needing intrinsic satisfaction with where they are in life, whether in sport, school, or work.

After the completion of their specialized athletic career, many individuals battle with their self identity and determining what their purpose in life is. Many participants experienced the overwhelming feeling that volleyball consumes their lives. For example, Participant 12 said "I do find my brain sometimes gets caught up in thinking that volleyball is your life and volleyball, you're like you're I find it's a trap you can get caught in like your identity is found in a volleyball player." This participant identified the challenge of coming to terms with the fact that volleyball is not all that life has to offer, which can be an extremely difficult concept to grasp. Participant 14 also spoke to the issue that specialized volleyball athletes are "always striving for a reason or a goal" and struggle internally after they've completed their athletic goal or reason. In addition, athletes who have finished specializing in volleyball experience a strange period of their lives where they are in a foreign environment with less commitments scheduled. As Participant 14 said, the competitive nature of specialization affects the athlete's "perspective around sport and who you are." Many participants spoke to this idea by saying that they looked

for any opportunity to add purpose to their lives, and the fact that it takes time to come to terms with not having as many commitments as they used to.

Specialized training is one important way that a volleyball player maintains their identity as a volleyball player. The concept of a specialized volleyball identity is reinforced by the perceptions of skill and athleticism in their relation to performance and intrinsic awareness. The idea presented above relates back to the earlier theme of goal oriented participation in young athletes. Sport becomes a job for participants: the expectation is that the athlete is focused, pushes through difficult times, and does not quit no matter the circumstance. For example, Participant 5 said “You know, you’re an athlete, you’re not a quitter. Athletes push through, it’s, you know you just don’t quit.” However, this can be extremely negative for specialized athletes during and after sport specialization. Athletes feel an extreme sense of pressure in many aspects of their lives, all of which being areas where they struggle with the idea of sport as an identity. Some participants felt that overspecialization in one sport led to an inability to participate in other sports. They experienced the need to be perfect in all aspects of their athletics regardless of the time they have dedicated to that sport and the skills required to reach perfection. For example, Participant 5 said “I would rather play volleyball then embarrass myself not knowing how to dribble a basketball.” They feel a sense of pressure that removes them completely from the sport industry because they would rather not experiment in other sports than experience the feeling of failure. As well, the athlete mentality that you do not quit, regardless of the situation, translates into future volleyball participation. Participant 9 said they experienced “a lot of pressure to continue playing after the club level like to go onto post-secondary because you put so much time into it.” This relates back to the idea that athletes “push through” because it has

been ingrained into their self identity. Anything less than what an athlete considers perfection is not good enough.

The athlete identity becomes ingrained in the minds of specialized athletes and is something that they translate into the future, either consciously or unconsciously. One transferable trait learned from the volleyball identity is the competitive nature of athletes. Many athletes transition into the “real world” (that is, the working or academic world) with a competitive nature that they implement into their day to day lives. For example, Participant 15 said “[my job] is where I can really let my competitive side come out.” This participant spoke to the idea that their current role in the workplace granted them the opportunity to indulge their competitive side into something other than sport. A second transferable skill participants touched on was the practice of the skills of commitment. Many participants spoke to the fact that early volleyball specialization supported the value of commitment and understanding the importance of dedicating yourself to something and seeing it through to the end. For example, Participant 9 said “[volleyball] taught me the important values about commitment and um really seeing something through.” Specialization in sport requires a certain level of commitment in order to achieve success, as a result many Participants said this was a key tool they learned through specialization. As a second example, Participant 15 said “it teaches you a lot about commitment and how to be you know fully indulged into something.” A third transferable trait is the mental strength that specialized volleyball athletes identify with. Participant 12 explained that specialized volleyball training made them “very mentally strong and engaged and that can be huge off the court.” Training mentally, physically, and emotionally in a sport makes an athlete mentally stronger (especially in a sport as mentally engaging as volleyball).

Present and Future

Giving Back to Sport. A theme that emerged from present and future participation was the desire to “give back” to the sport of volleyball. Many participants spoke to their commitment to the sport of volleyball, but especially the young people that are currently specializing in the sport. Participant 15 said, “I try to give back to the community as much as possible.” Many other participants share Participant 15’s perspective as they feel that they now have the skillset to positively impact the lives of young athletes in a mentorship position. Participant 15 said that giving back is “a way to take that specialization and everything that I learned from it, and apply it in a different way, working with all these athletes.” In addition, specialization aids in developing an understanding for where young athletes are coming from. Some participants spoke to their experiences in specialized volleyball and their awareness of the toxic environment that is high performance athletics. Their desire to give back to the sport of volleyball is rooted in their commitment to improve youth volleyball in both the culturally vital aspects such as body positivity and coach-player relationships in competitive environments on and off the court.

Specialization in volleyball creates many opportunities for volleyball athletes to create a good reputation in the volleyball community. Several participants said their specialization has helped them find their passion, which resembles stewardship and leaving a legacy in the community. Many participants said that their participation in specialized sport has created a reputation that provides the opportunity to give back. For example, Participant 14 said, “[It] all comes back to you know how you want to be remembered and making the biggest impact on the world that you can and for me these avenues is what that is. That’s how I can help and give back the most that I can.” These specialized athletes have the experience, skills, and accomplishments of specialized sport and the community often recognizes that. Specialized participation and the

history with high performance athletics is the experience that the community needs out of coaches and mentors who want to give back to the community.

