

DROP SHOTS OR DROPOUTS? AN INVESTIGATION OF MODIFIED 10 AND UNDER
TENNIS AND THE TRANSITION TO TRADITIONAL TENNIS

By

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ABSTRACT

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To ensure children's first exposure to the game is both positive and developmentally appropriate and to increase continued participation in tennis during adolescence, 10 & Under Tennis (10u) was created. Designed to be developmentally appropriate for the physical and cognitive levels of children, 10u tennis was proposed to increase skill development and maximize fun, two predictors of sport continued sport participation. However, no research has examined whether the 10u tennis promotes continued engagement and whether the transition out of 10u tennis and into traditional tennis influences the decision to continue or dropout of tennis. The purpose of this study was to explore the factors children cite as reasons for continued participation and dropping out of tennis after participation in 10u tennis and the role the transition from 10u tennis to traditional tennis has on the decision. Interviews were conducted with 12 parent-child dyads (24 participants overall) who either specialized in tennis, continued recreationally, or dropped out of tennis after transitioning to traditional tennis. Results showed that perceived competence, enjoyment, interpersonal relationships and achievement motivation were all sources of motivation to continue participation in tennis. A dislike of competition, performance anxiety, and other sport interests were cited as reasons for dropping out. An imbalance between the challenges associated with the transition to traditional tennis and the strategies and resources used to cope with them was related to the transition outcome of participants, with children who dropped out lacking the strategies and resources to cope with the challenges of transitioning to traditional tennis. Parent involvement and coach support were

critical factors of successful transitions. Overall the transition from 10u tennis to traditional tennis influenced the participants decision to either continue or dropout through the impact on perceived competence, enjoyment, and peer relationships. Results are discussed relative to current research and theory on motivation for youth sports participation and withdrawal.

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TABLE OF CONTENTS

LIST OF TABLES	x
LIST OF FIGURES	xii
CHAPTER I.....	1
INTRODUCTION	1
The Importance of Youth Sport	1
Youth Sport Engagement and Dropout	1
Goals of Modified Youth Sport	3
Within-Career Transitions	4
The Purposes of the Current Study	5
CHAPTER II	7
LITERATURE REVIEW.....	7
Youth Sport Engagement and Dropout	7
Engagement.....	7
Motives for Engagement.....	7
Fun and enjoyment.....	8
Interpersonal relationships	11
Coaching climate	14
Sub-group differences in engagement	14
Sex.....	15
Ethnicity	15
Socioeconomic status	15
Age.....	15
Development.....	16
Motor competence.....	16
Relative age effect.....	17
Sport Dropout.....	17
Motives for discontinuing sport	17
Types of dropout.....	18
Subgroup differences in sport dropouts.....	19
Age.....	19
Sex.....	19
Deeper Motives for Sport Engagement and Dropout.....	20
Physiological explanations.....	20
Social psychological explanations.....	21
Competence Motivation Theory	21
Self-Determination Theory.....	22
Expectancy-Value Model.....	22
Achievement Goal Theory	23
Revised Social-Cognitive Model of Achievement Motivation	24

Theory of Planned Behavior.....	24
Leisure Constraints Theory	25
Environmental explanations.....	25
Early sport specialization	25
Larger policies and cultural practices	26
Sport Engagement and Dropout Conclusions.....	27
Modified Sport.....	27
Outcomes	28
Physical outcomes	28
Psychosocial outcomes	29
USTA 10 & Under Tennis.....	30
Modified Sport Conclusions	33
Within-Career Transitions	33
Stage Models of Within-Sport Transitions	34
Holistic Athlete Career Model	35
Explanatory Models of Transitions.....	36
Athlete Career Transition Model.....	37
Transition from Modified to Traditional Sport.....	39
Rational for Current Study	40
 CHAPTER III.....	 43
METHOD	43
Methodological Framework	43
Phenomenography.....	43
Research Method.....	45
Procedure.....	45
Participants and Recruitment	45
Data Collection.....	47
Interview process.....	48
Demographic questionnaire	50
10u program quality questionnaire.....	51
Data Analysis	51
Methodological Rigor	53
Investigator Training	54
Audit Trail.....	54
Triangulation and Peer Debriefing.....	54
Reflexivity Statement	55
 CHAPTER IV.....	 56
RESULTS.....	56
Participants	56
Recreational Participants.....	59
Child Recreational Participants.....	60
General Dimension 1: 10u program experience.....	60
Tennis participation activities.....	61
Others involved.....	62

General Dimension 2: Perception of the transition to traditional tennis.....	63
Differences from 10u to traditional tennis	65
Challenges of transitioning to traditional tennis.....	66
Strategies used to cope with challenges of transition	68
Positive aspects of transition	69
Sources of support through transition	71
Skill level changes during transition.....	72
General Dimension 3: Motivation to continue participation	73
Reasons for continuing participation	74
Goals for tennis participation	76
Parent Recreational Participants	77
General Dimension 1: Perception of child’s participation.....	77
Perception of child’s transition to traditional tennis.....	78
Perceptions of child's motivation to continue tennis	79
General Dimension 2: Parent involvement	80
Parent role in child’s tennis participation.....	81
Parent goals for child in tennis	82
General Dimension 3: Parent’s considerations for child’s participation	83
Factors considered for participation.....	84
Parent challenges in tennis participation.....	87
Specialized Participants.....	88
Child Specialized Participants	89
General Dimension 1: 10u tennis experience.....	90
Tennis participation activities.....	90
Others involved.....	92
General Dimension 2: Perception of the transition to traditional tennis.....	93
Difference from 10u to traditional tennis.....	95
Challenges of transitioning to traditional tennis.....	98
Strategies used to cope with challenges of transition	99
Positive aspects of transition	101
Sources of support through transition	102
Skill level changes during transition.....	106
General Dimension 3: Motivation to continue participation	107
Reasons for continuing participation	107
Goals for tennis participation	109
Parent Specialized Participants	110
General Dimension 1: Perception of child’s participation.....	110
Perception of child’s transition to traditional tennis.....	111
Perceptions of child's motivation to continue tennis	113
General Dimension 2: Parent involvement	114
Parent role in child’s participation.....	115
Parent goals for child in tennis	117
General Dimension 3: Parent’s considerations for child’s participation	118
Factors considered for participation.....	119
Parent challenges in tennis participation.....	121
Dropout Participants.....	123

Child Dropout Participants	124
General Dimension 1: 10u tennis experience.....	124
Tennis participation activities.....	124
Others involved.....	125
General Dimension 2: Perception of the transition to traditional tennis.....	126
Difference from 10u to traditional tennis.....	128
Challenges of transitioning to traditional tennis.....	129
Strategies used to cope with challenges of transition	131
Positive aspects of transition	131
Sources of support through transition	132
Skill level changes during transition.....	133
General Dimension 3: Reasons dropping out of tennis	134
Reasons for dropout.....	135
Other sport goals.....	137
Parent Dropout Participants.....	138
General Dimension 1: Perception of child's participation.....	138
Perception of child's transition to traditional tennis.....	139
Perceptions of child's reasons for dropout.....	140
General Dimension 2: Parent involvement	141
Parent role in child's participation.....	142
Parent goals for child's sport participation.....	143
General Dimension 3: Parent's considerations for child's participation	144
Factors considered for participation.....	145
Parent challenges in tennis participation.....	147
Dyad Idiographic Narratives.....	148
Recreational Successful Transition Dyad Two.....	150
Specialized Successful Transition Dyad Eight	151
Dropout Crisis Transition Dyad Eleven	154
Specialized Successful Transition Dyad Five.....	156
Summary.....	158
CHAPTER V	159
DISCUSSION.....	159
Similarities and Differences Amongst Participants	159
Transition to Traditional Tennis.....	159
Similarities	159
Differences	160
Child Motivation to Continue or Dropout	161
Similarities	161
Differences	161
Parent Involvement.....	162
Similarities	162
Differences	162
Parent-Child Differences	163
Motivation to Continue Tennis and Reasons for Dropping Out.....	163
The Role of the Transition on the Decision to Continue or Dropout of Tennis	172

Proposed Tennis Developmental Pathway	177
Applied Implications	179
Parents.....	180
Coaches.....	181
USTA.....	182
Strengths and Limitations.....	183
Future Directions.....	185
Conclusion	186
APPENDICES	188
APPENDIX A: Research Project Summary	189
APPENDIX B: Parental Consent Form.....	190
APPENDIX C: Child Assent Form.....	193
APPENDIX D: Child Interview Guide Continued	194
APPENDIX E: Child Interview Guide Dropout.....	196
APPENDIX F: Parent Interview Guide Continued.....	198
APPENDIX G: Parent Interview Guide Dropout	199
APPENDIX H: Demographic Questionnaire	200
APPENDIX I: Participant Dyad Narratives	206
REFERENCES	223

LIST OF TABLES

Table 1. Reasons children report for participation in sport.....	8
Table 2. Reasons children report for dropping out of sport.....	18
Table 3. Participant categorization of parent-child dyads.....	58
Table 4. Child recreational 10u program experience.....	60
Table 5. Child recreational perception of the transition to traditional tennis.....	63
Table 6. Child recreational motivation to continue participation.....	73
Table 7. Parent recreational perceptions of child's transition.....	77
Table 8. Parent recreational involvement.....	80
Table 9. Parent recreational considerations for participation.....	83
Table 10. Child specialized 10u program experience.....	90
Table 11. Child specialized perception of the transition to traditional tennis.....	93
Table 12. Child specialized motivation to continue participation.....	107
Table 13. Parent specialized perceptions of child's transition.....	111
Table 14. Parent specialized involvement.....	114
Table 15. Parent specialized considerations for participation.....	118
Table 16. Child dropout 10u program experience.....	124
Table 17. Child dropout perception of transition to traditional tennis.....	127
Table 18. Child dropout reasons for dropping out of tennis.....	134
Table 19. Parent dropout perception of child's transition.....	139
Table 20. Parent dropout involvement.....	142
Table 21. Parent dropout considerations for participation.....	144

Table 22. Participant dyad ideographic narrative demographics 149

LIST OF FIGURES

Figure 1. Sport commitment model	10
Figure 2. Mediation model of sport commitment	11
Figure 3. Modified equipment progression in 10u Tennis	30
Figure 4. The Holistic Athlete Career Model	35
Figure 5. The Athlete Career Transition Model	38

CHAPTER I

INTRODUCTION

The Importance of Youth Sport

Millions of children in the United States and throughout the world are involved in youth sport (Gardner, Vella, Magee, 2016b; National Council of Youth Sports, 2008). Organized youth sport has important physical, psychological, and social developmental consequences for youth. Sport provides opportunities for youth to increase their fundamental motor skills, motor competence, fitness levels, and promotes lifelong physical activity (Henrique et al., 2016). Many psychological benefits are also believed to be developed through sport such as increased self-esteem, emotional development, and responsibility (Fraser-Thomas, Côté, & Deakin, 2005; Gould & Carson, 2008). Additionally, sport provides a platform for youth to learn important social skills such as conflict resolution and leadership skills. Given the well documented benefits of sport participation (Eime, Young, Harvey, Charity, & Payne, 2013; Gould, Cowburn, & Shields, 2014), sport is an attractive activity for children and adolescents. Although a large number of youth participate in organized youth sport, attrition and dropout rates are high, especially during adolescence (Balish, McLaren, Rainham & Blanchard, 2014).

Youth Sport Engagement and Dropout

Adolescents have reported several reasons for why they play sport with the most cited reason being to have “fun” (Gould, Feltz, Horn, & Weiss, 1982; Rottensteiner, Laakso, Pihlaja, & Konttinen, 2013; Ryska, Hohensee, Cooley, & Jones, 2002). While other reasons have been given, such as improving skills, staying in shape, excitement, and spending time with friends, enjoyment is consistently a strong predictor of continued sport participation (Carpenter & Coleman, 1998; Weiss, Kimmel, & Smith, 2001). While these descriptive reasons offer valuable

insight into how adolescents decide to remain in sport, there are underlying, deeper motives such as perceived competence, goal orientations, and intrinsic motivation (Atkins, Johnson, Force, & Petrie, 2015; Balish, McLaren, Rainham, & Blanchard, 2014; Nache, Bar-Eli, Perrin, & Laurencelle, 2005).

Adolescents have also provided reasons for dropping out of sport which include, though not limited to, having other things to do, lack of fun, change of interest, and boredom (Fraser-Thomas, Côté, & Deakin, 2005; Wicks, Beedy, Spangler, & Perkins, 2007). Underlying these surface reasons are several deeper motives for withdrawal from sport. The deeper motives include physiological reasons such as poor motor abilities (Haywood & Getchell, 2014) and delayed rates of maturation (Malina, Bouchard, & Bar-Or, 2004) and psychological reasons such as low perceived competence (Balish et al., 2014), adopting an ego goal orientation (Atkins et al., 2015), and lacking intrinsic motivation (Harter, 1978).

Sport dropout is concerning due to the loss of the potential benefits sport participation offers. Research shows that as children age, participation rates decline with the highest rates of dropout occurring during the adolescent period (Sabo & Veliz, 2008; Weiss & Amorose, 2008). One reason that can be attributed to this level of dropout is complexity, inappropriate sized equipment, and emphasis on winning that is part of traditional sport. As children are not as strong as adults, adult sized equipment can be a barrier to successfully performing skills. Additionally, as children do not understand competition in the same way adults do, over-emphasizing outcomes can lead decreases in competence, confidence, and motivation which may lead to dropout (Hancock et al., 2013b; Horn & Harris, 2002).

Goals of Modified Youth Sport

To promote continued engagement in sport, many sport organizations have introduced modified youth sport programs. Modified youth sport programs are offered and designed to engage children with a focus on learning and development to promote future participation by increasing enjoyment and perceived competence (Côté, Lidor, & Hackfort, 2009). Changes are made to the rules, equipment, game formats, and physical space to be developmentally appropriate for the physical and cognitive levels of children to give them the opportunity to feel success in the sport (Eime et al., 2015). Many youth sports in the United States and around the world have implemented modified sport programs such as U.S. Youth Soccer, USA Hockey, and Australian Youth Netball. While research has shown the positive impact modified sports has on physical performance (Chase, Ewing, Lirgg, & George, 1994; Farrow & Reid, 2010; Ferguson, Lirgg, Gorman, & Ting, 2005), limited research exists on whether modified youth sports are successfully promoting continued participation in sport.

One such modified youth sport program is the United States Tennis Association's (USTA) 10 & Under Tennis program. 10 & Under Tennis (10u tennis) utilizes modified equipment and developmentally appropriate court and ball sizes in an effort to make tennis more fun for kids while also improving sport specific skills to promote continued participation. Along with modified equipment, the program also utilizes age-appropriate competitive structures with shorter time periods and easier scoring rules. Research on the 10u tennis program show support for the improvement of skills using modified tennis equipment (Farrow & Reid, 2010; Larson & Guggenheimer, 2013). However, a considerable number of studies have examined motor performance outcomes rather than psychological outcomes of the 10u program.

Within-Career Transitions

While the goal of modified youth sports is to increase continued participation, little research has investigated the role that the transition from modified to traditional sport may have on an athlete's motivation to continue participation. Transitions in sport are "an event or non-event which results in a change in assumptions about oneself and the world and thus requires a corresponding change in one's behavior and relationships (Schlossberg, 1981, p. 5). Two types of transitions exist in sport, normative and non-normative. Normative transitions are predictable and anticipated, while non-normative are unanticipated and involuntary (Stambulova, 2000). Several models have been used to explain the transitional process such as the model of human adaption (Schlossberg, 1981) and the Holistic Athlete Career model (Wylleman, Lavalle, & De Knop, 2016). Within-career transitions, primarily normative transitions (e.g., moving from the junior to senior team in soccer), have recently gained attention to understand the process of progressing to more advanced stages of talent development (Wylleman, Alfermann, & Lavallee, 2004). However, little research has been conducted on the modified to traditional youth sport transitions.

One recent longitudinal study has shown that fewer than 25% of females and 14% of males made the transition from modified youth sport to club level sport (Eime et al., 2015). Specifically, over the course of a four-year period, children's participation in sport were recorded amongst three types of modified sport including tennis. Across all age groups, the majority of the children who participated in modified sport dropped out before transitioning to a higher level of competition within the same sport. However, Eime et al. (2015) did not explore whether individuals who withdrew had continued at the recreational or non-club level or included a comparison group of youth who participated in traditional, non-modified sport.

Eime et al.'s (2015) longitudinal quantitative study showed the low number of children who continue to play sport after participating in modified sport, however it did not examine the role the normative transition from modified to traditional sport may have on the child's decision to continue participation. As many children transition out of modified sport during the adolescent years, this transition from modified sport to higher levels of sport may be contributing to the increased dropout rates during adolescence. Little is known about the factors that influence whether the transition is successful and whether a successful transition influences continued participation.

The Purposes of the Current Study

There is a need to examine the transition from modified youth sport to traditional youth sport and its influence on sport engagement. Based on the lack of research on the transition from modified youth sport to traditional youth sport and on the impact modified sport has on continued participation in sport, the overall purposes of this study are:

1. To determine the factors that influenced an adolescent's decision to continue participation in tennis after participation in modified tennis.
2. To determine the factors that influenced an adolescent's decision to drop out of tennis after participation in modified tennis.
3. To determine the role the transition from 10u tennis to traditional tennis has on adolescent's decision to continue participation or drop out of tennis.