Social. A theme that emerged from present and future participation patterns in volleyball was the social aspect of participation. Many participants related their present and future participation in volleyball to the feeling of being a part of a community. This is rooted in the idea that specialized athletes have developed the skills required for present participation in volleyball. For example, Participant 10 said, “it’s kinda just like, it’s given me something to do like in my free time.” Participants further explained that their participation in recreational or intramural volleyball is because of their desire for social involvement. For example, Participant 10 said that their interest in joining an intramural team or attending drop in volleyball games was due to their desire for social interaction. In addition, participants who are still participating in specialized training explained that present specialization is enjoyable because of the social interaction they experience on court and off. Participant 36 explained the social perspective from on court: “You’re altogether on the court. And then it’s just like a community. Such a close community feel.” While Participant 12 explained their enjoyment for social participation off court, “I love being able to hang out with my team every day.” While present specialized participation has many social attributes, present recreational participation creates an outlet for specialized young athletes. Many participants feel that their experiences in specialized training have led to their ability to use volleyball as social distraction from their lives. Participants spoke to the distraction from school; however, work and other aspects of an individual's life may require a social distraction such as volleyball as well.

The community that athletes become involved with throughout their volleyball experience impacts the athlete long term. For example, Participant 18 said “Whether it’s good or

bad, your social life, your community, your like everything becomes the sport depending on how far you take it, uhm, so I think it does have an impact on who you become later on in life.” In addition, participants explained that their most meaningful relationships were developed through their specialization years. These relationships were friends that specialized athletes made and created deeper connections with. In addition, this community that specialized athletes find themselves positioned in brings forth future opportunities in their professional life. For example, Participant 8 spoke to their connections to the volleyball community as the reason for their career path.

Social involvement in the present and future also extend into opportunities for participation in sports other than volleyball. Participation in these other sports provides athletes with the ability to socialize with people outside of the volleyball community. For example, Participant 8 said, “It's really it's so refreshing to talk to non-volleyball people.” Many participants spoke to their desire to participate in sports other than volleyball for the social participation (for example, joining a league that will provide opportunities to socialize after playing a game). Several participants said that their desire to participate in sports other than volleyball was rooted in their familial connection to that sport. For example, participants mentioned sports that they are participating in currently and said their interest was sparked by a parent or friend's participation. Participants explained that their desire to participate in other sports is also because of specialization. While participating as a specialized athlete, participants could not explore these other sports. Once they completed years of specialized participation, participants approached recreational opportunities to extend their athletic involvement as well as interactions with people other than volleyball athletes.

However, social participation is also a negative outcome for present and future participation in volleyball. Almost all participants spoke to the issue that specialization defines your social group. When athletes specialize in a sport, the team becomes their social group. Athletes dedicate many hours a week to specialized volleyball training and said that there is very little time to spend in social settings outside of volleyball. The unfortunate reality a lot of these athletes encounter is that when they leave the sport, they lose their social group. This results from socially interacting with only volleyball players and when athletes leave their sport, they leave the group of people they interact with. Many participants, including Participant 9, spoke to their social reality that they have to “actively look for ways to make friends.” This proves to be difficult for participants as they have grown up in a community where teammates became their friend group, and participants have rarely experienced having to make friends.

“Burnout”. Burnout is a theme in the literature on sport specialization. As defined in the literature review, burnout is the decrease in motivation, stress and anxiety, or a loss of enjoyment for the sport that athletes specialize in (LePrade et al., 2016, p. 3). However, there is more to burnout than feeling as though you have played too much of one sport. As previously identified, specialization in volleyball leads to the development of a volleyball athlete identity. As a result, athletes can never truly step away from the athlete mentality or specialization mindset. Many participants in this project discussed how their desire to participate in sport is impacted by the intrinsic specialization that they cannot escape.

Participants felt as though their participation in volleyball after specialization (in a recreational setting) hinged on the preconceived idea that they needed to excel or be perfect in their execution of skills because they specialized in the sport. Once an athlete finds success in sport, it is difficult to mentally position yourself as a recreational player rather than a specialized

athlete. For example, Participant 11 said “I think with specializing, if you have some kind of success with specializing, it's kind of hard to go back to, like mentally and stuff. Or like anything less than that. It's kind of like, once you're used to always stepping on the court. And competing at a certain level, trying to like, dial that back for myself is like, difficult.” Having competed as a high-level athlete, participating in a recreational setting is difficult as athletes have to alter their play to fit the level of skill and competition.

It is important to speak to participant experiences that are similar to the existing literature on burnout. Some of the participants feel that they need time away from the sport of volleyball. This idea is positioned in two differing camps of “burnout.” The first camp being that participants found that their specialization overtook their lives. For example, Participant 4 said “I have no desire to play it [volleyball] because I feel like I overdid it.” They experience decreased motivation to participate in volleyball because of the overwhelming time they invested in volleyball. On the other hand, the second camp of “burnout” is the decrease in volleyball participation for an unknown reason. Some participants spoke to their decreased motivation for volleyball participation; however, they are unsure why they do not feel motivated to participate. Following the completion of their volleyball specialization experience, some participants have barely touched a volleyball. Participant 11 said “It wasn't really like a conscious thing. I think it was more than anything was just like, I'm gonna not like, like, do anything for the next like couple of months. And then take it from there.” Participant 7 said that their experience with “burnout” may have been caused by “too much of a good thing ... it [volleyball] becoming more than just like playing a sport.”

“Burnout” also speaks to the present and future sport participation as the ability to play or participate in sports other than the one you specialized in as well as other career goals and

aspirations. Participant 11 said that there were implied rules on high performance volleyball teams that prevented athletes from participating in other sports. When participants finish specializing in volleyball, they feel that they have the opportunity to experience sports other than volleyball. This is confirmed through the participation patterns of participants in this current project. Many participants participate in recreational leagues for sports other than volleyball. In addition, participants spoke to “burnout” as being the decision to take time away from the sport of volleyball and not pursuing a career at this time. Participant 14 explained that they were experiencing an overwhelming amount of volleyball and needed to take a break from the sport. This supports the literature on burnout that suggests athletes experience a loss of motivation to the sport they specialized in (LePrade et al., 2016, p. 3). On the topic of present and future participation in specialized volleyball training, Participant 11 said “I guess I just didn't like the sport enough to like dedicate more of my life to it at the like, cost of being able to achieve other things.” In this example, “burnout” refers to the experience of many athletes that their life goals begin to outweigh their athletic goals at some point in their lives. Stepping away from the sport wasn't because of the decreased motivation or lack of enjoyment for the sport of volleyball, rather the motivation to begin a new chapter in life (LePrade et al., 2016, p. 3).

Consumption

Social

One theme that emerged from the consumption patterns of participants was the social aspect of consumption. This idea exists in many different forms. For one, the desire to consume volleyball and other sports in a social environment is rooted in habits of other individuals, such as family. Another form of participant consumption pattern has been developed because of their

network or community. The final form of social consumption to be discussed is the desire to watch or consume sports for the purpose of observing the social aspect of sport.

The desire for social consumption is embedded in familial habits and influenced by social settings. Many participants spoke to the idea that their interest in sport consumption was sparked by their family. Many of the participants experienced sports consumption from a young age due to household television habits. For example, Participant 7 said “I grew up in a house that watch[ed] SportsCentre like every day so I’m just kind of used to it now.” For many of these participants, their consumption patterns were a result of walking into a room and a game already being on the television. For others, this history with sport consumption has created a lifestyle for social sport consumption now. Participants have become used to the idea of sports being on in their household and have adapted it from their younger years. In addition, participant history with sport consumption has led to their desire to stay up to date on what is going on in the sport world, both specific to volleyball as well as other sports in general.

Athlete consumption patterns are affected by where their community is located and the connections their network has to sports. Almost all participants said their volleyball consumption patterns are a result of the people they know participating in volleyball. Participants said they watch to support the endeavours of friends, family, and previous teammates who may still be participating in volleyball. For example, Participant 14 said “I think it's because that's where my network is. And the network itself is... is... is has some amazing people. I think that's, I mean, obviously, I'm biased. But I think that that's one of the special things about volleyball in Canada is the culture, and the people that we have in the sport.” Participants 5, 7, and 11 all commented on this idea by saying that they know someone playing or socially consume volleyball because they like to keep track of previous teammates. Participant 14 spoke to their opinion that in the

volleyball community, “a lot of people look more at life and who people are as a whole. Not just your worth is how good you are. I think that a lot of people are more well-rounded and care more about the person instead of the player.” The social consumption of volleyball is a supportive network where participants feel a sense of belonging. In addition, many patterns drew attention to their involvement in sports only lasting as long as their community and network is there. Once their community of volleyball athletes retires, many participants thought they would not look for volleyball consumption opportunities as actively.

Finally, participants spoke to their consumption as the desire to observe the social aspect of sport. For many participants, volleyball consumption is an opportunity to observe the team morale associated with the sport of volleyball. For example, Participant 7 said “I just know how fun it is like when you’re doing really good and whatever. You’re like having fun with your teammates... I just like watching it and like supporting that aspect.” In addition, many participants spoke to the community that a sport creates. Fans and consumers come together with one common interest of celebrating the sport they love. Participant 14 said, “you can have a football stadium, you know, of 40,000 people that will probably never talk to each other or hate each other but they’re all watching one team and they decided that they all love each other.” There is something to be said about the network sport creates for people and participants experience this during their specialization years firsthand and observe it later on in the form of consumption.

Specialized Knowledge

One theme that emerged was the idea that specialized knowledge in sport is a contributing factor of consumption patterns. Specialized knowledge is the information that a specialized athlete learned during their specialization years. It is a deeper understanding of the

sport that athletes who did not specialize may not have knowledge of or experience with. Specialized knowledge leads to the understanding of sport; specifically, the rules, skills, and strategy of the game. It can be beneficial to specialized athletes who consume sports as it creates a more in-depth analysis and experience of the game. The experience athletes have in playing a sport creates a deep understanding for the consumption of sport. This creates an analytical perspective for athletes to view sports with and many even find that it makes sport more enjoyable for consumption.

Specialized knowledge in the sport of volleyball creates a different type of consumption experience for athletes. Consumption with specialized knowledge creates a more analytical perspective of the sport of volleyball for participants. Many athletes said that when they watch volleyball, they find themselves watching in an analytical way, something they used to do during the years they specialized. Participants use volleyball consumption to as a tool for learning from other athletes, coaches, and applying it to their own sport or life. For example, Participant 8 said “[I] can take a lot of things... everything I’ve learned as a volleyball coach is from other people.” Participant 12 emphasized this idea by saying “I think it’s important as a volleyball player, as someone who specializes in the sport, to learn the game better. Uhm just to be able to read plays better.” Specialized knowledge and consumption patterns in volleyball are interdependent; an increase in specialized knowledge correlates to an increase in volleyball consumption and vice versa.

Volleyball is a unique sport that is constantly developing. Many participants consume volleyball because they want to see and learn how the sport is advancing. For example, Participants 8 and 11 both said that they enjoy watching volleyball because they like to see how the sport is evolving. While Participant 36 spoke about how they enjoy consuming volleyball

because they like to see “how it’s advancing.” Participant 9 explained that there is a unique skill set required to participate in the sport of volleyball. Participants spoke to the idea that volleyball is complex in various ways that make it difficult for average individuals to follow. Participant 9 further explained that the game of volleyball is as mentally engaging as physically, if not more. Participant 10 reaffirmed this idea by saying, “without having a volleyball knowledge and like, how the game works and everything, it’s not the same watching.” In comparison to other sports, participants commented on the complex level of understanding required for volleyball.