It is expected, based on past research, that reasons for dropout and engagement similar to past research such as fun, excitement, and spending time with friends and will align with the underlying mechanisms of perceived competence, goal orientation, and intrinsic motivation (Atkins, Johnson, Force, & Petrie, 2015; Balish, McLaren, Rainham, & Blanchard, 2014; Harter,

1978). Additionally, social agents such as parents, coaches, and friends will also have a role in the adolescent's decision to continue participation or drop out (Armentrout & Kamphoff, 2011; Fraser-Thomas, Cote, & Deakin, 2008). As little research has investigated the transition from modified to traditional youth sport, it is unclear as to what to expect regarding this question. However, from research on other within-career transitions, factors such as parental support, financial resources, and outside transitions may play a role.

CHAPTER II

LITERATURE REVIEW

Youth Sport Engagement and Dropout

Engagement

Participation in youth sports has been related to multiple positive outcomes. These outcomes include physical benefits such as lower body fat, increased muscular strength, and endurance, as well as increased aerobic capacity and enhanced movement skills (Pate, Trost, Levin, & Dowda, 2000). Sport engagement is also linked to numerous psychological outcomes such as enhanced self-confidence and self-esteem (Gould & Carson, 2008). Additionally, sport participation is linked to academic success, with sport participants having higher levels of academic performance in the form of school grades and homework completion (Miller, Melnick, Barnes, Farrel, & Sabo, 2005). Finally, sport participation is related to social developmental benefits such as teamwork, selflessness, and leadership qualities (Holt, Kingsley, Tink, & Scherer, 2011). Because of the numerous benefits that arise from sport participation, it is critical to understand what motivates children to play and stayed involved in sports.

Motives for engagement. The reasons why children play sport is a topic that has been continuously studied since the 1980's (Gould, Feltz, Horn, & Weiss, 1982; Ryska, Hohensee, Cooley, & Jones, 2002). Looking across almost four decades of research the results are consistent amongst the different generations. The most cited reason by children and youth for participating in sport is “fun”. Others cited reasons include improving skills, staying in shape, excitement, doing something one is good at, challenge of competition, to win, doing one's best, team spirit, be part of a team, make and spend time with friends (Gould et al., 1982; Rottensteiner et al., 2013; Ryska et al., 2002). Typically, these studies included both qualitative

interviews and quantitative questionnaires with youth and are consistent throughout the various studies with similar reasons for sport participation reported by youth sport participants (See Table 1).

Table 1. Reasons children report for participation in sport.

- Fun	- Doing one's best
- To learn new skills	- For team spirit
- Stay in shape, get exercise	- Improve skills
- For excitement	- To be part of a team
- Want to do something good at	- To make friends/be with friends
- Challenge of competition	- To be healthy
- To win	

(Gould et al., 1982; Rottensteiner et al., 2013; Ryska et al., 2002; USADA, 2011).

Fun and enjoyment. Of the several reasons children report for participating in sport, fun and enjoyment are repeatedly cited as primary motives for continued engagement (Gill, Gross, & Huddleston, 1983; Weiss et al., 2001). The factors that made sport fun for youth was recently investigated by Visek et al (2015). Using concept mapping, researchers used a list of 80 aspects of sport that youth participants reported made sport fun to provide weightings of importance for each factor. These fun factors included team rituals, swag, learning and improvement, game time support, team friendships, practices, games, mental bonuses, positive coaching, positive team dynamics, and trying hard (Visek et al., 2015). Due to the magnitude of factors reported by Visek et al. (2015) and other researchers, “enjoyment” has been used as a broader concept to explain the high intrapersonal variability of fun.

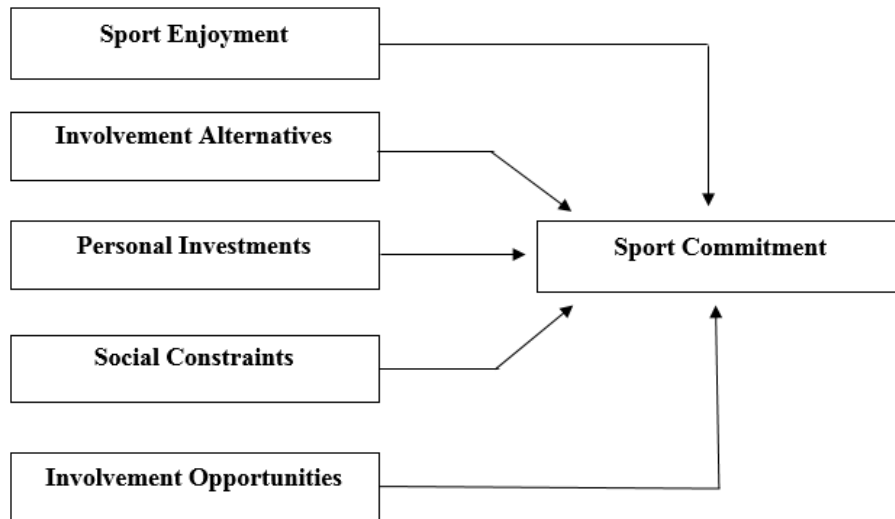
Sport enjoyment is the “positive affective response to sport experience that reflects generalized feelings such as pleasure, liking, and fun” (Scanlan & Simmons, 1992). Enjoyment is a core component of many sport motivation theories such as achievement goal theory (Nicholls, 1984) and competence motivation theory (Harter, 1978) and therefore is a key factor in continued sport participation. Furthermore, within developmental models of sport participation, enjoyment is referred to as one of the most important elements of the early stages of youth sport as it helps youth develop intrinsic motivation (Cote, Lidor, & Hackfort, 2009).

Sport enjoyment varies depending on the child’s developmental stage as it has been shown to decrease as chronological age increases (Scanlan & Lethwaite, 1986). Additionally, sources of sport enjoyment differ in the various developmental stages. Nine-year-old children report improving skills and learning as sources of enjoyment while playing with friends was important for ten-year-olds (Gano-Overway, Ewing & Waldron, 2001). Competing against someone of the same ability level is enjoyable for 11-year-olds while for 12-year-olds enjoyment came from competing against a challenging opponent. Winning finally became a source of enjoyment when children are about 13-15 years old (Gano-Overway et al., 2001). As such, sport enjoyment can come from both intrinsic (e.g., learning and improving a new skill) and extrinsic sources (e.g., receiving recognition for winning).

As sport enjoyment serves as a key factor in the development of intrinsic motivation, it also has a role in sport commitment. Research has continuously shown that sport enjoyment is a primary factor involved in youth commitment and continuation of sport participation (Casper, Gray, & Babkes-Stellino, 2007; McCarthy, Jones, & Clark-Carter, 2008; Weiss et al., 2001;). Along with sport enjoyment, four other factors have been found to predict sport commitment: involvement alternatives (e.g., band or other clubs), personal investments (e.g., time and effort),

social constraints (e.g., social pressure to participate), and involvement opportunities (e.g., being with sport friends) (Scanlan, Carpenter, Schmidt, Simon, & Keeler, 1993). While this model was developed during a different era in youth sports, it is still important to acknowledge the importance of sport enjoyment on a child's decision to participate in a sport.

Figure 1. Sport commitment model.



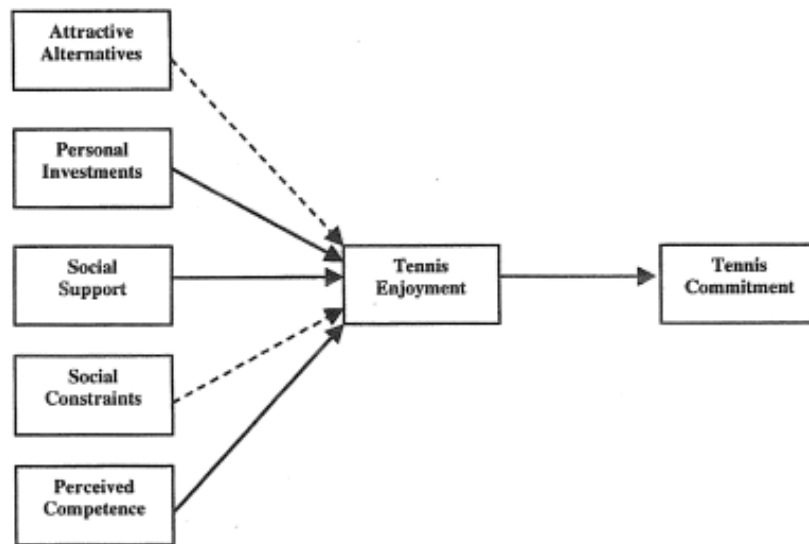
(Scanlan, Carpenter, Schmidt, Simon, & Keeler, 1993)

Of the five determinates, sport enjoyment is one of the strongest predictors of sport commitment. Youth football, soccer, and volleyball players reported enjoyment, involvement opportunities, and personal investments as the strongest predictors of their sport commitment (Carpenter, Scanlan, Simons, & Lobel, 1993). With softball and baseball players, sport enjoyment and personal investments accounted for a significant portion of the variance of sport commitment (Scanlan et al., 1993). Last, longitudinal data conducted on elite youth cricketers showed sport enjoyment as a significant predictor of sport commitment (Carpenter & Coleman, 1998).

In tennis specifically, a newer model of sport commitment was tested which included sport enjoyment as a mediator for the other determinates and level of sport commitment (see

figure 2) (Weiss et al., 2001). This model contends that sport enjoyment mediates the relationship between tennis commitment and other factors such as attractive alternatives, personal investments, social support, social constraints, and perceived competence. This model was tested with tennis players ages 10-18 who at least one year of tennis commitment and results showed enjoyment to be the strongest influence on commitment. This research shows that for tennis players, enjoyment serves as the primary predictor of the level of tennis commitment (Weiss et al., 2001) and therefore appears to be critical for long-term participation in tennis.

Figure 2. Mediational model of sport commitment.



(Weiss, Kimmel, & Smith, 2001).

Interpersonal relationships. The numerous motives that children have reported as reasons for sport participation include several related to interrelationships between peers, parents, and coaches. Peer relationships have an important role in organized sport contexts and have been found to be related to continued sport participation (Fraser-Thomas et al., 2008). Friendship in the youth sport context can foster motivation for continued participation in sport with its positive dimensions such as companionship, self-esteem enhancement, help and guidance, and prosocial behavior (Weiss et al., 1996). Additionally, peers have been linked to

children's sense of physical competence, moral attitudes, behaviors, and affective outcomes (Smith, 2003). However, the negative dimensions of friendships such as conflict, unattractive qualities, betrayal, and inaccessibility can lead to withdrawal from youth sport (Weiss et al., 1996).

Research has shown support for the role of peers in sport engagement. Fraser-Thomas et al., (2008) found that adolescent swimmers who dropped out of the sport reported not having a close peer group at their swimming environment. Through qualitative interviews with both highly invested adolescent athletes and dropout athletes, Fraser-Thomas et al. (2008) focused on the role of significant others in adolescent swimmers' sport participation patterns. Dropout athletes reported a lack of close peer group at swimming and pressure to attend social events such as parties and sleepovers. Engaged athletes, however, spoke of support and encouragement from peers and the positive role friends had on increasing confidence. Similarly, positive friendship quality has been shown to be an influential source of support for soccer continuation in youth (Ullrich-French & Smith, 2009). Ultimately, peers both inside and outside of the sport context play a role in the decision to continue participation. When an individual's sport involvement clashes with their social development, dropout may be more likely to occur (Patrick et al., 1999).

The relationship the athlete has with the coach also impacts the child's participation in sport (Fraser-Thomas et al., 2008; Pelletier, Fortier, Vallerand, & Brière, 2001). According to a study examining youth hockey dropouts approximately one-third of participants reported their decision to drop out as related their coach attitude and interests (Armentrout & Kamphoff, 2011). Athletes who continue participation in sport have been found to perceive their coaches as more autonomy-supportive and who gave individualized attention while athletes who withdrew from

sport viewed their coaches as more controlling and autocratic (Fraser-Thomas et al., 2008; Pelletier et al., 2001).

Boiché and Sarrazin (2009) found that athletes in a variety of sports who continued participation had a better coach-athlete relationship than athletes who had dropped out. With a sample of 261 adolescents who currently participated in sport and 106 adolescents who dropped out, a quantitative questionnaire probed topics of the athlete's perceptions of their sport experience, their parents, teammates, and coach. Perceptions of the coach investment had a positive relationship with perceived value. The more the athlete perceived their coach was invested in them as an athlete, the more value they placed on the sport experience.

Parents also play a role in a child's decision to continue participation in sport. During the early years of sport participation, parents have the most influential role by providing the child with opportunities to engage in unstructured sport while also giving them important resources such as financial support (Fraser-Thomas et al., 2008). In tennis specifically, 132 junior tennis coaches completed questionnaires that pertained to the role of parents in junior tennis success. Parents were perceived to play an important role in the development of the tennis player and provided necessary support in the form of logistics, such as transportation and scheduling, unconditional love and support, and socio-emotional support (Gould, Lauer, Rolo, Jannes, & Pennisi, 2006). However, parents were also perceived to have a negative role on their child's participation in sport when they over-emphasized winning, held unrealistic expectations, criticized the child, and pushed the child to play.

During adolescence, research has revealed that those children who dropout of sport report that their parents provided coaching advice during practices and meets and provided rewards for good performances, while putting pressure on the child to continue participation (Fraser-Thomas

et al., 2008). Young athletes who dropped out also reported their parents put pressure on them due to a lack of opportunities parents received during their own childhoods. This lack of opportunity parents experienced may contribute to a need to ‘over’ provide for their children which may be well-intentioned but interpreted by their child as controlling and restrictive (Hecimovich, 2004; Fraser-Thomas et al., 2008).

Coaching climate. The motivational climate that a coach creates for the athlete impacts the athlete’s intention to continue the sport (Gardner et al., 2016). Consistently among multiple studies reveals that coaches who create a mastery-motivational climate have lower levels of dropout in their athletes (Boiché & Sarrazin, 2009; Le Bars, Gernigon, & Ninot, 2009; Smoll & Smith, 2002). A mastery-motivational climate is characterized by a focus on learning and task involvement, effort and improvement, and promotes cooperation and individual roles (Ames, 1992). Judoka athletes who dropped out of sport within two years reported motivational climates as less task-involving and more ego-involving than their engaged counterparts (Le Bars et al., 2009). Additionally, it was found that comparisons between peers increased by coaches as participation continued, while the perception of the coach having task-involving climate decreased. Furthermore, other research has shown that when coaches trained to create mastery-motivational climates by increasing technical instruction and giving more reinforcement had lower rates of athlete dropout than untrained coaches (Smith, Smoll, & Curtis, 1979).

Sub-group differences in engagement. Along with the primary reasons children cite for participating in sport, subgroup differences have also been examined among young people. Some subgroup patterns have been found but the research shows that within group differences outweigh those between groups (Dawes, Vest, & Simpkins, 2014). However, the differences are worth discussing given the characteristics of the participants in this study.

Sex. Girl's and boy's report similar motives for participation in sport, however differ in the importance given to expressed motives. Girl's more often cite team and peer affiliation, being healthy and controlling their weight, and the desire to enhance their self-esteem to create a more positive view of themselves (Ryska et al., 2002). Boy's report competition and winning more often than girls and are more likely to participate in sport than girls (Ryska et al., 2002; Vella, Cliff, & Okely, 2014).

Ethnicity. Although there is limited research that examines ethnic differences in motives to participate in sport, Duncan, Strycker, and Chaumeton (2015) found some differences amongst African American, Caucasian, and Latina girls. African American girls were found to have higher rates of participation than both Caucasian or Latina groups. Additionally, they found that greater sport participation was related to higher athletic perceived competence, self-worth, and body attractiveness across all the included ethnic groups.

Socioeconomic status. Research examining the relationship between socioeconomic status (SES) and youth sport participation has repeatedly shown that children of lower SES participate in less physical activity and sport than their high SES counterparts (Crespo, Ainsworth, Keteyian, Heath, & Smit, 1999; Woodfield et al., 2002). A longitudinal study involving children ages 9-15, found SES to be a predictor of sport involvement and a positive correlation existed between SES and frequency of involvement in organized sport (White & McTeer, 2012). Children from lower SES families may have less opportunity to be involved in sport due to the cost of organized sport and proximity to safe environments in low SES areas.

Age. Differences in motives across chronological age have been found with athletes in late childhood, ages 8-11 years, reporting having fun, skill improvement, and making parents happy as more important than early (12-14 years) and late adolescents (15-17 years). Older

athletes in late adolescents reported controlling weight, performing well, and life lessons as reasons to participate in sport (Martin & Gould, 2016).

Development. Two aspects of development should be considered when examining how developmental differences influence sport participation. First, as perceived competence is often related to participation, actual motor competence in skill acquisition should be included. Second, the role of maturity associated variation and relative age effects in sport selection need to be considered.