Participant 1 suggested that volleyball is completely different from other sports. They provided an example of a sport like basketball, specifically comparing the tempos of the different games. Participant 1 said, “But basketball, the ball never drops and there’s not as much downtime in between points. So, I feel like it’s a lot more easier for just your average consumer to tune in and watch the game.” On average, specialized volleyball athletes will enjoy and have an easier time consuming volleyball than someone who is not specialized in volleyball.

On the other hand, specialized knowledge of volleyball can negatively influence athletes’ experiences of consumption. Participants spoke to the idea that when consuming higher levels of volleyball, they find that they compare themselves to professional athletes. Participant 1 discussed the repercussions of watching higher level volleyball, specifically the negative impact it can have on them mentally. When athletes see themselves playing on video, it can be difficult for them to separate their level of play from that of professional athletes. This is also prevalent in youth volleyball as specialized knowledge gives athletes a sense of where they are in development compared to other youth athletes and could potentially turn them away from the sport.

Specialized knowledge in volleyball creates a different consumption experience of other sports for athletes. Many participants felt that their specialized knowledge in the sport of volleyball drives their consumption patterns of other sports. Participants spoke to their consumption habits, specifically their analysis of other sports. Participant 14 said that they analyze football and see it as a “complex chess match.” In addition, they provided comparisons between the positions in football to the positions in volleyball. For example, the quarterback in football shares a similar role as a setter in volleyball. In addition, many specialized volleyball participants had experience in sports other than volleyball prior to specializing. As a result, their specialized athlete knowledge assists in their understanding of other sports later on. They can refer to their youth sport experiences and utilize their specialized knowledge of their current sport when consuming sports other than volleyball.

Availability of Content

Volleyball content (specifically, live games) is limited in its availability for consumption purposes of viewers. Participant 8 spoke to the fact that in Canada, locating live volleyball content for consumption is extremely difficult. When participants were asked about their consumption of volleyball (for example, watching games or tournaments on television, listening to the radio, listening to a podcast, or streaming it online) many touched on the fact that the sport of volleyball is not readily available or accessible for consumption. In order to view games on a television or computer, participants spoke to the fact they had to use online streaming services or resort to social media for links to live feeds. Participants explained that sports such as tennis, hockey, and football are commonly found on television and thus more accessible for consumption.

Content availability affects and influences the consumption patterns of viewers because it does not have the same popularity of other sports. Participant 7 spoke to the idea that “volleyball’s a smaller sport, like you don’t see it on TV every day.” Participant 4 took this a step further by saying that when comparing popular sports such as hockey to volleyball, volleyball does not have “globally as big of a reach.” Many participants spoke to the idea that because of the global scale of the sport of volleyball, viewers have to actively search for opportunities to consume live volleyball content. For example, Participant 34 said that “you have to want to watch it.” This was reaffirmed by participants because some even suggested that if volleyball was broadcasted on television, they would definitely watch it.

Purchase of Merchandise

The purchase of sport specific merchandise has been identified as a theme of consumption for specialized athletes which has implications for the sport industry. Specifically, participants spoke to their consumption patterns for volleyball equipment or gear. There was division between participants who said they use(d) court shoes specifically designed for the sport of volleyball and participants who use(d) court shoes designed for basketball. In addition, there are contrasting views regarding the design of volleyball and basketball shoes and the benefits or downsides to using shoes other than those designed for the sport of volleyball.

Participants who said they used shoes designed for sports other than volleyball identified shoes designed for the sport of basketball as their shoe. There are various reasons identified by participants for selecting a basketball court shoe rather than a volleyball shoe. Some participants choose to purchase basketball shoes because they find that the design of the shoe serves a better purpose for movements specific to their volleyball position. For example, Participant 18 said that their experience with volleyball court shoes was negative because they “always found that like

the bottoms gave out quickly and especially when like lateral movement the bottoms like the tread would be just gone." When asked about their experience with basketball shoes, Participant 18 said "I found with like basketball shoes the tread seems to like last a little longer because they're used to that change in direction, so I found that they were really nice for blocking." Participant 18's decision to purchase basketball court shoes for volleyball participation is because of their belief that volleyball merchandise does not serve the correct purpose. However, Participant 14 said that they use basketball shoes because they're designed similar in form to volleyball shoes. The shoes Participant 14 uses are low top, lighter and are a common basketball shoe used by the volleyball community.

Basketball shoes were identified as being more visually appealing and available for consumers to purchase. Volleyball shoes were identified as less visually appealing with limited selection. Some participants purchase court shoes designed for the sport of basketball for visual appearance and style. For example, Participant 7 said "when I got my first pair it was just because I thought that was cool." However, Participant 7 further explained that they believe that volleyball shoe brands are beginning to make their shoes more visually attractive and "cool." Participant 7 confirms this idea by saying "I think they're making volleyball ones look cooler now because they know that they're not [cool]." This transition to a more visually appealing volleyball shoe design seen as important to some participants.

Social Media

Social media has been identified as a positive and negative outcome of sport specialization as it occupies athletes outside of their training environment. Many participants said that they use social media platforms as a method for consumption of sports (volleyball and any other sports that they identified). Social media even extends into the network of people

specialized volleyball athletes connect with or follow: teammates, coaches, professional teams and athletes. Social media provides a place for athletes, fans, and consumers to watch condensed sport in the form of highlights. Participant 14 said that they use social media (specifically Facebook) to watch live streams of games. Participants utilize social media platforms such as Instagram and Facebook to watch highlights, stay up to date on sports, and be involved with the sports community.