Motor competence. The acquisition of fundamental motor skills is related to success in sport (Haywood & Getchell, 2014; Henrique et al., 2016). Developing competence in motor skills early in life such as jumping, throwing, and kicking has been found to be important for participation in many sports as a child ages (Henrique et al., 2016). Vandorpe and colleagues (2012) found that children's movement skill levels were related to their degree of participation in organized sport. In this longitudinal study, the researchers found that children between the ages of six and nine who consistently practiced sport had better motor coordination levels than children who partially participated or did not participate at all in organized sport. Furthermore, Henrique et al. (2016) found that with every 1-point increase in locomotor skills, there was a 21% increase in the continuation of participation on a sports team after two years. Lastly, a positive correlation between high motor competence and sport participation was found among children ages 9-16 (Fransen et al., 2004). The results of research examining the relationship between motor competence and sport participation show that the decision to continue in sport is influenced by the young person's actual motor competence (DeMeester et al, 2015; Henrique et al, 2016; Vandorpe et al., 2012).

Relative age effect. Although, the term relative age effect has not been used often in the participation and dropout youth sport literature, it may be relevant to the topic as it has been explored within athletic talent development (Andronikos, Elumaro, Westbury, & Martindale, 2015; Malina, Bouchard, & Bar-Or, 2004). Relative age effect is the biological variation in individuals of the same chronological age in size and performance. It is contended that children who are the oldest in their age groups will be biologically more advanced and have an advantage in sport. These biological differences, in strength and height, favor individuals born in the early part of the year, while hinder those born in the later months of the year as they have increased time for development (Sherar, Baxter-Jones, Faulkner & Russell, 2007). Additionally, the timing and rate of physical maturation in adolescence may also play a role, as early maturing individuals who tend to be taller, heavier, and stronger than later maturing individuals may have more sport success (Malina et al., 2004; Sherar et al., 2007). This early athletic success, due to early birth month and/or early maturation, may lead to high levels of perceived competence influencing their likelihood of continued sport participation (Figueiredo, Goncalves, Coelho e Silva, & Malina, 2009; Sherar, Baxter-Jones, Faulkner, & Russell, 2006).

Sport Dropout

Motives for discontinuing sport. Children have reported a variety of reasons for dropping out of sport. It is important to note that the reasons for discontinuing sport participation are not merely the opposite of the reasons for continued participation in sport. Some parallel motives for involvement while others do not. The most reported reasons include having other things to do and not enough fun (USADA, 2011; Weinberg & Gould, 2015). Other common reasons are changes of interest, boredom, parental pressure, lack of coach support, fear of failure, and not being able to be with friends. More reasons are shown in Table 2.

Table 2. Reasons children report for dropping out of sport.

- Other things to do/something enjoyed more	- Interpersonal issues with teammates
- Not fun enough	- Desire for more free time
- Change of interest	- Excessive parental pressure
- Not as good as wanted to be	- Less support by coach
- Boredom	- Not enough playing time
- Not able to be with friends	- Not exciting enough
- Desire to focus on school	- Fear of failure
- Wanted to play another sport	- Cost
- Excessive competitive pressure	- Didn't like the coach

(Fraser-Thomas, Côté & Deakin, 2008; Gould et al., 1982; Guillet et al., 2002; Guillet, Sarrazin, Fontayne, & Brustad, 2006; USADA, 2011)

Types of dropout. Generally, there are two types of dropouts from sport: sport-specific dropouts and sport-general dropouts (Gould & Petlichkoff, 1988). Sport-specific dropping out is the process of discontinuing one sport to continue participation in another. This type of dropout is a natural occurrence as when children age their interests shift and sport seasons start to overlap with school and club seasons occurring simultaneously (Fraser-Thomas et al., 2008). Therefore, sport-specific dropout may be a result of the specialization process through which children begin to invest heavily in one sport (Côté et al., 2009).

The second type of dropout, sport-general dropout is more concerning as this includes the termination of total sport participation and may contribute to the low physical activity levels of youth in America (Centers for Disease Control, 2017). Due to the rates of childhood obesity, 12.7 million children and adolescents (CDC, 2017), it is critical to understand how to prevent sport-general dropout to increase rates of physical activity for this population. Currently, little

research has been conducted that examined differences in sport-general or sport-specific dropouts.

Sub group differences in sport dropouts. Many underlying mechanisms and antecedents have been found when examining the motives for why children dropout of sport and these mechanisms interact and add to one another. To investigate how the reasons reported for dropping out of sport interact with one another, researchers have used multilevel frameworks such as social-cognitive model with social agents (Gardner et al., 2016a; Gardner et al., 2016b; Vella et al., 2014). Specifically, Vella and colleagues employed a sport participation model that included perceived competence, goal orientation, and social factors such as relationships with parents, peers, and coach interactions (Vella et al., 2014). However, while many variables may interact to influence the decision to drop out of sport, as with reasons for sport engagement, subgroup differences exist amongst these reasons.

Age. Young athletes between the ages of 8 and 11, report that program structure such as having little success or lack of playing time, along with the social context are reasons for dropping out of sport. Older athletes, ages 12 to 14 years, report boredom, not enough challenge, and the behaviors of coaches as reasons for dropping out (Ryska et al., 2002; Martin & Gould, 2016). Additionally, as youth athletes age, some factors become more important such as enjoying alternative activities and focusing more on school (Martin & Gould, 2016). Age is also positively correlated with sport dropout. As children get older, they are more likely to dropout (Balish et al., 2014).

Sex. Some variation exists between males and females with reasons for dropping out of sport. Boys report disagreements with competitive philosophy of the team as a reason for withdraw and tend to quit sport more often due to involvement in other sports (Ryska et al.,

2002). Boys also dropout due to perceived low competence and lack of parent expectations. Girls, however, cite reasons such as being shy about their bodies along with a desire to focus on school (Martin & Gould, 2016).

Deeper Motives for Sport Engagement and Dropout

The descriptive reasons children report as motives for participating and dropping out of sport offer important insight into why children decide to continue to participate or dropout of sport. However, there are deeper, underlying motives for participation and withdraw. Physiological, psychosocial, and environmental explanations have been found in research for why a child may decide to discontinue sport involvement.

Physiological explanations. During adolescence, the physiological changes to the body play a role in the athletes perceived sport experience. As was discussed earlier, motor competence is related to success in sport (Haywood & Getchell, 2014; Henrique et al., 2016), with the potential for low motor competence to lead to sport dropout. A lack of early success in basic skills of a sport may influence an athlete's decision to drop out of sport as their perceived motor competence would be low (Haywood & Getchell, 2014). However, it is important to note that young people are not able to accurately assess their actual competence level until early adolescence (Horn & Weiss, 1991).

Research has shown the link between perceived motor competence and sport engagement. Adolescents low in both actual and perceived motor competence were less physically active and less engaged in sport than their counterparts who had high perceived competence and high or low actual competence (Meester et al., 2016). During adolescence and the process of growth and maturation, puberty may influence an individual's actual and perceived motor competence. As discussed above, early maturing adolescents tend to have a

height and muscle advantage and may experience more motor competence gains (Mailina et al., 2004). These gains could lead to more engagement in sport and physical activity for early maturing athletes and may positively influence their perceived and actual motor competence. Late maturing athletes may be selected out of sport due to small stature and then engage in less physical activity and therefore have lower perceived and motor competence (Figueiredo et al., 2009). However, these differences in gains are diminished when late maturers reach their early maturers' status (Malina et al., 2004).

Social psychological explanations. While some physiological explanations play a role in youth dropout from sport, the majority of explanations that have been forwarded are psychosocial. This research consists of fully developed theories such as competence motivation theory, self-determination theory, expectancy-value model, achievement goal theory, social-cognitive model, and leisure constraints theory.

Competence Motivation Theory. The competence motivation theory states that people are motivated to feel competent or worthy (Harter, 1978). In this model, self-perceptions of competence and perception of control determines an individual's participation in sport. Therefore, a young athlete who has high perceived competence in their ability to perform in the sport as well as feelings of control in their ability to learn, they will be more motivated to stay engaged in the sport. If young athletes have low perceived competence in their ability to perform in the sport and feels little control in their ability to learn, the negative emotions that result will lead to decreased motivation to continue participation in the sport (Harter, 1978).

Research supports this model as perceived low competence has been consistently related to sport withdrawal. In a systematic review focusing on correlates of youth sport attrition, Balish et al. (2014) found that perceived competence was the variable with the most evidence linking it

to sport withdraw. For example, in a study of Finnish children, the athletes who had higher levels of perceived competence reported higher levels of sport motivation and were more likely to continue in sport (Rottensteiner et al., 2015). Similar results were found in Meester et al.'s (2016) who examined adolescents' perceived motor competence and motivation. Measuring physical activity and sports participation, motivation for physical education, perceived motor competence, and actual competence were used to examine differences in motivation based on perceived ability profiles. Athletes who overestimated their competence and believed they were more skilled than their actual ability level, were more motivated than their peers who had the same actual competence but lower perceived competence. Thus, this study confirms the important role perceived competence has with motivation (Meester et al., 2016).

Self-Determination Theory. This model proposed by Deci & Ryan (1985) consists of the belief that people have three basic needs: to feel competent, to experience relatedness and connections to others, and to have a sense of autonomy or belief that their actions make a difference. When these three needs are fulfilled, intrinsic motivation increases along with performance and development. Numerous research studies have been conducted on this model within the youth sport. In one such study, athletes who continued participation in youth sport had higher self-determined motivation, greater need satisfaction, and more intention to participate in competitive sport than their withdrawn counterparts (Guzman & Kingston, 2012). Calvo, Cervelló, Jiménez, Iglesias, and Moreno (2010) also found that sport dropout was related to lower satisfaction of relatedness and lower satisfaction of autonomy needs in soccer players ages 13-17.

Expectancy-Value Model. This theory states that one's achievement motivation is determined by their expectations of success and the value they put on the activity (Eccles, Adler

& Meece, 1984). According to the expectancy-value model, motivation is high when expectations for success and value of task are both high. An individual's expectations for success and the value they place on the task are dependent of many factors found in the social environment such as parents' beliefs and past athletic achievement experiences. This model has been studied regarding sport participation where it was found that the higher the athletes' perceived competence and their intentions to continue, the lower their discontinuation of involvement in the sport (Guillet, Sarrazin, Fontayne, & Brustad, 2006). In this study, when athletes had higher expectations in their ability to be successful and valued the task by influenced their intention to continue. Using structural equation modeling, Guillet et al. (2006) found that the higher the perceptions of value, the less perceived competence influenced intention to dropout.

Achievement Goal Theory. In this theory, Nicholls (1984) contends that motivation is determined by the orientation an individual has when defining their ability. Individuals tend to have one of two orientations: task or ego orientation. According to this theory, athletes high in task orientation determine their ability and motivation by self-improvement or self-referenced standards of performance. Athletes with a task orientation will be more likely to sustain their motivation to continue in a sport as they do not need a successful outcome to judge their ability. Athletes high in ego orientation base their perceptions of ability on outcomes and thus have lower motivation when they are not winning in their sport, which may lead to sport dropout (Nicholls, 1984).

The achievement goal theory has been extensively applied within the youth sport setting. In adolescent males, those characterized with a high task orientation reported greater self-esteem, competence, and enjoyment which were positively related to their intention to continue in the sport (Atkins et al., 2015). Task and ego orientations have been found to be related to perceived

competence as well, especially for those with high task orientation children (Balish et al. 2014). Additionally, ego-orientation, perception of skill, and sport dropout was examined with competitive youth athletes between the ages of 14 and 18 (Cervelló, Escartí, & Guzmán, 2007). These athletes, who were competing or had competed at a superior level were given quantitative measures on goal orientations, perceptions of others sport success, perceived ability, and dropout behavior. Of the four factors measured, the dispositional goal orientation and the perception of ability predicted dropout. A high ego-orientation and low perceptions of ability positively predicted dropout for this population.

Revised Social-Cognitive Model of Achievement Motivation. This model, proposed by Gardner et al. (2016b), is an integrated model that includes elements of multiple cognitive theories along with social influences. Cognitive elements, such as incremental beliefs, perceived competence, ego-orientation, are combined with social influences such as friendship quality, parental support, peer acceptance, and the coach-athlete relationship. Recent research has shown some support for elements in the model. Specifically, youth who had incremental beliefs (belief that ability can be changed through hard work and effort) had greater enjoyment in sport than those who had entity beliefs (belief that ability cannot be changed). Furthermore, mastery-approach goals led to positive effects while performance-avoidance goals led to negative effects (Gardner, Vella, & Magee, 2017).

Theory of Planned Behavior. This theory, from Ajzen & Fishbein (1980) has been applied to youth sport participation and withdrawal (Nache et al., 2005). In this theory, it is proposed that a person's intentions are the best predictor of their behavior. Their intentions are a result of their attitudes toward an activity and subjective norms about the value of the activity and their motivation to comply with those beliefs. Another key piece of this theory is their belief

in their ability to perform the behavior. Within youth sport dropout, the theory of planned behavior predicted athletes who dropped out of sport. Measures of intention, attitude, normative belief, subjective norm, and control belief were given to soccer players ages 13-15 and results found that taken together, these factors accurately predicted athletes who would drop out of sport at the start of the season (Nache et al., 2005).

Leisure Constraints Theory. This model includes both immediate and distal constraints to leisure activities with three specific constraints: intrapersonal, interpersonal, and structural (Crawford & Godbey, 1987). Intrapersonal constraints consist of internal attributes and states of perceived competence, interpersonal constraints consist of social factors such as friends and parents, and structure constraints refer to external factors such as cost and transportation issues. In a systematic review of dropout in youth sport, Crane and Temple (2015) found that intrapersonal and interpersonal constraints had more influence than structural constraints. Specifically, sport enjoyment and perceived competence were most frequently found as reasons for sport attrition.

Environmental explanations. While both physiological and psychosocial explanations explain reasons why children decide to continue participation in sport or dropout, some environmental explanations also exist. Research has investigated a variety of sport environments and stakeholder influences on youth sport dropout. Two such environmental influences are early sport specialization and larger policies and cultural practices.

Early sport specialization. Sport specialization has become a popular topic of study within youth sport research. Early sport specialization involves having a focused involvement in one sport and spending a large amount of time on deliberate practice activities to improve skills and performance in that sport (Côté et al., 2009). This trend toward early specialization in sport

may be a result of the increased professionalization of youth sport. With the professionalization of youth sport, the perceived benefits of becoming an elite athlete outweigh the negative outcomes that may result early specialization in one sport (Hecimovich, 2004). The negative consequences that can result from sport specialization include an increased risk of overuse injuries, loss in motivation, increased stress, and burnout (DiFiori et al., 2014). These negative consequences may lead to a withdraw from sport, which may lead to more sedentary behavior and ultimately a less active lifestyle.

Within tennis specifically, specialization was found to be related to high incidence of injury (Jayanthi et al., 2011). In 519 participants, tennis players who reported specializing only in tennis were more likely to report an injury during the previous year. Additionally, in a study examining expert coaches' views of parents within 10u tennis, coaches reported that parents were overly focused on the "race to the yellow ball" (Gould et al., 2016) meaning that parents wished to move their child through the developmental stages of tennis quickly. This rush was rooted in the parents focus on outcomes such as winning and scholarships, rather than on the holistic development of their child athlete. This parent focus on outcomes could result in the child specializing in tennis early and risking the negative consequences that may arise.

Larger policies and cultural practices. There are many policy and cultural factors that may influence a young person's decision or ability to continue sport participation. Included in this is the range of environmental factors that can influence which sport an athlete participates in and how long they stay involved in the sport. Environmental variables such as child's sex, amount of people living in the household, family income, language spoken at home, parent education levels, exposure to sport, and access to physical education specialist were found to influence participation in sport (Vella et al., 2014). Specifically, a lower household income,

language other than English spoken at home, low level of parent education, and lack of exposure to sport were related to sport dropout. Furthermore, environmental factors were found to be very important for youth living in low-SES areas such as proximity, cost, facilities, and safety (Humbert et al., 2006).

Sport Engagement and Dropout Conclusions

Children have reported multiple motives for continued engagement and dropout of sport. Fun and enjoyment are often reported as the most important reasons children play sports, however underlying themes have been found for a deeper understanding as to why children continue or dropout of sport. Physiological factors such as motor competence and psychosocial and environmental considerations provide explanations of what influences youth to continue a sport (Balish et al., 2014; Haywood & Getchell, 2014; Hecimovich, 2004). Many of the models overlap in their inclusion of perceived competence, goal orientation, and the impact of environmental factors such as social agents and therefore may be helpful indicators of why children decide to drop out of sport. However, more research needs to be conducted to examine which factors have the greatest influence and how these factors interact.