However, social media presents a negative aspect of specialization as athletes never have a break from the sport in which they specialize. Participant 8 speaks to this idea by saying, “you never take a break [from volleyball].” Participant 8 identified that social media prevents volleyball athletes from taking a “mental break” from volleyball. After intense volleyball training, athletes return home and resort to their computers or phones for a mental break. However, Participant 8 suggests that social media feeds of specialized volleyball athletes are filled with volleyball content because their “social group is just volleyball.” Volleyball athletes consume an overwhelming amount of volleyball content through social media and never truly get a break from specializing.

Athleticism

Athleticism is a very important theme that emerged as many participants consume volleyball and other sports because of their interest in the qualities of professional athletes. Participants explained the areas of sports that ultimately drive their consumption patterns, most of which tied into the fascination of watching high level athletes perform. For example, Participant 36 said “athletes. I think they’re just the coolest. How they use their body in different ways. Like they become so good at it and they get paid like millions of dollars. It’s just fascinating to me.” Participant 3 spoke to the idea that they enjoyed watching people utilize their

athletic ability and do what they love. Many participants explained the excitement they've experienced from watching good athletes do great things.

On the other hand, some participants consume other sports because they enjoy comparing and contrasting the skills, tactics, and athletic abilities of athletes in one sport to athletes in another sport. Some sport consumption was aligned with the fascination of the psychology and physicality of sport. Participant 11 said that they enjoy analyzing the development of other sports and comparing the differences between the best athlete in one sport (for example, basketball) and the best athlete in another sport (for example, golf). Participants are intrigued by the opportunity they have as consumers to analyze athletic ability and determine what specific sports require out of athletes.

Consumer experiences in sport influence the patterns of consumption of sports, both specific to their specialized sport as well as other sports. Participants spoke to the appreciation they have of good athletes because of their understanding of sports and history of sport participation. For example, Participant 9 said "I think just being an athlete, I have an appreciation for other athletes that are playing sports at the professional level." Viewer appreciation of sport escalates when there is a direct relationship between the activity being consumed and personal history. Participant 5 spoke to this idea by saying, "I feel like just having been an athlete, you appreciate so much more the skill that it takes and the effort that it takes for these kids to uhm perform at the level that they're performing at." Consumption of volleyball is tied to the idea that participants view a higher calibre of volleyball than they played for enjoyment purposes. In addition, participants shared an appreciation for the difficulty of sports other than volleyball because of the required skill as well as comparing the sport to volleyball. Participant 7 said they enjoy consuming sports other than volleyball because they are constantly "thinking about how

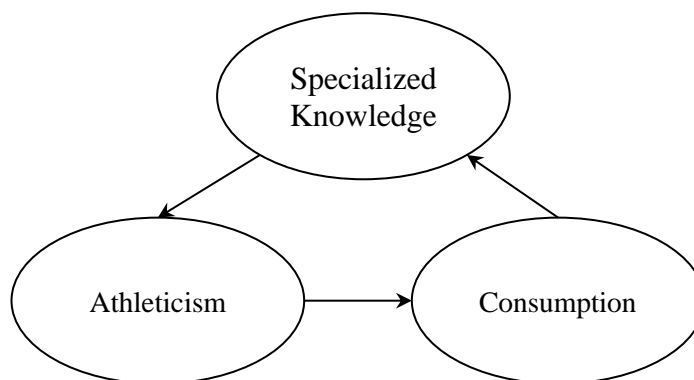
hard they are." As previously discussed, volleyball athletes utilize specialized knowledge of sport in general because of the desire to consume sport for the enjoyment of watching pure athleticism.

Discussion

This project was designed with the intention of identifying common themes related to the effects of sport specialization on the individual and the sport industry. In addition, it helps to bridge the gap in the literature among sport specialization, the sport industry, and the participation and consumption patterns of sport.

Specialized Consumption Patterns

Specialized knowledge and athleticism are two key themes that emerged from the consumption patterns of the participants in this current project. As illustrated in Figure 1, results from the current project suggest that both themes are involved in a perpetual cycle of sport consumption. In other words, consumption patterns of specialized athletes are often dictated by specialized knowledge of sport in general (Figure 1). Specialized knowledge of athleticism elevates consumption patterns of individuals because of their understanding of what it takes to perform at high levels. People who specialized in sport understand what it takes to be a good athlete and achieve success in the competitive sport industry. When people do not have a foundational understanding of sport, which is developed through specialized knowledge, they are less likely to have an appreciation of athleticism and consume sports (Figure 1).

Figure 1*Specialized Consumption Patterns*

The sport industry requires viewers to have specialized knowledge of sport to understand athleticism required for sport, which in turn increases sport consumption (Figure 1). However, the sport industry also relies on specialized athletes to drive consumption patterns of individuals who did not specialize in sport. It has been controversially suggested that the best young athletes are products of specialization (Malina, 2010, p. 364). While this may or may not be true, the best individuals for the sport industry for consumption purposes are these specialized athletes. As embedded in the literature, in order for consumption in the sport industry to occur, a consumer must be present (Lucian, 2014, p. 44). As a result, specialized knowledge of sport drives individual consumption desires. Without an understanding of the sport, individuals would be less likely to involve themselves in the consumption of sport (Figure 1).

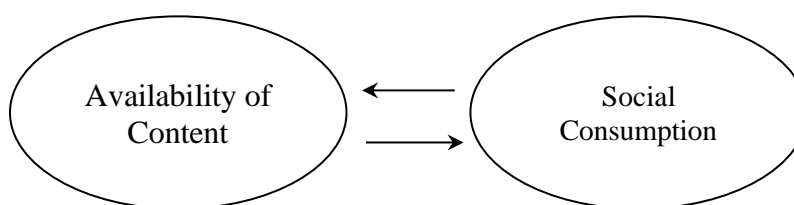
Volleyball Content and Consumption Cycle

The availability of content and social consumption are two interdependent themes that emerged from this current project (Figure 2). As depicted in Figure 2, the availability of volleyball content heavily impacts the media viewership and consumption of the sport. If volleyball is unavailable, or difficult for consumers to access, people are less likely to engage in volleyball consumption. As a result, there is less social consumption of the sport of volleyball.