Modified Sport

Modified sport was created to engage children in sport, develop fundamental motor skills, and increase quality of the sport experience (Eime, Payne, & Casey, 2005; Hill & Green, 2008). Matching the developmental capabilities of children, the focus of modified sport programs is on learning and development rather than winning. Modified sport involves developmentally-appropriate equipment, competition, rules, and physical space that taken together increases opportunities for children to learn skills and stay involved in the action (Hill & Green, 2008). Research has found that modifying sport for youth leads to greater success in performance and

psychosocial variables. It is the goal of modified programs to increase success and enjoyment in the sport to increase the child's likelihood of continuing participation. Several sports have adopted a modified version for youth, including volleyball, ice hockey and tennis in the United States and soccer and field hockey in Australia (Hill & Green, 2008) and the number of children participating in modified sport has increased in recent years (Eime et al., 2005).

Recently, a new term, Competitive Engineering (CE), has been coined to describe modified sport. Competitive Engineering is the "process of making modifications to the competitive environment by changing the sport structure, rules, facilities, and equipment in order to enhance a variety of desired cognitive, affective, and behavioral outcomes" (Burton, Gillham, & Hammermeister, 2011, p. 202). Competitive Engineering involves not only modifying equipment but also creating motivational climates that focus on task improvement rather than winning. While research has yet to be conducted on the psychological outcomes of CE sport, exploratory work found that in Competitive Engineered flag football led to more personal involvement through greater involvement in scoring and increased action which have been proposed as strategies to enhance enjoyment (Burton, O'Connell, Gillham, & Hammermeister, 2011).

Outcomes

Physical outcomes. Modified equipment and physical space has been linked to improvement in motor and sport specific skills in a variety of sports. Consistently throughout the research, modified equipment that matches the developmental age of children has been found to lead to greater success as compared to adult sized equipment (Chase, Ewing, Lirgg, & George, 1994; Farrow & Reid, 2010; Ferguson, Lirgg, Gorman, & Ting, 2005). In basketball, boys and girls ages 9-12 had more success with a modified basketball hoop size of 8 ft. as compared to the

started 10 ft. height (Chase et al., 1994). Within Chase et al.'s (1994) study, it was also found that a modified basket height was especially important for girls. The researchers contributed the increase in successful shots on the modified basket height to the lack of physical strength of children to shoot on the 10 ft. basket height. Also in basketball, the use of a lighter ball for males ages 9-12 was related to more dribbling and passing, higher shot frequency, and greater shot success as compared to a standard basketball (Arias, Argudo, & Alonso, 2012).

Similar positive outcomes were found in volleyball with seventh grade participants (Pellett, Henschel-Pellett, & Harrison, 1994). During 16 days of practice, participants were assigned to either a regulation volleyball or a lighter weight volleyball and completed a pre- and post-skills test. Participants had more successful sets and serves when using a lighter volleyball which indicated a higher ability of keeping the ball in play during game settings (Pellett et al., 1994). Overall, research has shown support for the greater improvement of physical skills for youth using modified equipment rather than traditional equipment.

Psychosocial outcomes. Modified programs are believed to increase enjoyment, efficacy, and engagement in the sport. However, few studies have been conducted that examine such psychosocial outcomes. In a review of research on modified youth sport, only three studies were found that measured psychological variables (Arias et al., 2011). In basketball, greater self-efficacy was reported when participants shot on lower basket heights. After playing basketball on both an 8-ft and 10-ft basket height, participants reported the highest self-efficacy when shooting at the basketball hoop a height of 8-ft (Chase et al., 1994).

Ferguson et al. (2005) studied the outcomes of a 12-week golf program for college-aged novice players. During the first six-weeks, participants used modified equipment and used traditional equipment during the last six weeks. Participants reported a significant increase in




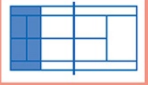
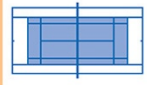

self-efficacy for all skills during the first six week, which accompanied the switch to traditional equipment. Last, during a 13-day tennis unit within a college tennis course, participants were randomly assigned to play with either a 95-in or 110-in racket head size. At the end of the unit, participants who played with the larger head size racket, 110-in, reported greater improvements in both self-efficacy and emotional well-being (Pellett & Lox, 1998).

USTA 10 & Under Tennis

Recently, the United States Tennis Association (USTA) implemented their version of modified tennis for children 10 years and younger. The goal of Ten and Under Tennis (10u Tennis) tennis was developed to increase participation for youth under 10 years of age by focusing on skill improvement and increasing enjoyment. It was believed that by increasing competence and enjoyment, children would be motivated to continue participation in tennis.

10u Tennis involves developmentally appropriate equipment, court size, and competitive structure. The modified equipment includes racket length and weight, ball size and weight, and net height. The modified equipment changes sizes and weights in a progression as children age. The youngest, smallest children use the lightest, biggest tennis balls with the smallest lightest racket, on the smallest court with the lowest net. As the children age, the ball size gets smaller and heavier, the racket increases in length, and the court size gets larger and the net height taller (Pankhurst, 2016) (see Figure 3).

Figure 3. Modified equipment progression in 10u Tennis.

STAGE	RED	ORANGE	GREEN
AGE	8 and under	9 - 10	11 and up
BALL	 <p>Red felt or foam Moves slower and bounces lower than orange ball</p>	 <p>Orange Moves slower and bounces lower than green ball</p>	 <p>Green Slightly reduced bounce from yellow ball</p>
COURT SIZE	 <p>36' x 18'</p>	 <p>60' x 21' singles 60' x 27' doubles</p>	 <p>78' x 27' singles 78' x 36' doubles</p>
NET HEIGHT	29"	3' center, 36" at net posts	3' center, 36" at net posts
RACQUET	Up to 23"	23" - 25"	25" - 27"

(“A parents guide: Teaching tennis to children 10 and Under”, 2010)

While adult tennis equipment is too heavy and large for children leading to improper technique and low ability to perform basic tennis skills, the modified equipment was meant to provide more opportunities for skill improvement and success as it is the appropriate weight and size for the children developmental stage. The greater success and improvement that results would then increase the child’s enjoyment in tennis. Additionally, the 10u program included a games approach to teaching, which keeps the children active throughout the lesson rather than standing in lines (Gubacs-Collins, 2007).

Research has shown support for the improvement of tennis skills with the modified equipment. After participating in a five-week tennis program with the modified equipment, children had more success in stroke proficiency than children using standard equipment (Farrow & Reid, 2010). In this study, participants, children with a mean age of eight years, were assigned to one of four conditions that varied in ball and court size; scaled ball/scaled court, scaled ball/standard court, standard ball/scaled court, and standard ball/standard court. Participants in the scaled ball/scaled court had more hitting opportunities during each lesson while participants in the standard ball/standard court had the least. Furthermore, participants in the standard

ball/standard court condition had the poorest stroke proficiency relative to the other conditions which may have been a result from the lack of hitting opportunities compared to the other conditions (Farrow & Reid, 2010).

Larson and Guggenheimer (2013) found significantly more successful forehand groundstrokes were completed when children were on a scaled court with a scaled (smaller) tennis ball. Additionally, velocity and longitudinal placement were higher for children in the scaled equipment condition as compared to children using standard tennis equipment. The greater success with the scaled ball and scaled court may have been a result of the increased reaction time as scaled balls travel slower due to the increased size and weight of the ball (Larson & Guggenheimer, 2013).

In another study, amongst nine combination of tennis rackets and tennis balls, the most successful hitting performance resulted when children used the smallest racket combined with the least compressed tennis ball (Buszard et al., 2014). Furthermore, the combination of smallest racket and least compressed ball promoted two technical advantages of swinging high to low and striking the ball in front and to the side of the body. In match play, better performance has been found using lower compressed tennis balls in terms of increased rally speed, more comfortable strike height, and higher number of balls played at the net (Kachel, Buszard, & Reid, 2014). More winners, more forced errors, and more movement forward into the court was also found when children played with a scaled net (Timmerman et al., 2015).

While research shows support for skill improvement using the modified equipment in 10u tennis, little research has been conducted on whether the 10u program is related to psychosocial outcomes. Enjoyment was measured at the end of a playing session in which children played on four different conditions that varied in court and net size. The greatest enjoyment was found in

the standard court with the scaled net which led researcher to conclude that manipulating the net height might be a method for engaging children in the sport (Timmerman et al., 2015). In another study, children who played with lower compression ball on a scaled court reported higher level of engagement as compared to children playing on a standard court with a standard tennis ball (Farrow & Reid, 2010).

Modified Sport Conclusions

Modifying sport by scaling equipment to fit the developmental age of participants has been promoted as a method for increasing engagement, developing fundamental motor skills, and improving the quality of the sport experience (Eime et al., 2005; Hill & Green, 2008). While research has shown support for positive physical outcomes such as increased skill performance and stroke proficiency (Buszard, Farrow, Reid, & Masters, 2014), there is lack of research conducted on the psychosocial skills that results, specifically in modified youth tennis. Therefore, it is unclear as to whether modified youth tennis, such as 10u tennis, are successfully reaching their stated goals of increasing enjoyment and engagement. Furthermore, it is unclear whether modified youth tennis is increasing sport engagement and promoting continued participation.

Within-Career Transitions

As talent development of youth athletes has gained much attention over the past several years, the transitions made by athletes between the stages of talent development has become an important area of focus. While much research has focused on the transition of elite athletes or athletes at the end of their career, within-career transitions have recently been identified as a critical area of study to understand the process of progressing to more advanced stages of talent development (Wylleman et al., 2004). In this sense, the transition out of developmentally-

appropriate modified sport to traditional club level of sport can be viewed as a within-career transition.

A transition has been defined as an “event or non-event which results in a change in assumptions about oneself and the world and thus requires a corresponding change in one’s behavior and relationships” (Schlossberg, 1981, p. 5). Three factors are associated with transitions and influence how the athlete proceeds through the transition. These factors are the athlete’s characteristics, the athlete’s perception of the transition, and the characteristics of the pre- and post-transition environments. Additionally, two types of transitions occur during an athletes’ development, normative and non-normative (Stambulova, 2000). Normative transitions are predictable and anticipated, such as age levels in competition and are determined by the age or organizational characteristics of the sport. Non-normative transitions are unpredictable, unanticipated, and involuntary, such as an injury or loss of a coach (Stambulova, 2000; Wylleman, Rosier, De Brandt, & De Knop, 2016). Making the transition out of modified sport into traditional sport can be perceived as a normative transition as it is both anticipated and predicted transition in the athlete’s talent development.

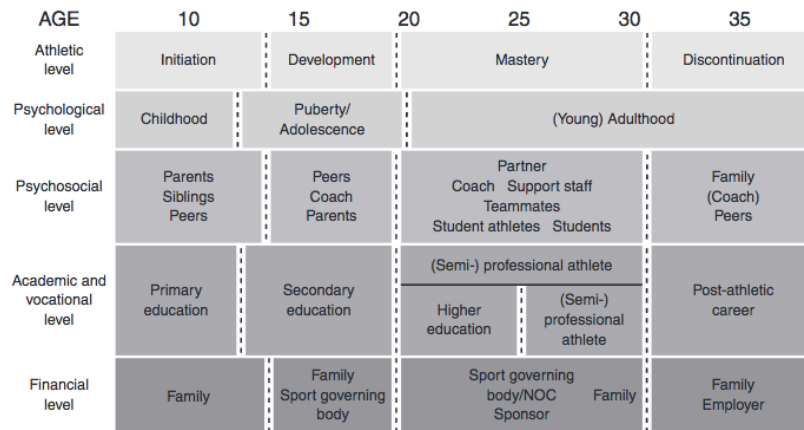
Stage Models of Within-Sport Transitions

The first models of within-sport transitions are similar to those found in talent development such as Bloom’s (1995) stages of talent identification and Côté’s (1999) stages of talent development. Similar, preliminary models of within-sport transitions include stage models that consist of predictable stages and transitions over the athlete’s sport career. One such model comes from Stambulova (1994) who researched career transitions of Russian athletes. This model consists of six transitions: (1) the beginning of the sports specialization; (b) the transition to intensive training; (c) the transition to high-achievement and adult sport; (d) the transition

from amateur to professional sport; (e) the transition from culmination to the end of the sports career; and (f) the end of the sports career. Further research showed that athletes encounter a variety of stages and transition beyond the athletic domain and therefore a more holistic model was appropriate to explain within-career transitions (Wylleman et al., 1999).

Holistic Athlete Career Model. A more holistic model of within-career transitions is found with the Holistic Athletic Career model (Wylleman et al., 2004), a career stage descriptive model. As an athlete’s sport career is associated with the development of other pathways, such as education, Wylleman et al. (2004) determined that an athletes career should be considered holistically. This model consists of the normative transitions that athletes face within their career and includes athletic, individual, psychosocial, and academic/vocational levels. More recently, the Holistic Athletic Career model has been developed which expands on the previous model by incorporating a financial level (Wylleman, Rosier & De Knop, 2016) (see figure 4).

Figure 4. The Holistic Athlete Career Model.



(Wylleman et al., 2013a)

In this model, it is contended that an athletes’ development and the transitions between different stages interacts with other levels of development. Athletes not only face the challenges that come with transitions within their sport but also transitions that occur in their educational,

psychological, psychosocial, and financial development. Therefore, this perspective is holistic in nature and called a ‘whole person’ approach (Wylleman et al., 2004; Wylleman & Rosier, 2016). Within the modified sport context or more specifically, in the case of the transition out of 10u tennis, the transition will approximately occur during the initiation-development athletic level. It is during this stage that that the younger person is beginning to transition from childhood to adolescence and peers begin to take a more important role in psychosocial development. Additionally, the athletes will make the transition from elementary school to middle school and financial requirements of tennis may take a larger role in their participation. While many of these transitions are normative in nature, many non-normative transitions may also occur such as a sudden move to a new place of living or a change in the parental relationship.

Research that examined within-career transitions has shown support for the holistic model. Cerić, Erpič, Wylleman, and Zupančič (2004) found several factors influenced the quality of the transition at the end of a sports career. The voluntariness of the career termination, the athletic identity, educational status, and occurrence of negative non-athletic transitions influenced the way in which athletes retire from elite sports and adapt to life after sports.

Explanatory Models of Transitions

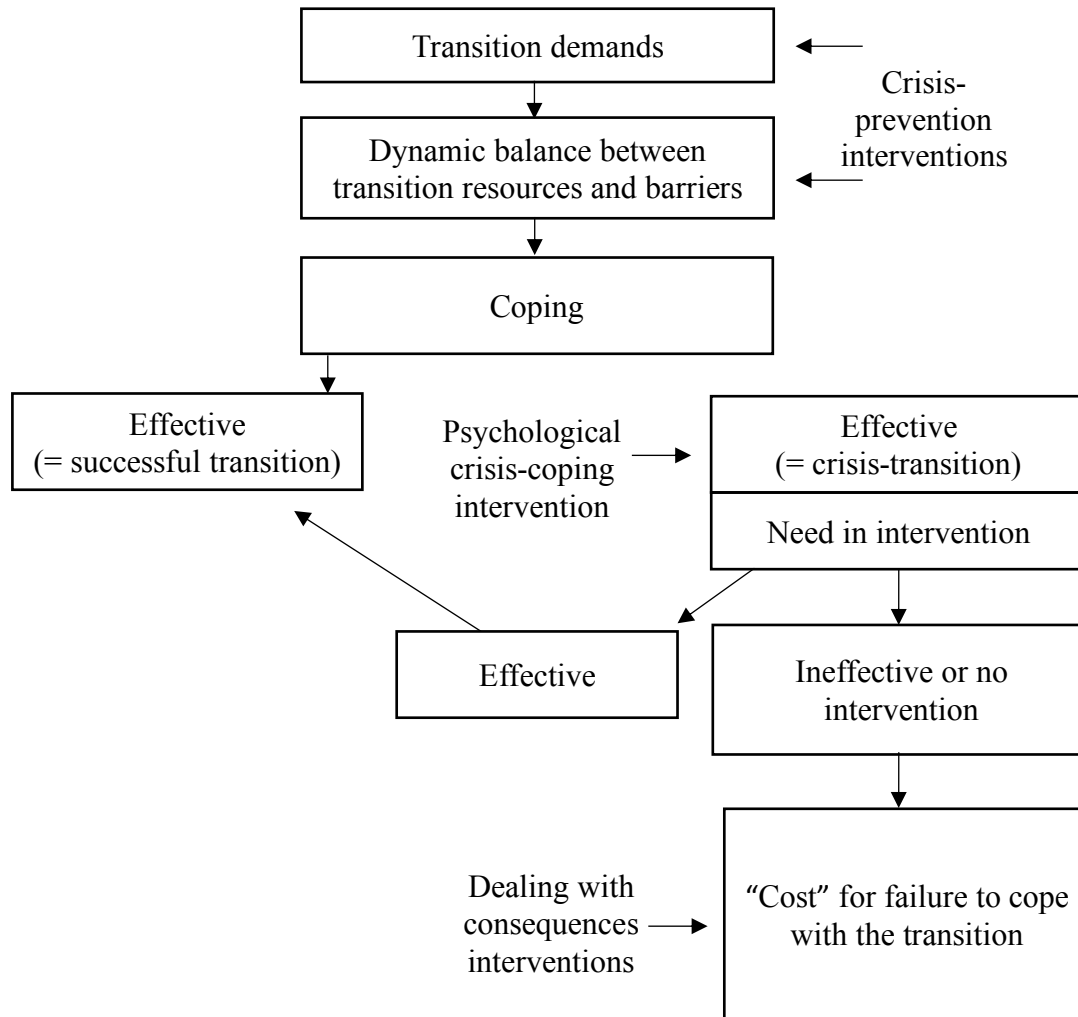
Past research on within-sport transitions has used the Model of Human Adaption to examine experiences during transitions in sport. This model contends that four major factors explain inter- and intra-individual differences in transition experience: (a) the situation (feelings of control, previous experience); (b) the self (psychological characteristics); (c) support (social support); and (d) strategies (coping strategies and resources). Each of the variables found within the four factors acts a resource or a deficit during the transition to influence ease of adaption. Pummel, Harwood, & Lavallee (2008) explored adolescents in a within-career transition in

equestrian using the model of human adaptation. The researchers found support for the critical role support from significant others has on a successful transition. They also concluded that the perception that the riders had on their transition, such as feelings of control of the process, was related to the amount of stress they experienced.

Athlete Career Transition Model. Stambulova's (2003) model outlines the process of the transition between two levels of sport participation and describes why an athlete experiences a successful or unsuccessful transition (Figure 5, p. 49). This model asserts there are specific challenges that arise when a transition occurs that athlete's need to be able overcome with strategies. Strategies consist of using both internal and external resources to cope with the demands of the transition. Internal factors include the athlete's knowledge, skills, personality traits, and motivation while external factors include social support, financial support, and skill development support. According to Stambulova (2003) when athletes do not cope with the difficulties and challenges that arise when making each transition and interventions to help them are not effective, negative outcomes are likely to occur.

The Stambulova (2003) model also includes a categorization of transition outcomes. According to Stambulova (2003) there are two primary outcomes of a transition: successful transition and crisis transition. For a successful transition, athletes have effective coping strategies in which they develop the necessary resources to overcome transition barriers. In a crisis transition, the athlete is unable to cope with the challenges of the transition effectively and requires intervention from others. With the intervention, athletes can experience a successful but delayed transition. However, if the intervention is unsuccessful, negative outcomes result from their failure to cope with transition demands. Such negative outcomes include poor performance, injury, overtraining, and dropout.

Figure 5. The Athlete Career Transition Model



(Stambulova, 2003)

Research using the Athlete Career Transition Model (Stambulova, 2003) has shown support for the relationship between challenges and coping strategies on transition outcomes. Stress or challenges of within-career transitions include the role of others such as family, friends, friends, and teammate (Morris et al., 2014, Morris et al., 2016). Additionally, sources of stress included organizational issues, external and internal pressures, and time pressures for equestrian athletes in the developmental stage of their careers. Sources of stress were categorized as either

external or internal stressors for young professional soccer players and included external sources of family, friends, and club and an internal source self-imposed pressure (Morris et al., 2014, Morris et al., 2016).

Social support and resources provided by organizations have been found as sources of support through the transition. For soccer players transitioning to the professional level support from family, friends, coaches and teammates were found to be a source of support as well as for equestrian riders in their transition to competitive riding (Morris et al., 2014, Morris et al., 2016, Pummel et al., 2008). Parents were found to provided tangible support through transportation, entering in tournaments, helping athlete prepare for competitions, assisting in practice, and providing financial resource. Parent also gave emotional support such as encouragement, being there, calming the athlete down, and low pressure (Pummel et al., 2008). Support for sport organizations included the provision of resources such as teaching sport science to athletes, parent education sessions on the transition, and coach education. For equestrian riders, support also came from the organization through training, support network, advice, and encouragement.

Transition from Modified to Traditional Sport

While within-career transitions have been investigated, there has been limited research exploring the transition from modified sport to adolescent/club level sport. Only one study has examined the number of children who make the transition from modified to club sport levels. (Eime et al., 2015). Using a longitudinal design, researchers collected data for each registered member of one of three club affiliates with a state sporting association. The researchers identified participants, ages 4-12, who had played in a modified sport during Year 1 and tracked them over a 4-year period. Participants were classified into one of three categories: (1) Transition, individual transitioned from the modified sport program to a club sport competition,

(2) Continue, individual continued participation into modified youth program, (3) Withdraw, individual discontinued participation in the modified program and did not transition.

Within the four-year period that participants were tracked, fewer than 25% of females and 14% of males made a successful transition from a modified sports program to club sport competition. Additionally, across all age groups, the majority of participants withdrew from the modified program before transitioning to club sport competition. While this low rate of transition may be attributed to sport sampling, it is important to study this transitional period as there are benefits for youth who play sport continuously. In addition, having children participate in tennis has the advantage of being a life time sport that can be played well into a person's 80s. Therefore, it is critical to investigate factors that influence the transition from modified to traditional sport to inform sport programming on creating environments which promote successful transitions and continued participation.

Rational for Current Study

The literature review has summarized the research pertaining to sport engagement, modified sport, and within-sport transitions. Most children report playing sport because it is 'fun' however there are many physiological, psychosocial, and environmental factors that influence the decision to play sport or dropout (Balish et al., 2014; Harter, 1978; Haywood & Getchell, 2014; Ryska et al., 2002). To increase youth sport participation, modified sport programs have been developed that include developmentally appropriate equipment aimed to increase enjoyment and motor competence (Côté et al., 2009). However, it is unclear as to whether modified sport programs are successful in promoting continued sport participation and the transition into traditional sport from modified sport may play a role in whether a child decides to keep playing or dropout. While much is known about why children play sport and what

motivates them to continue participation, less is known about whether modified sport is successful in increasing continued sport participation and the role the transition out of modified sport to traditional sport has on sport engagement. The limitations and gaps in the literature are described below:

- Goals of modified youth sport: The physical/skill development outcomes of modified youth sport are well documented, however limited research has examined the psychosocial outcomes of youth sport which are hypothesized to lead to continued participation. As enjoyment is the most reported reason why children play sport, further research needs to be conducted on whether modified sport is fun and what elements children find are most enjoyable. Additionally, there is a need to identify other psychosocial factors within modified youth sport that lead to continued participation, such as perceived competence.
- Transitions out of modified sport: Within-career transitions have been researched and the different factors that lead to a successful transition have been identified. However, limited research has been conducted on the transition from modified youth sport to traditional youth sport. Of the research that has been conducted, no qualitative studies have been conducted for a deeper understanding of the transition.

Based on the identified gaps in previous literature on sport engagement, modified youth sport, and transitions, there are three purposes of the current study.

1. To determine the motives adolescents have for continued participation in tennis after participation in modified tennis and the factors that had a role in whether they continued to play tennis. Specifically, this study investigated the motives and factors that current

tennis players who had previously participated in modified tennis attribute to their decision to continue participation.

2. To determine the motives adolescents have for dropping out in tennis after participation in modified tennis and the factors that influenced that decision. Specifically, to explore the factors that contributed to the decision to drop out as well as the influence of the both the 10u program and the transition to traditional sport on the decision.
3. To determine the role the transition from 10u tennis to traditional tennis has on adolescent's decisions to continue participation or dropout of tennis. Specifically, athletes who had transitioned and either continued playing or dropped out will be included to understand the influence of the transition experience.

It is expected, based on current participation and dropout research, that adolescents will report reasons for dropout and engagement are consistent with the underlying mechanisms of perceived competence, goal orientation, and intrinsic motivation (Atkins, Johnson, Force, & Petrie, 2015; Balish, McLaren, Rainham, & Blanchard, 2014; Harter, 1978). Additionally, social agents such as parents, coaches, and friends will also have a role in the adolescent's decision to continue participation or dropout (Armentrout & Kamphoff, 2011; Fraser-Thomas, Cote, & Deakin, 2008). It is also expected that organizational factors within the 10u program, such as time commitment, perceived quality of coaching and financial requirements will influence the decision to drop out or continue participation (Armentrout & Kamphoff, 2011). As few studies have investigated the transition from modified to traditional youth sport, it is unclear as to what to expect. However, from research on other within-career transitions, factors such as parental support, financial resources, and outside transitions, such as the transition from elementary to middle school, may play a role.

CHAPTER III

METHOD

The purpose of this study was to understand the motives that adolescents report when deciding to continue participation or drop out of tennis, as well as the factors that influenced their decision, after playing in a 10u program. Additionally, this study is designed to understand adolescents' experiences when transitioning from a modified tennis program to traditional tennis and how that transition influences their decision to continue participation or drop out. This chapter will outline the methodology that was chosen to answer these questions including the methodological framework, design, participants, procedures, data collection, and data analysis. The methodological rigor of the study will also be discussed.

Methodological Framework

Phenomenography

Phenomenography as a research approach describes, analyzes, and understands the experiences of individuals relative to a certain phenomenon. The goal of this approach is to understand how people perceive, experience, and conceptualize a phenomenon (Marton, 1981). As this study focuses on the experiences of adolescents in a modified tennis program and their experiences transitioning into traditional tennis, phenomenography is an appropriate approach to address this research purpose. This approach will identify the similarities and differences in the way adolescents experience modified tennis and the transition to traditional tennis (Marton, 1981; 1986).

Phenomenography also focuses on the relationships that exist between individuals and the world around them (Martons, 1986). A non-dualistic ontological perspective is taken by this approach, which states that while an "objective" reality exists, this reality is understood through

the perspectives of the individuals who experience it. Using a non-dualist stance, this approach views the internal (thinking) and external (the world) as not independent entities. The relationship between the two, the individual and phenomena, is where meaning comes from and the outcome of this approach is centered on describing the world as the individual experiences and explains it. Furthermore, phenomenography includes a second-order approach in which it seeks to describe how the learner experiences the world and how they explain it. This second-order approach of phenomenography is what separates it from a phenomenological approach which focuses on the individual and their experience (Barnard McCosker, & Gerber, 1999; Richardson, 1999).

Phenomenography explores the qualitatively diverse ways that individuals experience, understand, and give meaning to a phenomenon in the world. Ultimately, the goal is to emphasize the collective meaning and commonalities of understanding rather than individual experiences (Barnard et al. 1999). To fulfill this goal, this approach works to identify similarities and differences amongst individuals in their phenomenal meaning (Åkerlind, 2012). As multiple individuals, will share their experiences in a modified sport program and their experience transitioning to traditional sport, the phenomenography approach is fitting.

The outcome of the phenomenography approach is statements about people's conceptions of the world (Marton, 1986). Categories of descriptions are the fundamental outcomes of this research approach to create structurally significant differences in how individuals define a phenomenon. The goal is to find the structural framework in which the categories of understanding exist. Additionally, these categories are decontextualized and can be used in other contexts than the one studied (Martons, 1986).

Research Method

While phenomenography offers an approach to research, it is not a research method (Marton, 1981). There are several methods that can be used to conduct phenomenographic work such as observations and case studies. A common method used in phenomenography research is the research interview (Richardson, 1999). Using this method, interviews are conducted to capture the views of participants about a certain phenomenon. Then using verbatim transcripts, an iterative and interactive data analysis process is used to identify categories of descriptions in the data. While research on dropout in sport has been primarily quantitative (Fraser-Thomas et al., 2005; Ryska et al., 2002), using the qualitative interview will add to the existing research by providing a rich and in-depth exploration into adolescent's experience in sport.

Procedure

Participants and Recruitment

As the purpose of this study was to explore reasons for why adolescents continue or dropout of tennis, adolescents were interviewed to explore their motivation and transitional experience. Additionally, as the literature on sport participation and dropout includes other factors that influence participation, such as cost and parent education level, parents were also included as participants to obtain a comprehensive understanding of the factor that influences whether an adolescent continues or drops out of tennis. The inclusion criteria for participants in this study included (a) participation in a 10u tennis program for at least one year, (b) participation in a traditional tennis program for at least 6th months. The inclusion criteria were created to ensure that adolescents had experience with the 10u tennis program and had at least attempted the transition to traditional tennis. A parent in this study was considered a primary

care-giver who was responsible for the daily care of the child and a child was an individual under the age of 18 years and dependent on one or more parents.

Institutional review board approval was obtained from Michigan State University. The sample of 12 parent-child dyads was recruited using a purposive-snowball method (Babbie, 2011). While the original purpose was to conduct interviews to saturation, so no new themes could emerge through further interviews, the difficulty of finding dropouts led to a finite number of participants – all that could be found and agreed to participate. The snowball sampling technique started with tennis club directors and tennis coaches who recommended potential participants and then proceeding with recommendations from study participants.

Initial recruitment included tennis clubs in the Midwest area based on researcher knowledge of the existence of a 10u program at the club. The lead researcher contacted club directors to explain the purposes of the study. Club directors then recommended specific tennis coaches who provided participant referral. Initial participant recruitment included tennis coaches as they were most likely to be familiar with players and parents at the club. From the initial referral, participant recruitment followed the snowball sample strategy described below:

1. *Club Director Referral*: The club director, after given information for the study were asked to identify adolescents as potential participants. An information form (Appendix A) was given to the club directors to provide specific information about the study and participant requirements as well as lead researcher contact information. The club director was asked to identify the tennis instructors/coaches who may have the most knowledge of individuals who fit the participant requirements.

2. *Tennis Instructor Referral*: The tennis instructor identified by the club director was contacted, given information about the study and was asked to identify adolescents as possible

participants. The coach was asked to contact possible participants parents and request if they would be interested in participating in the study. Once parents had shown interest in participating in the study the lead researcher and parent scheduled a convenient time and place to conduct the interviews.

3. *Snowball Sampling Strategy*: At the conclusion of the interviews, participants were asked to identify others they believe fit the requirements for participation. They were asked to forward the lead researchers contact information to those they identified and ask them to contact the lead researcher if interested. Additionally, the lead researcher then asked the coach to contact those identified if participants did not have their contact information.

4. *Sport Dropouts*: As sport dropouts were more difficult to identify additional methods of recruitment were used. First, middle school tennis coaches in the Midwest area were contacted and asked to recommend potential participants. Second, tennis directors at various community tennis programs were also asked to identify possible participants by comparing databases from the past years. Finally, high school tennis coaches were asked for recommendations on possible participants and other individuals who may be able to identify participants.

Data Collection

Data was collected via semi-structured interviews that moved from broad to more specific questions. Interviews were conducted in-person at a convenient time and location for the participants and over the phone when necessary. Parental consent and child assent were collected prior to the start of the interviews (Appendix B-C). Adolescents were interviewed separately from parents to allow both participants to be more open and honest with opinions and to get both perspective of the youth tennis experience. Four interview guides were developed for each type of participant (Appendix D-G). Questions were based on Schlossberg (1981) and Wylleman et

al. (2016) models along with research on sport engagement and dropout. Two pilot interviews were conducted, one child interview and one parent interview to assess the quality of the questions. After the pilot studies were conducted, changes were made to both interview guides. Changes to the child interview guide included reframing questions to make them easier to understand. Changes to the parent interview included the addition of a question to explore how parents evaluate their child success in tennis.

The final adolescent interview guide included questions related to (i) Background in sport (questions to build rapport and experience in 10u); (ii) Experience in 10u program and current tennis participation, (iii) The transition to traditional tennis (perception, challenges, experience); (iii) Social Support (peers, family, coach); (iv) Psychological components (motives for continuing/discontinuing, goals, perceived competence); and (v) Academic transitions. The final interview guide for the parent participants included (i) Background in tennis (build rapport and parent experience in 10u tennis); (ii) The transition to traditional sport (perception of transition) (iii) Factors influencing participation or dropping out) and (iv) Support (types of support, role of parent during transition). Through using the semi-structured interview guide, the researcher was able to ask the structured series of question but allowed to probe for further clarification or to ask additional relevant questions.

Interview process. At the start of the interview, the researcher discussed the purpose of the study and the interview process for the participants and their parents. Parents then gave their consent for their child to participate. After parental consent was obtained, child assent was collected. When possible, the adolescent was interviewed first while their parent completed the demographic survey. However, due to time constraints of the participants, the parent was sometimes interviewed first.

The child interviews started with the lead researcher explaining the purpose of the interview was to understand their experience in tennis and assure them that there were no right or wrong answers. This was followed by a series of questions designed to build rapport quickly between the researcher and participant as this is an important factor in child interviews (Irwin & Johnson, 2005; Wilson & Powell, 2001). Questions such as “What is your favorite thing about tennis (or other sport)?” and “Are you a fan of any professional tennis players (or athletes)?” were used to guide the conversation. The lead researcher would also answer these questions in order for the interviewer and participant could get to know each other and have less constrained discourse. Additionally, participants were offered paper and pens for free-drawing or a fidget cube to play with during the interview to enhance their level of comfort.

After building rapport the first set of questions focused on the 10u experience and current tennis participation to gain an understanding of their progression through the 10u program and also to provide a gauge of the quality of the program. Current tennis participation questions were asked to explore whether the child was specializing in tennis or was recreationally involved. Probes were included to target information about the coach, parent involvement, sequence of 10u equipment used, and good/bad elements of the programs. The next set of questions targeted the transition to traditional tennis with questions referring to their perception of the transition and how it occurred and the challenges they encountered.

Sources of support questions were asked next and started broadly but include probes about parents, coach, and peers. This section was then followed by broad questions referring to motivations to continue or dropout of tennis and their goals and expectations for tennis or sport participation. Also included were probes for perceived competence and skill improvement. Last, as transitions are influenced by other transitions occurring in life outside of sport, a question was

included about possible other changes that may have occurred during that time period such as a changing schools or grade levels and how that transition influenced their tennis participation.