Social consumption, as identified earlier, is the consumption of sport (whether it be volleyball or other sports) in a social setting. In a social setting, people are less likely to actively search for volleyball content and more likely to watch a sport such as hockey, baseball, or football that has high media coverage. In turn, the low consumption of volleyball impedes the growth of media coverage of volleyball because of the disinterest from viewers. Low social consumption and media coverage of volleyball reduces the opportunities for non-volleyball athletes to learn the rules, strategy, and skill involved in the sport of volleyball.

Figure 2

Volleyball Content and Consumption Cycle

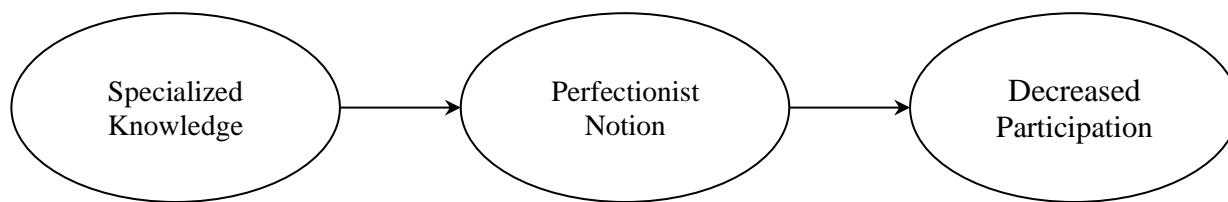


The relationship between the availability of volleyball content and social consumption is detrimental to the sport industry (Figure 2). As presented in the existing literature on the sport industry, the product category this current project focuses on products produced and located in one location with the intention of requiring the consumer to be present in order for consumption to occur (Lucian, 2014, p. 44). In respect to this description, volleyball consumed in person or on television would be considered a product of the volleyball sport industry (Lucian, 2014, p. 44). The content that specialized athletes know to search for through online streaming services or social media would be included under the umbrella of sport products. It would be beneficial for the sport industry to identify ways in which they can make volleyball more readily accessible for consumption. In turn, the volleyball industry will see an increase in viewership because of the

connection that the growing sport of volleyball has to it. In addition, these specialized athletes can more easily encourage other individuals with limited volleyball knowledge to consume the sport.

Perfection and Participation

Rooted in the participation and consumption themes of this current project is the influence specialized knowledge has on participation patterns (Figure 3). Specialized knowledge of sport that comes with high intensity specialized training is both positive and negative in nature. Unfortunately, for many athletes, specialized knowledge leads to the perfectionist notion. This notion suggests that athletes train in a large capacity with the intention of becoming “perfect” in their execution of skills and mental performance (Figure 3). When athletes train to be perfect in every aspect, it becomes difficult to separate this notion from other aspects of their lives. The specialized knowledge and perfectionist notion extends into future participation patterns. As illustrated by Figure 3, specialized knowledge develops the perfectionist notion of athletes and may result in decreased participation by athletes. As identified in this current project, specialized athletes often remove themselves from participation in the sport they trained in because of their perfectionist mentality (Figure 3). Athletes put pressure on themselves in social participation settings (for example, recreational volleyball participation or intramural volleyball) and often feel a decreased motivation to participate because of it. They would rather remove themselves from the sport than not be perfect in their execution of skills.

Figure 3*Perfection and Participation*

The sport industry needs to take into consideration the implications involved with specialized knowledge and the perfectionist notion (Figure 3). With these themes comes a decrease in long term participation for athletes. This does not benefit the sport industry because investment in the specialized training of these young athletes can decrease their participation patterns (Figure 3). The perfection and participation linkage is rooted in the literature surrounding the psychosocial nature of burnout (LaPrade et al., 2016, p. 3). The psychosocial nature of burnout suggests that these decreased participation patterns are a result of the perfectionist behaviour of athletes, or pressures in performance associated with a coach or parent (LaPrade et al., 2016, p. 3). The sport industry must ensure that specialized training does not lead to decreased participation (Brenner, 2007, p. 1244). Preventing such perfectionist behaviours of specialized athletes may elevate the participation patterns of specialized athletes' long term (Figure 3).

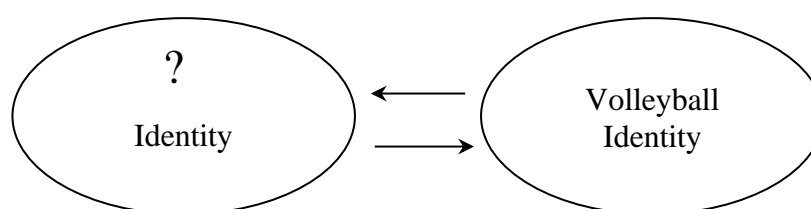
The Unknown Identity

The volleyball identity can be viewed as a mold in which volleyball athletes are supposed to fit into. Regardless of their personal experiences, goals or values outside of volleyball, there is an expectation that specialized volleyball players are supposed to identify with the volleyball identity. Contrary to this projection, specialized volleyball players can feel lost in a world where other individuals dictate how the lives of these specialized athletes should be. As identified

earlier in the literature, Robert Malina suggested that young athletes are “pawns in a complex matrix”, the matrix consists of parents, coaches, media, and the sport industry (2010, p. 369). This “matrix” and specialized training in the sport of volleyball push young athletes towards the perceived identity of a specialized volleyball athlete (Malina, 2010, p. 369). Although this may seem to be beneficial to the sport industry, the data suggests otherwise.