For parent participants, the interview began with questions relative to their background in tennis and reasons for signing their child up for tennis. Following the tennis background questions, the researchers asked questions and probes about their child's 10u experience. This set of questions was included for three reasons: (1) provide information about the quality of the 10u program, (2) understand the parent opinion of the 10u progression, and (3) gauge the parents level of involvement during the 10u program. The next set of questions were broad, open-ended questions about the factors that they had to consider for their child to continue participating in tennis. Probes were included to ask about a variety of factors, such as cost and time commitment, that were found to influence participation in youth sports (Fraser-Thomas, Côté & Deakin, 2008). During this part of the interview parents were asked why they thought their child decided to continue playing tennis or dropped out which provided their perspective on the child's decision. Last, parents were asked questions regarding their support and role for their child's tennis experience, how that had changed during the transition, and their goals/expectations for their child's tennis or sport participation.

Demographic questionnaire. Parents were given a short-demographic questionnaire to complete while their child was being interviewed (Appendix H). Demographic information collected included: child age, gender, race/ethnicity, siblings, child's 10u experience, child's current tennis participation, child's other sport participation, parent and spouse occupation, parent education level, income level, parent race/ethnicity, and parent tennis experience. The purpose of the demographic survey was to collect background information of participants that

have been found to be related to sport participation and to act as a screening tool for inclusion criteria for the study.

10u program quality questionnaire. A questionnaire was developed to assess the quality of the 10u program the participants played in. Two categories of questions were created: (1) coach engagement and (2) class organization. The parents were asked to complete the two categories of questions that included 15 questions and was inserted into the demographic form. The 10u program quality questionnaire was developed by the lead researcher and based on information found in the USTA 10 & Under Manual, a guide for teaching 10u tennis provided by the USTA. To ensure the questions would accurately reflect the quality of the 10u program, two experts in 10u tennis were give the questions and asked to provide feedback. The lead research incorporated and changed several questions based on their feedback that was then sent to the two experts for their approval and resulted in 16 questions. Each question concerned different quality markers of the 10u tennis program (e.g., Did the coach use the appropriate court and equipment for the age group/level (e.g., red balls on the 36' x 18' court)?). Each was answered by one of three choices: Yes, No, Unsure. The total number of 'yes' answers were summed for each participant for all sixteen questions. A higher score on this questionnaire reflected a high perceived quality of the 10u program.

Data Analysis

Interviews were audio-recorded and data was transcribed verbatim. Transcripts were read and re-read by lead investigator and research assistant for immersion in the data. Hierarchical thematic content analysis was conducted using both inductive and deductive elements (Miles & Huberman, 1994). The inductive analysis was used to create initial raw data themes and hierarchical structure while deductive process was used to place higher order themes into general

dimensions that reflected responses to the major questions asked. Along with this nomothetic analysis, idiographic narratives in the form of case studies of each participant dyad was conducted.

Data analysis was completed in a three phase process that included (1) an open-coding phenomenographic approach that focused on describing the meaning and experiences of participants in the 10u program and their transition to traditional sport (Yates et al., 2012), (2) reviewing the meaning units together with the lead and assistant researcher, to show the range of experiences across the participants (Akerlind, 2012) and inductively create categories that encompassed the range of experiences, and (3) deductively analyzing placing categories into higher order themes determined by past research on sport engagement and dropout, within-career transitions, and major questions asked. Using this three-phase process enhanced the understanding of how adolescents perceived their experience in modified youth sport and their transition into traditional sport. These three steps were conducted separately for child and parent interviews.

The first phase of the analysis process matched with the phenomenographic research orientation and was used to describe participant's experiences in 10u tennis and the transition to traditional tennis (Yates et al., 2012). This was done for each individual participant and then collectively with participants in the same category (e.g., dropout parents). This phase of the data analysis was conducted in three steps to ensure the emergence of categories and meaning units. The first step was meaning unit creation when transcripts were read line by line with raw data about the participant's experience coded as individual meaning units. The second step included inductive analysis to create raw themes that aggregate similar meaning units. This included

cross-theme analysis to determine similar properties to combine raw meaning units or decide whether they should remain separate, known as constant comparison (Patton, 2014).

The second phase of the analysis involved creating lower-order themes with the raw data citations of all participants assembled together. The third phase of the analysis process involved the inductive analysis to place the lower-order categories into higher-order theme. Finally, higher order themes were deductively placed into general-dimensions. These general dimensions were developed deductively based on prior research on youth sport engagement and dropout and within-career transitions and on major questions asked (Harwood, Drew, & Knight, 2010).

In addition to the nomothetic analysis across participants, idiographic case study profiles were created for each dyad. The case study profiles showed the unique experiences of each dyad and allowed for an in-depth understanding of each adolescent's experience transitioning to traditional tennis and the reasons for their decision to continue or dropout of tennis while also including the parent's perspective of the experience and their role in the decision. Therefore, the case study profiles provided a holistic account of the variety of experiences through 10u to traditional tennis. Beyond providing a more holistic profile, they also provided demographic information that can be linked to the experience they had in the sport. The case study profiles were developed based on the hierarchical themes produced during the nomothetic analyses in addition to field notes and observations conducted by the lead researchers.

Methodological Rigor

To increase the methodological rigor of the study, several methods were used including trained researchers, a detailed audit trail, and investigator reflexivity statements.

Investigator Training

The lead researcher has taken graduate level courses in qualitative research and has conducted several qualitative research studies using a variety of qualitative research approaches. Due to this experience, the lead researcher understands the importance of methodological rigor. The research assistant on this study has also taken courses in qualitative research methods and was trained by the lead researcher on coding interview transcripts.

Audit Trail

An audit trail serves as a method to examine the process of the research and the trustworthiness of the results to increase the rigor of the study (Creswell & Miller, 2000). To establish the audit trail, the researcher used journaling and memoing during the study and took field notes during each interview. Additionally, a research log of all activities and data analysis procedures was kept. This helped to ensure that the specific methodological process outlined in the data analysis were used to increase trustworthiness and credibility of the results. The audit trail also helped to ensure that the research aims were reflected in the research methods used (Åkerlind, 2012).

Triangulation and Peer Debriefing

Triangulation refers to finding congruence among different sources of information to ensure validity (Creswell & Miller, 2000). Triangulation was done among the different researchers as both the lead researcher and the research assistant conducted the analysis process separately and then together. Both researchers independently coded participant's transcripts followed by discussions together to come to a consensus on meaning units, categories, and themes at each stage of the data analysis. Additionally, triangulation was also completed as the codes, categories, and higher-order themes were given to an objective researcher trained in

qualitative data analysis along with the interview transcripts and infographic narratives. This objective researcher ensured that categories and theme accurately reflected participants' experiences and perspectives.

Reflexivity Statement

Reflexivity statements serve as a method for researchers to disclose their assumptions, beliefs, and biases that may influence the study. This process allows readers to understand the researchers position and helps the researcher acknowledge and suspend any biases that may arise during the study. To ensure that the leader researcher was aware of any potential biases and her goal for the study, a reflexivity statement was written.

The researcher has a rich background in tennis, playing during youth, collegiately and continuing through adulthood. The researcher has worked as a tennis instructor, teaching the 10u program and has previously coached adolescent tennis players. Additionally, the researcher has been involved in multiple research studies that focused on the 10u program. With these experiences, the researcher believes she has the knowledge to accurately conduct the interviews and understand the terminology of the sport. However, these experiences make the researcher aware that possible biases she may bring into the study such as her own positive beliefs about the value of modified sport and the benefits that sport participation offers. The researcher acknowledges her wish that the 10u program is successful and leads to positive outcomes but understands that all programs and individuals are different. This helped her to critically examine individual's experiences in and after the 10u program.

CHAPTER IV

RESULTS

Participants

The sample for this study consisted of 12 parent-child dyads (12 parents and 12 children) who had participated in a 10u tennis program in the United States and had made the transition to traditional tennis. The child participants ranged in age from 10-13 ($M = 11.5$) and consisted of 7 females and 5 males. The majority of both child and parent participants were Caucasian ($n = 18$), however other ethnicities were present including Asian/Pacific Islander and Hispanic along with two child who were biracial. The parent participants included 8 females and 4 males, with four mother-daughter dyads, three father-daughter dyads, four mother-son dyads, and one father-son dyad. Eight of the twelve parent respondents held a graduate degree with the remaining four parents holding a bachelor's degree. Participant families had relatively high average income with six parents reporting over \$200,000 income while the lowest income reported was between \$70,000-\$79,000. Of the child participants, eight were Caucasian, two were biracial, one was Asian, and one was Hispanic. Of the parent participants, 10 were Caucasian, one was Asian, and one was Hispanic. Eleven of the 12 parents were married, while one was divorced. As for tennis experience, most parents had a variety of tennis experience with five having played recreationally, three who played in high school, one who played college level tennis and two who had no tennis experience. Their spouses had similar experiences in tennis with six having played recreationally, two having played in high school, one having played college level tennis, and two who had no tennis experience.

Participants in this study were categorized into three categories of participation type and were also given categorizations of parent involvement, and transition outcome (see Table 3).

First, participants were divided into three categories: 1) Continued Participation Recreationally (Recreational), 2) Continued Participation Specialized (Specialized), and 3) Dropout. The three categories arose from the data as common themes and demographic information were found through data analysis specific to each type of participation. Participants-dyads were placed into one of the three categories based on the months per year playing tennis and hours per week spent in sport relative to the recommendations that exist on sport specialization. The recommendations include playing no more than eight months per year in one sport and no more hours per week in sport than age of child (Jayanthi, LaBella, Fischer, Pasulka, & Dugas, 2015). Additionally, the amount of competitive tournament play was also used to categorize the continued participants into specialized or recreational participation along with the average cost of tennis participation per month.

In addition to level of participation, each adolescent in the study was categorized by transition outcome similar to Stambulova (2003-2009) who classified transition outcomes as either successful, crisis, or successful – delayed. A successful transition was defined as a transition in which the child had effective coping strategies to overcome the transition challenges they reported. The crisis transition was found when athletes were unable to cope with the challenges they experienced. Last, the successful-delayed transition was found when participants initially could not cope with the challenges but was able to overcome the challenges with parent or coach help. The purpose of this categorization was to provide information on whether the type of outcome was related to continued participation in tennis.

Finally, as parents were also interviewed for this study, level of parent involvement was provided for each parent-child dyad based on parents perceived involvement and their child's perception of their involvement. Three types of parent involvement were found including high

involvement, moderate involvement, or low involvement. The purpose of the categorization was to find whether level of parental involvement was associated with transition outcome.

Results of the nomothetic analysis for each category of participation is presented separately in three parts. First, demographic information for the category of participation will be described. Second, major themes and categories regarding 10u tennis, the transition to traditional tennis, and reasons for continuing or dropping out of tennis will be discussed for each child participant. Third, major themes and categories regarding perception of child’s transition to traditional tennis, parent involvement, and considerations for participation for parents will be shared. For all tables with nomothetic themes and categories, the number of parents within each theme is shown in parentheses.

Table 3. Participant categorization of parent-child dyads

<u>Dyad</u>	<u>Participation Type</u>	<u>Transition</u>	<u>Parent Involvement</u>
1	Continued - Recreationally	Successful	Moderate
2	Continued - Recreationally	Successful – delayed	Low
3	Continued - Recreationally	Successful - delayed	Low
6	Continued - Recreationally	Successful	Low
4	Continued - Specialized	Successful	High
5	Continued - Specialized	Successful	High
7	Continued - Specialized	Successful	Moderate
8	Continued - Specialized	Successful	High
9	Dropout	Crisis	Moderate
10	Dropout	Crisis	Low
11	Dropout	Crisis	Moderate
12	Dropout	Successful	Low

Recreational Participants

Four parent-child dyads were categorized as continuing their child's participation in tennis recreationally. The ages of the child participants ranged from 10-12 years old and this category consisted of two mother-son dyads, one father-daughter dyad, and one mother-daughter dyad. Three of the four children and all parents were Caucasian with one child biracial. All had one younger sibling, with two who were currently playing in 10u tennis. Currently, the children play tennis for majority of the months per year (range 9-12 months) and play 3-4 hours of tennis per week. Only one child was participating in USTA level tournaments and all were participating in Junior Team Tennis. One child was participating in other sports, while another child was starting another sport in the near future. Parents in this category were all married and had at least a bachelor's degree, with three of the participants having earned a graduate level education. Three of the four parents reported a combined yearly income of at least \$200,000, while the last reported an income between \$100,000-\$149,000. All parent participants had either recreational or high school level experience. Parents spent \$241 per month on average for their child's participation in tennis.

The continued recreationally dyads rated their 10u program quality as relatively high with an average rating of 13.75 out of 16. The coach engagement rating was particularly high with short breaks, interaction with kids during breaks, and cooperative play rated as not present by only one participant. As per organization of the 10u program, two parents reported player to coach ratios higher than 8:1 and no apparent written lessons plans. Overall, continued recreationally parents perceived their 10u program as one of relatively high quality.

Child Recreational Participants

Child recreational participants discussed many different topics relevant to their tennis participation. These topics were categorized into three general dimensions: 10u tennis experience, perception of the transition to traditional tennis, and motivation to continue tennis participation. The three general dimensions contained 10 higher-order themes, 26 lower-order themes, 58 subthemes, and 158 raw data citations.

General Dimension 1: 10u program experience. Child recreational participants spoke about two categories of their 10u experience: tennis participation activities and others involved which were coded as two higher-order themes, with 6 lower-order themes and 34 raw data citations (see Table 4).

Table 4. Child recreational 10u program experience

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
10u Tennis Experience	Tennis Participation Activities	Various Types of Progressions	Standard progression (2)
			Started with orange ball (2)
		Mix of Games and Traditional Approach	Both approaches used in class (3)
		Primarily Participated in Junior Team Tennis	Played Junior Team Tennis (JTT) (4)
	Enjoyed JTT (3)		
	Others Involved	Positive and engaging coaches	Coaches were fun and nice (4)
		Varied parent involvement	Don't stay and watch practice/matches (2)
			Stayed and watched practice/matches (2)
		Enjoyed Friends	Had fun with friends (2)
			Made friends (2)

Note. The number in parentheses refers to the number of parents who contributed to each subtheme.

Tennis participation activities. Tennis participation activities were discussed by child participants and consisted of the ball progression they followed in 10u tennis, the type of class activities they experienced in class, and junior team tennis.

Various types of progressions. While 10u tennis consists of progressions including both the use of various ball and court sizes, recreational participants solely spoke of the ball progression they followed. Recreational participants generally followed two types of progressions that depended on the age they began playing 10u tennis. Participants that started at the youngest ages started with the red tennis ball and progressed through the standard progression of orange, green dot, and then yellow. Participants who started 10u tennis later, around 9 years older, started with the orange ball and then progressed through green dot to the yellow ball.

Mix of games and traditional approach. A mix of the games approach and the traditional approach was used by coaches of the recreational players. Participants noted activities involving rallying during classes but also remembered standing in lines where the coach fed the ball to them. Also, additional elements of the games approach were discussed such as playing a game at the end of class. The mix of traditional and games approach was apparent by the following quote “Yeah, sometimes rallying. Um drills where we would maybe sometimes have deep short or a short shot or volleys. And then also sometimes if we had time, we would play a game at the end” (Participant 2). An interesting note from recreational participants was their preference for the traditional format of being fed the ball. Two participants spoke of how hitting the ball from the instructor feed made practicing their shot easier such as Participant 6 who said, “I feel like if they hit me one it's not going to be too hard, unless they challenge us.”

Primarily participated in junior team tennis. Recreationally players did not generally participate in USTA tournaments during their 10u program. Only one participant had ever played a USTA level tournament and had only played one time. They primarily participated in Junior Team Tennis (JTT) and enjoyed their participation in the team tennis format of competition. Participants described JTT as fun experience and liked playing against better people and friends. In JTT they could improve their skills as they practiced the skill they learned from their coach. Overall, participants had a good experience in JTT as illustrated by Participant 2 who stated, “I feel like it's a good experience to have if you're playing tennis at the moment...It's like real, it's playing an actual tennis match and it gives you more experience like in, like to use in tennis class.”

Others involved. Coaches, parents, and peers were all discussed relative to the 10u tennis experience. Participants spoke of their coach’s engaging and positive behaviors, the range in parent involvement and their enjoyment of friends in tennis.

Positive and engaging coaches. Coaches of recreational players in 10u tennis were remembered as positive and engaging. Participants spoke about positive behaviors from the coach such as giving personalized feedback and encouragement as described by Participant 2 who said “She's really nice. She's really nice team player um really encouraging.” Coaches also exhibited engaging behaviors such as being fun, telling jokes, and smiling throughout practice. As one participant noted “They're pretty fun. I mean like uh, they're not strict or anything thing. He actually let us do like jokes of the day” (Participant 1).

Varied parent involvement. During 10u tennis, participants’ parent’s involvement varied. For two participants, their parents stayed and watched both practices and competitions. For the other two participants, their parents mostly dropped them off for tennis class and did not stay and

watch often. However, three participants spoke about playing tennis with their parents at home when they could, and one spoke about his parent providing feedback to him after his team tennis matches.

Enjoyed friends. Participant enjoyed and made friends during their 10u program participation. Friends were a source of fun during this time in tennis, with many participants reporting enjoyment through playing with friends as did Participant 2 who stated, “I was really liking it [tennis] around the time when I had all those friends in that one class.” Additionally, participants spoke of making new friends through tennis after initially not knowing anyone in the class. For example, Participant 6 made new friendships through tennis as she said “Yeah, I actually made new friends. I started off not knowing anyone then I progressed to having more friends. They're really nice. The better I get to know them, they get nice to me too.”

General Dimension 2: Perception of the transition to traditional tennis. Child recreational participants discussed many different topics relevant to their transition to traditional tennis that were coded as the perception of the transition to traditional tennis. Analysis of the perception of transition to traditional tennis identified six higher-order themes: differences from 10u tennis to traditional tennis, challenges, strategies to cope with challenges, positive aspects, sources of support, and skill level changes. These six higher-order themes contained fourteen lower-order themes, 35 subthemes, and 101 raw data citations (See Table 5).

Table 5. Child recreational perception of the transition to traditional tennis

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
	Differences from 10u to traditional tennis	Learning new skills and technique	Working on new skills (2)
			Focus on ground strokes (1)
		Increased focus on competition in practice	Play practice matches in groups (2)
			More focus on match play (1)

Table 5 (cont'd)

Perception of Transition to Traditional Tennis		Higher level of play	All players play well (3) Better competition (2)
	Challenges of transitioning to traditional tennis	Difficulty hitting with yellow ball	Yellow ball bounces higher and faster (2)
			Difficulty controlling yellow ball (1)
			Hard to hit yellow ball (3)
			Need time to adapt to yellow ball (1)
		Changes with friends	Friends no longer in classes (2)
			Friends transitioned before (1)
			Had to leave friends when transitioned (2)
		Losing in competitions to high level players	Losing in competitions to higher skilled players (2)
			Frustrated from losing (2)
			Playing older, better athletes in competitions (1)
	Strategies used to cope with challenges of transition	External resources	Listen and use help from coach (2)
			Work with yellow balls before transition (1)
		Internal resources	Adapt strategy to play with yellow ball (2)
			Focus on other things after loss (2)
			Be positive (2)
	Positive aspects of Transition	Competition	Enjoys junior team tennis (3)
			Like competition (2)
			Competing against better players (2)
		The perception of reaching yellow ball level	Benefits of playing with yellow ball (3)
			Yellow ball as better (3)
	Sources of support through transition	Parents	Tennis specific support (3)
			Emotional support (2)
		Coach	Help develop skills for yellow ball (3)
			Emotional support (2)
	Skill level changes during transition	Initial struggle followed by improvement	Difficult adapting to yellow ball led to skill decrease (3)
Improved with time (3)			
Various ways of evaluating of skill level		Coach feedback (1)	
		Ability to hit with yellow ball (1)	
		Comparison with peers (1)	

Differences from 10u to traditional tennis. Recreational child participants perceived three types of differences from 10u tennis to traditional tennis. These three differences were coded into the higher-order themes of learning new skills and technique, increased focus on competition in practices and a higher level of play.

Learning new skills and technique. Recreational participants noticed that once in traditional tennis, they were learning new skills and techniques that were different from 10u tennis. They noticed that the technique they were learning was more advanced and they were learning skills that would help them with play and adapt to the new bounce and speed of the yellow ball. Coaches were also teaching more advanced technique during practices as discussed by one participant who said, “They focus on like, they actually focus on like technique and more advanced things” (Participant 1). Last, one participant noted that conditioning elements were introduced into her traditional tennis classes such as running back and forth to the net, rather than the warmup games that were played in 10u tennis.

Increased focus on competition in practice. Once transitioned to traditional tennis, recreational players noticed an increase in the amount of competition in practices. The number of practice matches increased and there was less emphasis on skill learning than in 10u tennis as described by Participant 3 who stated, “Um well we play more like, we don't focus so much on skill, it's more of just matches and like tips to improve not like, this is how to hit a forehand.” This focus on competition and matches in practice was perceived as a way to help them prepare for their team tennis matches and also for their future participation in high school tennis. This preparation was illustrated by Participant 6 who said, “We're doing lots of like practice matches, so once we go to our tournaments, we're more prepared for them.”

Higher level of play. In traditional tennis, participants felt that in classes there was a higher level of tennis in their classes. While in 10u tennis, the level of play varied in groups with some players worse and some players better than participants. However, once in traditional tennis, participants noticed an overall increase in the level of play in their practice classes. Participant 1 discussed the increase in play by stating “Um, people would like play really bad at some other levels. But in this level [traditional tennis], people play fairly well.”

Challenges of transitioning to traditional tennis. Challenges experienced through the transition to traditional by recreational participants were coded into three higher-order themes: Difficulty hitting the yellow ball, changes with friends, and losing in competitions to high level players. Players most often cited the difficulty of hitting the yellow tennis ball, followed by changes with friends through the transition and last, losing in competitions.

Difficulty hitting with yellow ball. Participants found hitting the yellow ball difficult due to the higher and faster bounce than green dot balls in 10u tennis. This was evident for all participants and was clear from Participant 6 who said, “Like when I first played with them I thought like they bounced way higher and they were way more like faster and stuff” and Participant 2 who said “Well the balls different so it bounces higher. Um, it's harder to hit.” Participants felt that because the yellow ball bounced higher, it made it more difficult to control as compared to the 10u tennis balls. The yellow ball also bounced and travelled faster giving them less time to respond to hit the ball successfully. Participants struggled to adapt to the new yellow ball once in traditional tennis which was illustrated by Participant 3 who said “[The yellow ball] Kind of weird, I was not used to hitting like hard balls. When somebody would hit a really deep ball then it's harder to hit.”

Changes with friends. This theme consisted of the challenge around changing friendships when participants transitioned from 10u to traditional tennis. This transition often included change to a new practice class that happened at different times for all 10u players. This meant participants sometimes had to leave their friends in 10u classes or their friends left them in 10u tennis when they transitioned to traditional tennis. This happened to Participant 6 as she stated, “When I moved up to yellow ball I didn't really have as many friends because all of my friends were either in green still or still in orange.” While some participants left friends behind, others had friends who transitioned before them. This was cited as a challenge as they were then left without friends in their classes which, as discussed previously, was a source of enjoyment for participants. Participant 2 discussed this challenge as he said

Well, challenging and hard things was not being in the same class with my friends in, yeah. I had, kind of, at the same time like with the first group of friends, they left up. I didn't like it, um that's probably another reason I don't like the Monday classes much, and it's just hard um, to have to go through.

Losing in competitions to high level players. Recreational participants faced the challenge of playing competitions against other players of higher-level skills. This often resulted in a loss that was associated with frustration from participants. For some participants, the frustration of losing was a memorable event as they spoke about exact matches when they lost to a higher skilled player. For example, Participant 1 discussed one match in particular in which he was beaten by a player above his skill level,

There's like, there's literally guys that were like descendants of like a like top doubles players that were like literally, they like won the Australian open. So literally this kid, he

just like, he just crushed me and he won the whole tournament, he even won against his older brother.

Players were often frustrated when they encountered another player in competition who beat them such as Participant 3 who stated, “Um obviously if the people are better than me. Um that I don't know how to, like you do something bad and like scores super bad, I might get like flustered and then start going downhill even more.” For recreational participants, this challenge of playing higher level opponents in competitions served as a barrier to participating in USTA tournaments. When asked if they would be interested in playing USTA tournaments, participants were open to competing but only if opponents were of similar skill and age as evident from the following quote, “Based on how good they are. If they are like high schoolers and stuff, then I probably wouldn't want to play against them. But if they are like my age, then probably” (Participant 6)

Strategies used to cope with challenges of transition. Two major strategies were discussed by participants to help them cope with the challenges they faced with their transition to traditional tennis. These two strategies were coding as either using external or internal resources.

External resources. Recreational participants discussed two external resources they used as strategies to cope with the challenges that arose from the transition to traditional tennis. First, participants listened to their coach and use them as a resource to help them learn how to hit the yellow ball successfully. For example, Participant 6 discussed,

My coach helped me more understand how the ball was going to bounce and how it's going to come at me and stuff. So, they told me to back up and sort of get ready for how fast the ball was going to come.

The second strategy consisted of playing with the yellow ball with parents before transitioning in group practices and competitions. Playing with the yellow ball helped to prepare for the new bounce and the difficulty associated with hitting it. Such as for participant one who stated

I play with my parents like off court, like I played with my parents and so they didn't have like the orange balls and like the green balls, and stuff like that. So, I just played with normal balls, that made me pretty ready. (Participant 1)

Internal resources. Participants discussed adapting their strategy to play better with the yellow ball. This strategy entailed moving their feet more, hitting harder, and gripping the racket tightly. Recreational participants also talked about emotional strategies they used to help cope with losing a match. Emotional strategies used by participants included focusing on things outside of tennis and being positive. After tough losses, participants described trying to focus their attention on other things unrelated to tennis. Participant 1 referred to this strategy when he said, “That kind of experience [getting crushed at tournament], I just kinda had to shake it off. I just went home, turned on my x-box, played with my friend.” By diverting their attention, players were able to overcome losses quickly. Remaining positive was another strategy used, in which participants focused on positive aspects of their match or performance. For example, Participant 2 spoke about overcoming the challenge of his friends leaving his tennis class as he said, “You can get through it. You just have to think about it, at least they're not dead [laughter].”

Positive aspects of transition. Recreational participants discussed two positive aspects of transitioning to traditional tennis. Positive aspects included competition and the perception of reaching the yellow ball level.

Competition. Participants enjoyed competition in both practices and JTT matches. Although a challenge for them was competing against more skilled opponents, they still enjoyed the competitive aspect of their tennis participation. Many participants wanted to be more competitive and do more JTT matches such as Participant 6 who said she enjoyed, “Getting to practice for when I am in high school and stuff, like getting more, not like bad competitive but like more competitive and wanting to do matches and stuff.” Another aspect of competition that participants enjoyed was figuring out strategy and learning how to play while competing against better opponents. This was evident by participant 3 who said that she like competition because, “I’m playing better people and um that I can understand how to play singles and doubles, like the rules and all that. Like I know them but there's stuff I don't know.”

The perception of reaching the yellow ball. Playing with the yellow ball was perceived as an exciting move for recreational participants. Recreational participants perceived the yellow ball as being the ‘better’ ball as compared to the 10u tennis balls. As participant 3 stated “It felt more professional if you're using the real yellow balls” and participant six stated “We were really excited because like that's what all the cool kids used and then we got to use even cooler balls.” There was a perception, for recreational players, that the yellow ball as the better ball to use and made them feel more professional or legitimate tennis players. There were also some perceived benefits of playing with the yellow ball such as being able to hit harder which made certain shots more effective. This was true for Participant 2 who felt he had a better forehand with the yellow ball,

I think it's a lot better, the forehand with yellow ball. I think it's a better shot. Meaning like if you're really going to try and win the point with either an orange ball forehand or yellow ball forehand, yellow ball forehand will be good.

Participants also saw the benefit of playing with family with the yellow ball, as their parents were more comfortable hitting the yellow ball as Participant 6 discussed,

With the yellow ball I knew I could, so my dad's like, he's an adult so he uses like yellow balls and it was easier for him to hit those instead of like the tiny like orange and green balls. So, I think it was easier to play with my dad and stuff.

Sources of support through transition. Recreational participants found support through the transition to traditional yellow ball from parents and coaches who offered both tennis specific support and emotional support.

Parents. Recreational participants felt their parents provided support for their tennis participation with both tennis-specific support and emotional support. Playing tennis together with their children served as the primary mode of support that children felt. Practicing with their parents outside of tennis classes helped them with their transition as it prepared them to hit with the yellow ball in practice and competition. This was clear for Participant 2 who stated, "I think in the summer, we [he and his parents] practiced a lot of green ball so I could move up." Parents also were cited as supportive by booking private lessons and also providing feedback after matches. Emotional support was also provided from their parents through encouragement and reassurance such as for Participant 7 who said, "Before like each match they'll give me like encouragement, like the competitive matches." Encouragement was also given after tough matches as participants spoke about their parents helping the feel better after a loss.

Coaches. Coaches offered support to the players in two ways. First, coaches assisted with tennis skills for the yellow tennis ball. Coaches helped players to understand the different bounce of the yellow ball which helped the player adapt to the faster and higher bounce. For example, Participant 6 discussed the help her coach offered,

They helped me more understand how the ball was going to bounce and how it's going to come at me and stuff. So they told me to back up and sort of get ready for how fast the ball was going to come.

They also helped work on skills that were needed to play successfully with the yellow ball and provided feedback for players. Besides tennis specific support, coaches also provided emotional support to participants through encouragement and finding the balance between support and challenge. Participants discussed how coaches were encouraging and nice and didn't push them more than the participants were comfortable.

Skill level changes during transition. Two higher-order themes were found for the category of skill level changes during the transition to traditional sport. The higher-order themes included an initial struggle followed by improvement and various methods for evaluating skills.

Initial struggle followed by improvement. The transition to traditional tennis was associated with an initial struggle to perform skills. This initial struggle came from the difficulty participants had to adapt to the higher and faster bounce of the yellow tennis ball. When asked to rate their skill level on a 1-10 scale, participants rated their skill level as lower in traditional tennis than as compared to their skill level in 10u tennis. However, all participants discussed how their skill level has improved over time in traditional tennis. The players felt that the more they played with the yellow ball, the better they became in the sport. This was the case for Participant 6 who stated, "It's pretty easier, the more I get used to them, the more better I can get."

Various ways of evaluating skill level. Recreational participants based their skill level on many factors that included coach feedback, the ease of hitting with the yellow ball, and comparisons to peers in their classes and competitions. First, coach feedback on participants' performance informed them how they were improving in the sport. Participants felt that when

coaches told them they had improved, that this was a sign of their skill level increase.

Participants also noticed that the yellow balls were becoming easier to hit overtime as Participant 2 said,

I think I improved um cause I feel like I improved because you have a ball has seemed to be easier from doing all that stuff, um practicing with those I think it's a good way to go step-by-step concerning of yellow ball might take a long time to get used to.

Last, participants also used peer comparison as a means of evaluating their skill level. For example, Participant 1 compared himself with those around him rather than his own skill level in the past when he said, “Usually I compare it [skill level] to the people around me. Because it's better to focus on the present than the past.”

General Dimension 3: Motivation to continue participation. Recreational participants discussed reasons for continuing their participation in tennis and also their goals for participation. As can be seen in Table 6 this general dimension was coded into two higher-order themes, six lower-order themes, and 13 subthemes with 50 raw data citations.

Table 6. Child recreational motivation to continue participation

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Motivation to Continue Participation	Reasons for continuing participation	Enjoys tennis	Likes sport of tennis (3)
			Has fun in tennis (3)
		Likes characteristics specific to tennis	Individual aspect of participation (2)
			Tennis: quiet non-dangerous sport (1)
			Lifelong participation (1)
		Relationships with others	Friends in classes (3)
	Likes the coach (3)		
	Playing tennis together as family (2)		
	Perceived competence in sport	Improved skills (2)	
		Good at tennis (1)	
	Goals	Outcome goals	Playing in High School (4)
		Task goals	Improve skills and play better (3)
			Benefits of sport participation (1)

Reasons for continuing participation. Participants discussed several factors that motivated them to continue their tennis participation. These factors were coded into four higher-order themes of enjoyment of tennis, characteristics specific to tennis, relationships with others, and perceived competence.

Enjoys tennis. Specialized participants discussed their enjoyment of tennis as a reason for continuing their participation. This enjoyment came from liking the sport and also having fun playing the sport. Participants liked the sport itself such as Participant 2 who said,

I like the sport a lot. I think it's a great sport and I just want to keep going with it. I just, I just like the sport...I like the rules of it and how it's played. Like how it's played, double bounces, and it's just something that makes the game more fair. Um different shots um can change the momentum of the game.

Participants enjoyment and fun when playing functioned as a factor that motivated them to continue their participation in tennis. This was the case for Participant 1 who stated, "I guess the thrill of it. Like um, sometimes just, like you know playing's pretty fun. I guess that's what I love about it, it's fun."

Likes characteristics specific to tennis. Beyond liking and enjoying tennis, participants also discussed characteristics of tennis that they cited as reasons for continued motivation. These characteristics included the individual aspect of the sport, the quiet environment and low danger of tennis, and the potential for lifelong participation. First, participants spoke about how they enjoyed the individual aspect of tennis and not having to rely on a team for participation. For example, Participant 2 spoke about how he preferred singles over doubles while Participant 3 spoke about the benefits of a solitary sport such as knowing exactly when she does something right. Second, participants liked that the sport was low-key in that there were not loud cheering

fans and low danger in getting hit with the ball. Last, participants spoke about the ability to play the sport through their life, as Participant 6 expressed, “My dad said that it's a lifelong sport and like I could play it in high school, college if I wanted to. So it's just like a good sport to know how to play.”