Figure 4

The Unknown Identity



Many volleyball athletes experience years of specialized training, and although this may appear to be positive, the literature contradicts this. Very few volleyball athletes actually get to experience the rewards and high-level success of sport that comes with specialized volleyball training (Malina, 2010, p. 369). This may be a result of the athlete not wanting to pursue a volleyball career, or one of the following outcomes of specialization embedded in the literature. High volumes of specialized training are tied to the risk of injury for a volleyball athlete and may impact an athlete's ability to pursue a volleyball career (Jayanthi et al., 2013, p. 255). On the other hand, burnout can lead to the development of the perfectionist behaviour of athletes and negatively affect the lives of athletes following their volleyball career (LePrade et al., 2016, p. 3). Regardless of the experience athletes have during past participation, many athletes experience similar lifestyle changes when transitioning from an athlete who performed specialized training, to the volleyball identity, to their unknown identity following their volleyball career.

The sport industry needs to take into consideration the relationship between the unknown identity, the volleyball identity, and the outcomes of specialization rooted in the literature as well as in this current project. The data suggests many athletes are battling with the uncertainty of who they are after their specialized volleyball identity. They have the complete freedom to decide what experiences they want out of life after volleyball specialization. Many of these athletes feel as though they do not have a support group to lean on, which in some circumstances is true. When athletes transition towards their unknown future identity, those still engrossed in volleyball specialization offer their support. However, these individuals are unable to relate to those who have transitioned out of the sport as they still identify as the volleyball identity. When athletes no longer identify as a volleyball player, they sometimes become trapped in the unknown. It is detrimental to the volleyball sport industry and retired specialized athletes, that the sport industry looks for ways to eliminate this state of uncertainty for athletes. It would be beneficial for the sport industry to have these athletes that have transitioned out of their volleyball identity still be involved in the volleyball community. Although there are organizations that have started programs to accommodate retired athletes in this situation, it needs to extend further into the industry.

Industry Implications

One of the key implications of specialization for the sport industry is that revenue is linked to the participation and consumption patterns of athletes. However, there is a fine line between encouraging specialization and overtraining or exhausting athletes from the sport. As this current project has identified, many volleyball athletes experienced an overwhelming amount of volleyball which can influence participation patterns in both positive and negative ways. The sport industry needs to understand that they rely on young volleyball athletes just as

much as these athletes rely on them.

Volleyball organizations and clubs in Calgary, Alberta need to place greater emphasis on creating well-rounded athletes for the purposes of increasing long-term consumption and participation in volleyball athletes. Multi-sport athletes in general are better for the sport industry as a whole because they exist with specialized knowledge that extends across various sports. It is recommended that volleyball organizations introduce policies that prevent coaches from limiting the number of sports young athletes participate in. This may result in a decreased number of practices in a week in order to accommodate multi-sport athletes. However, the decrease in practice times will reduce costs incurred from gym space rentals and facility upkeep. In addition, volleyball organizations and clubs need to flag the accessibility and availability of volleyball specific content in order to grow the industry. In a discussion with many of the participants, volleyball is one of the fastest growing sports in Canada. Volleyball organizations need to capitalize on this growth by creating a promotional strategy for increasing media viewership of volleyball content.

Primary Strengths

The scope of this project is exploratory. Its small scope allowed for a deep analysis into the effects of sport specialization on individual athletes connected to the Calgary, Alberta region. An extensive amount of data has been drawn from the 17 participants in relation to the participation in and consumption of sport. The exploratory scope creates an opportunity to delve into the effect of specialization on the sport industry, with a narrow focus on the specific region of Calgary, Alberta. Considering this project focuses on a gap in the literature within the sport industry, the small scope is not viewed to be a large issue. Rather, it is an opportunity to create a starting point for future research projects and answer an important question in the sport industry.

Strong findings on the effects of specialization have been extracted from the data of the small sample. The exploratory scope has created an opportunity for an in-depth analysis of individual perceptions of sport specialization and perceived outcomes of specialization.

Limitations

The limitations of the study can be viewed as primary strengths, and opportunities for future research. The sample size of the study was 17 participants, and the time frame for the project was relatively short. In addition, the sample was limited to participants with connections to the Calgary, Alberta volleyball community. This provided a small amount of data for the analyses and may have limited the findings of the study. It focused on specialized athletes and did not focus as much on athletes who did not specialize in sport. The small sample that is not representative is limiting in the sense that conclusions have been drawn from the answers of specialized athletes. The project does not evaluate the effect not specializing in sport has on athletes or the sport industry; resultantly, there is not a control group to compare the results of the project. The narrow scope does not create an opportunity to measure the findings against previous research or a control group. Finally, the project only focuses on athletes who specialized in the sport of volleyball and may not reflect the same results across other sports.

Future Research

Future research projects are encouraged to use the limitations of this study as the foundation for the methodological design. It is encouraged that future studies include a control group in the method to compare the results across the two training patterns associated with specialization (specialization in sport, and no specialization in sport). It would be beneficial to ask athletes who did not specialize in sport what their participation and consumption patterns are. Gaps in the literature may be filled with a study that analyzes the impact sport specialization has

on the sport industry, compared across two camps. Further research on the participation and consumption outcomes of sport specialization based on training patterns may assist in the overall success of the sport industry. The sport industry will further understand what the impact of specialization is on the industry and how it should support the phenomenon. In addition, future research could extend this idea by recruiting participants that are in similar career stages. This will provide greater clarity on the unclear area of present and future participation patterns in sport. Participants will provide details of their present volleyball goals and values specific to their current career position. Through this research design present and future participation patterns will emerge and future researchers can evaluate data that is more conclusive.

Other notable outcomes have been determined throughout the review of sport specialization literature and design of this research project. It is recommended that future research extends to other sports to further identify a link between sport specialization and the sport industry. As well, attributing key outcomes of sport specialization based on the specific criteria of the sport. For example, body image issue in dancers may be a result of excessive time spent in high intensity sport specific training.

Future research should examine the gender and family influence on the outcomes of sport specialization. Focusing on the role of gender in sport specialization may produce varying outcomes for the individual as well as the sport industry. An outcome identified in the design of this project is family, specifically what the effect is of specialization on a family. In addition, familial relationships to the sport of volleyball have been linked to the participation and consumption patterns of athletes. Future research should evaluate the specific part family plays in the sport specialization process of a child: How do parents influence sport specialization? It

will be interesting to uncover how the money and time a parent invests effects the sport industry, in the form of cross-sectional and longitudinal studies.

Future research should continue to examine the influence that social media has on young athletes. As this current project identified, social media use is a consumption pattern that is prominent in many youth specialized volleyball athletes. Designing a project around social media and how social media platforms acts as an extension of specialized training would be both interesting and detrimental to the sport industry.

Finally, examining the intergenerational effects of youth sport specialization would further the research in this area. In some discussion surrounding the study, it was suggested that specialized athletes have two differing views on their future children specializing in the sport of volleyball. Future research should specifically narrow in on when these youth (who are products of specialization) have children, what are their consumption patterns? There is potential for future research on this topic to be performed as a longitudinal study. It will distinguish if these youth prevent their children from becoming sport specialized participants, or if they encourage sport specialization and participation in sport.

Conclusion

The sport industry is obsessed with the concept of specialization. To extend this concept further, the industry is synonymous with specialization. The sport industry is creating sport specialists who aspire to reach post-secondary or professional levels of sport participation. The findings of this project have identified two areas of specialization that are an extension of the existing literature: participation and consumption of volleyball. Notably, these patterns are interrelated in many aspects of sport specialization and detrimental to the success of the sport industry. The sport industry, and all organizations under that umbrella, need to understand that

the sport specializers they are creating are impacted immensely by their actions. The goal of this project was to create a starting point for future research surrounding specialization and the sport industry. The project challenges the current state of participation and consumption patterns in specialized volleyball training and encourages action from the sport industry to benefit not only themselves, but the individuals most directly impacted: specialized athletes.

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Appendix A: Interview Questions

1. Do you consider yourself to be an athlete who specialized in volleyball?

Probes:

- a. From what age to what age did you specialize in volleyball?
- b. In a typical year of specializing in volleyball, how many months did you train?
- c. In a typical week of specializing in volleyball, how many days and how many hours per day did you dedicate to training and what did your training consist of?
- d. Did you train in your off season from volleyball? If so, how much and for what sports besides volleyball (if any)?

2. In your opinion, what impacts does specializing in one sport have on athletes during and after specialization?

Probes:

- a. All things considered; are you glad you specialized in sport as a youth? Why or why not?
- b. What impacts did specialization have on you during your career?
- c. What impacts did specialization have on you after your career?
- d. Would you say your experience specializing in volleyball has impacted your life over the last year? If yes, in what ways? If no, why not?

3. Do you still participate in volleyball? If so, how often and in what ways (coaching, playing, training, recreationally, professionally, officiating)?

Probes:

- a. If yes, what drives you to participate in the sport you specialized in?
- b. If no, why do you choose not to participate in the sport you specialized in?
- c. Over the last year, how much money have you spent on volleyball (for example: registration fees, equipment)?

4. Over the last year, have you participated in sports other than volleyball?

Probes:

- a. What sports, what level, and how often?
- b. If yes, what drives you to participate in these sports?
- c. Over the last year, how much money have you spent on sports other than volleyball (for example: registration fees, equipment)?

5. Over the last year, how much time have you spent consuming (for example: watching on television, listening to radio) volleyball?

Probes:

- a. What mediums (for example: internet, radio, television)?
- b. What mediated events?
- c. Why do you consume volleyball? What is it about the sport that still interests you?

6. Over the last year, how much time have you spent consuming (for example: watching on television, listening to radio) other sports?

Probes:

- a. What sports?
- b. Why those sports?
- c. What mediums (for example: internet, radio, television)?
- d. What events?
- e. Why do you consume sports other than volleyball? What is it about other sport that interests you?

7. Over the last year, what sporting events have you attended and paid admission to?

Probes:

- a. How many were volleyball and estimate how much money you would spend on them?
- b. How many were other sports and estimate how much money you would spend on them?

8. Do you think your specialization in volleyball at an early age affected your participation in or consumption of volleyball?

Probes:

- a. Do you think it cultivated an interest in volleyball?
- b. If so, how?
- c. Do you think it drove you away from volleyball?
- d. If so, how?

9. Thank you for your participation in this interview. Is there anything else you would like to add about the impact specialization has had on your participation in sport or consumption of sport (for example: as a fan, as a consumer)?

Appendix B: Demographic Survey

Please circle the best answer to each question or fill in the blank where applicable.

1. What is your age? _____

2. What is your sex?

Male

Female

I do not identify as either. I prefer to identify as: _____

3. What is your ethnic background?

First Nations

Inuit

Métis

White

Black

Asian

Hispanic

East Indian

Other (please specify) _____

4. Do you still live in your parents' house?

Yes

No

5. What is your total annual household income? (Approximations are acceptable)

6. What is your highest level of education? _____