Relationships with others. Relationships with friends, the coach, and the ability to play tennis with parents served as sources of motivation for recreational players. Playing with friends and having friends served as a reason for why participants wanted to continue their participation. This motivating factor was evident from the following quote, “I wanted to stick with my friends and uh you know it's pretty fun so you don't really just quit something that's fun” (Participant 2). Their relationship with their coach was also a reason why players continued their participation in tennis. Participants had a strong relationship with their coach which was attributed as a source of motivation to continue playing as it did for participant two who stated, “I wasn't like, I think the reason that I stayed and wanted to do tennis more is because she became my coach.”

Additionally, coaches expressed interest in the players staying in the sport and helped them through the process of transitioning to traditional tennis. For example, Participant 6 said, “My coaches really wanted me to stay and so like they would help me through the process of moving up.” Being able to play with family with another reason for continuing participation. The participants spoke of their family playing tennis together as did Participant 1 who stated, “The rest of my family, my household started playing tennis too again I guess...when we can all, when we can get like my dad and everybody.”

Perceived competence. Recreational participants spoke of their perceived competence in tennis as a source of motivation to continue. Perceived competence included improving skills and being good at the sport. Participants spoke about how they had improved their skills through

the transition to traditional tennis. This point was illustrated by Participant 3 who discussed clearly seeing how he had improved in the sport and how that made him want to continue playing. Participants also spoke about being good at the sport as a source of motivation as did Participant 2 who said, “Yeah pretty good, not like one of those people whose gonna smoke a shot personally, but pretty, kinda, I'm not like super good, but I mean I can still do good at tennis.”

Goals for tennis participation. Participants discussed two types of goals for their tennis participation: outcome goals and task goals. While outcome goals were mentioned, most emphasis was put on task-related tennis goals for recreational participants.

Outcome goals. Only one type of outcome goals was discussed for recreational players. This goal consisted of playing on a high school tennis team in the future. All four participants spoke about their goal to make the high school tennis team. For example, Participant 3 stated, “I want to try and get on like a varsity team when, sometime, high school.” While all other participants also wished to play high school, two participants mentioned that they have no current aspirations to play professional tennis. This was discussed by Participant 1 who said, “But definitely not just to get in like professionals. Because my coach said you just like have to have a gift to get it on TV.”

Task goals. Two main types of task goals were associated with recreational participants. First, participants wished to improve their skills and become better tennis players. Participants spoke about trying to improve skills such as consistency and volleys and also spoke of wanting to play better tennis and more intense matches. The second type of goal focused on benefits that tennis participation offers to health and social lives. For example, Participant 1 spoke about how

he played tennis for the fitness but also to continue having the social life that he has gained through tennis participation.

Parent Recreational Participants

Parent recreational participants shared a variety of perspectives and experiences associated with their child’s 10u tennis participation. This information was categorized into three general dimensions: perception of child’s participation, parent involvement, and considerations for child’s participation. These three general dimensions contained six higher-order themes, 18 lower-order themes, 45 subthemes, and 124 raw data citations (See Table 7).

General Dimension 1: Perception of child’s participation. Parents shared information related to their perceptions of their child’s experience in tennis. Two higher-order themes are associated with this general dimension: perception of child’s transition to traditional tennis and perception of child’s motivation to continue. Four lower-order themes were coded into the higher order themes with 11 subthemes and 33 raw data citations.

Table 7. Parent recreational perceptions of child’s transition

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Perception of Child's Participation	Perception of child's transition to traditional tennis	Skill improvement	Prepared for yellow ball (2)
			Improved skills (3)
		Difficult aspects of transition	Friends dynamic changed (1)
			Playing higher levels of opponents (2)
			Difficulty with yellow ball (2)
	Perceptions of child's motivation to continue tennis	Skill improvement	Youngest in class (2)
			Has skills to play tennis successfully (2)
			Improved skills (3)
		Others involved	Proud of hard work (3)
			Loves the coach (4)
		Like playing with friends (3)	

Perception of child's transition to traditional tennis. Parent's perceptions of their child's transition to yellow ball was coded into two higher-order themes of skill improvement and difficult aspects of transition.

Skill improvement. All parents spoke about the improvement they saw in their child's skill level through the transition to traditional tennis. Not only did their child improve but they also became more comfortable playing at the traditional level as evident by one parent who stated, "He's getting used to it you know and I can see he's having more fun now as he's getting better" (Parent 2). Parents also felt that their child was proud of playing with the yellow ball and the hard work they were expending at the traditional level. Further, parents felt that their child was prepared for the transition from 10u tennis to traditional tennis which made it progress smoothly. This point was illustrated when one parent was asked whether they thought their child was ready for traditional tennis and responded, "I think so. She was just hitting the ball really well, didn't seem to have too many problems" (Parent 6).

Difficult aspects of transition. While parents did feel that their child improved through the transition, parents felt that there were factors associated with the transition to traditional tennis that were difficult for their child. Difficult factors included playing high level of opponents at competitions, playing with the yellow ball, the change in friend dynamics, and being the youngest in their class. Parents perceived that it difficult for their child when they had to play opponents with a higher skill level in competitions. One parent spoke about how their child has yet to win a match in JTT,

So I think she's enjoying her yellow ball but the kids she's with are really good. Just like she hasn't won to singles match yet and I'm hoping you know, I'll be so proud of her. I

think eventually she'll get one right but um, she's probably one of the worst ones on her tennis team. (Parent 3)

Another challenge associated with the transition to traditional tennis was adapting to the yellow ball. Parents observed their child being surprised at the new bounce and struggle with the endurance needed to keep up with the faster play. Through the transition to traditional tennis, parents also observed a difficulty when their child's friendships changed when some players moved up to traditional tennis classes while others stayed in their current 10u classes. This was a challenge because many of the children like playing with friends and enjoyed the social aspect of tennis. Finally, parents reported that their children were playing against older children in traditional tennis and were often the youngest in their classes. For example, one parent shared, "I mean it's harder, it's definitely harder now that it's just... the group, the group of kids that are in the yellow ball, being that he's low man on the totem pole age wise, it's harder for him" (Parent 2).

Perceptions of child's motivation to continue tennis. Parents discussed two main reasons why they believed their child decided to continue their participation in tennis. These two reasons were their improvement and the role of others involved in their tennis participation.

Skill improvement. The child's perceived improvement in tennis was cited as a reason for their motivation to continue in tennis as observed by parents. Parents felt that they had developed the knowledge and skill to play tennis successfully. With this improvement, parents felt that their child was enjoying tennis which also led to their desire to continue participation. In addition enjoyment and improvement, they also sensed that their child was proud of the hard work they had put in to improve their tennis skills as evident by the following quote, "I think she's proud of

how, you know, she's got a lot, a lot better and uh she should be proud of her hard work but I think she enjoys it and she enjoys getting better” (Parent 3).

Enjoyment from being with others. Recreational parents also perceived that the social aspect of tennis motivated them to continue participation. First, parents cited the love of the coach as a reason for their child to continue. All four parents spoke about how their child loves and enjoys working with their coach. Second, parents thought their child enjoyed playing with their friends at tennis and look forward to playing tennis because they had made friends in their new traditional level classes. This point was illustrated by Parent 2 who said, “That's [having friends] fun I think for them because then they feel like they're like having fun with their friends not just working on tennis.”

General Dimension 2: Parent involvement. Parent’s spoke of their involvement in their child’s tennis participation and through data analysis resulted in two higher-order themes of parent role and parent goals. Five lower-order themes were coded with 13 sub-themes and 34 raw data citations (see Table 8).

Table 8. Parent recreational involvement

General Dimension	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Parent Involvement in Child’s Tennis Participation	Parent role in child’s tennis participation	Emotional support	Encouragement (3)
			Motivate (2)
		Active involvement	Play tennis with child (2)
			JTT captain (2)
			Talk with coach (1)
			Watch matches (2)
		Resources	Logistical support (2)
			Financial support (2)
		Parent goals for child in tennis	Gain benefits of sport participation
	Have social network in sport (2)		
	Physical/health benefits (2)		
	Play together as family (2)		
	Play on high school tennis team		Play at high school level (2)

Parent role in child's tennis participation. Recreational parents spoke about their role in their child's tennis participation with three major themes which included providing emotional support, having an active parent role, and providing the resources for their participation.

Emotional support. Parents provided support to their children through encouragement and motivation. Parents encouraged their child's participation as an important role by applauding their improvement and being excited about their matches. One parent spoke about how he keeps track of good things in the match so he can point them out to her afterward,

I try to like keep track of good thing, so even, like she's, like I said, she's never won to singles match yet right but I'll try to, I'll try to keep track of you know in my mind say, wow it, it was great when you hit that shot against this or that and that I know how to tell her boy had a such a fun time watching you. (Parent 3)

Parents also saw their role as a motivator for their child by keeping motivated to compete and also trying to keep their focus on the process rather than the outcome. This was especially helpful as their child were playing opponents with a high skill level during competitions and were frustrated when they lost.

Active parent involvement. To support their child, parents took an active role in their participation through a range of activities. Many parents discussed how they spent time outside the club playing together with their child to help them practice their skill, especially with the yellow tennis ball. Parents also reported serving as the captain of their child's JTT team and also working with coaches to give feedback on their child's performance at competitions. Last, some parents perceived themselves as an active parent by watching their child's matches and practices while other parents preferred to not watch because of the pressure it might cause for their child.

Resources. Beyond emotional support, parents also provided the resources necessary for their child to participate in tennis through navigating the logistics of tournaments, driving them to practices, and financially supporting their participation. For example, when asked what her role of was in their child's tennis one parent stated, "What role do I see myself having? Um, well let's see, that's funny. Uh, driver" (Parent 2). While other parents cited being the financial supporter of the tennis participation by paying for their practices and private lessons and one parent spoke of her role of navigating the logistics of practices and competitions.

Parent goals for child in tennis. Two themes were found for recreational parent's goals for their child's participation in tennis: Gain benefits of sport participation and play at the high school level. Most citations were primarily coded into the benefits theme with the most emphasis put on task-related goals rather than outcome goals.

Gain benefits of sport participation. Parents of recreational player's spoke primarily of goals for their child based on the benefits that can be gained through participation in tennis. These goals included lifetime participation, constructive social network, physically active through tennis, and playing together as a family. A common theme for parents was the opportunity for lifetime participation in tennis. This served as a reason for starting their child in tennis and also as a goal as parents wished that their child be able to play and stay participating in tennis as they age. Parents also wished for their child to develop a social network around their sport participation and use tennis as a social bridge. Using tennis as a vehicle for physical activity was a third goal for parents as they wished their children to stay active and healthy. Last, parents hoped that their child continue in tennis so they can continue to play together as a family. All these goals were summed together well by one parent who stated, "Hopefully he'll play high

school and it will be a social bridge for him in high school. But, that's about it, physical activity and something we can play together as a family” (Parent 1).

Play on high school tennis team. While the primary goals of parents centered on the benefits of participation, parents also hoped for their child to play on a high school team. For example, one parent stated, “I would say just hoping that she could play high school, hoping that she could play long-term” (Parent 6). They wanted their children to keep improving and playing tennis so when they reached high school they could become part of a team as Participant 3 explained “You know hopefully she'll make the high school tennis team and she'll have a group of friends, a group of constructive friends in school.”

General Dimension 3: Parent’s considerations for child’s participation. As a recreational parent, there were factors that influenced whether the child could and should continue participation in tennis. These factors were coded into two higher-order themes of factors considered for continued participation and parent challenges of child’s participation in tennis. As seen in Table 9 there were eight lower-order themes found through data analysis with 19 subthemes and 57 raw data citations.

Table 9. Parent recreational considerations for participation

General Dimension	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Parent Considerations for Child's Participation	Factors considered for participation	Relationship with coach	Positive coach characteristics (2)
			Good relationship (2)
			Likes coach (3)
		Skill level/improvement	Improvement (1)
			Competence (2)
			Potential in sport (2)
		Parent rule for sport participation	Parent rule child has to play a sport (2)
		Potential benefits of participation	Life-long participation (2)
			Physical health benefits (2)
			Social benefits (2)

Table 9 (cont'd)

Parent Considerations for Child's Participation		Child characteristics	Sport Matches Personality (2)
			Child has fun (1)
		Cost/finances	Has financial resources (3)
			Worth Cost (1)
	Parent challenges in tennis participation	Confusion/difficulty with competitive structure	Unsure which tournaments to play (2)
			Confusion on tournament structure (3)
		Lack of information and help with tournaments	No parent education on tournament structure (3)
			No one listening to parent concerns (1)

Factors considered for participation. Six high-order themes were found for recreational parents on the factors they considered for their child’s participation in tennis. The six higher-order themes included the coach relationship, skill level/improvement, parent sport participation rule, potential benefits of participation, child characteristics, and cost/finances.

Relationship with coach. The tennis coach had a role in the decision to keep the child participating in tennis. For recreational parents, they decided to keep their child in tennis because of the coach’s positive coaching characteristics such as encouragement and attention which they valued as parents. Participants also spoke about how both the parent and child had a strong relationship with the coach. This relationship helps the coach understand each child to work the most effectively with them. This was evident for Participant 1 who said, “They know him so well now cause they played five years with him. They know what pushes his buttons, they know how to get him to respond. Yeah, they know us, they know the family, it's just the rapport.” This strong relationship between the coach, parents, and child served as an important factor when considering continued participation.

Skill level/improvement. Parents discussed the role of their child’s skill level in the decision to continue participation. This theme consisted of the amount of improvement parents

saw in their child's tennis skills but also the potential to go further in the sport. Parents spoke about the amount and speed of improvement as a reason to keep them involved, especially the fast improvement in skill level as evident by the quote,

She did better and then this fall she went right into adult, yellow, and um really took off, like she's gotten, I probably, I mean she's not terrible, I said she's not great at tennis but she's not terrible either, she's grown a lot here. (Parent 3)

The child's competency in tennis was also noted as a factor, not just with strokes and skills but also with their knowledge in the sport. Last, parents spoke about their child's potential to go further in the sport and continue their participation in high school and then recreationally throughout life as a factor that was considered.

Parent rule for sport participation. Recreational parents had a family rule that their child has to play at least one sport. This rule served to ensure their child was physically active. For some parents, they did not give their child the choice to discontinue their sport participation such as participant one who said,

He didn't have a choice. He has to play a sport. And it's just more that you're not allowed to sit at home every night after school. Like you have to go physically do something.

Yeah you can't sit at home and game every night, yeah that's what the rule is. (Parent 1)

For other parents, they did not care which sport their child chose to play but just wanted them physically active and participating in sport. This was true for Parent 3 who stated, "I'd say my number one factor, like I mentioned, I just want her playing a sport right. Yeah, I don't, she could be, she could swim, I don't care what it is like she just has to do something."

Potential benefits of sport participation. Playing tennis offered a variety of benefits to their children through participation. Benefits included lifelong participation, health benefits and

social benefits and served as a reason to keep their child involved in tennis. Recreational parents cited potential lifelong participation in tennis as reason for continuing their child in tennis as they would be able to play in long-term and into adulthood. They also considered the health benefits that came from physical activity in the sport. Tennis offered a platform for their children to stay physically active making them healthier individuals. Last, parents considered the social benefits of tennis participation such as having friends in the sport and having a social bridge through tennis. This benefit was evident with Parent 3 who stated, “She'll have a, if she, someday when she's on a team she' have like automatic friends that are all doing constructive things with their time versus destructive.” For parents, tennis served as a method for their child to have friends that were also engaging in positive, constructive activities.

Child characteristics. Recreational participants discussed two factors specific to their child that they considered. The two factors included the child’s personality and the child’s enjoyment in sport. Two parents spoke about how tennis matches their child’s personality traits. Parents noted that their children preferred individual sports and struggled with team sports. For example, Parent 1 described her son as, “I think he had, he struggled with the team concept, the large team concept. Because he got frustrated with his teammates and would blame them for things. So I think that tennis allows him some, more um autonomy.” Only one parent spoke about whether their child was enjoying his participation in tennis. This parent stated, “Whether or not he was having fun. Whether or not he truly liked it. I think he likes playing with his friends and I think he just like the general competition of it all” (Parent 2).

Cost/finances. All parents recognized that tennis participation was associated with a high financial cost. Parents reported spending \$100-\$260 per month and between \$1000-\$1400 per every 14-week sessions. Although parents recognized the high cost of participation, they

discussed having the financial resources for participation and did not perceive cost as a barrier. This point was illustrated by Parent 2 who stated, “But that [cost] is, that's a big, that is a big thing. Fortunately, we, it's not that big of a thing to where we wouldn't still do it.” Furthermore, parents felt that their child’s participation in tennis was worth the cost as their child was improving in the sport. This was evident by the following quote, “We saw so much improvement within a short amount of time that it was encouraging to us, we're like well it's worth the cost if she's really improving and getting better” (Parent 3).

Parent challenges in tennis participation. Three types of challenges were discussed by recreational parents for their child’s participation in tennis. The three types were coded as higher-order themes and included confusion/difficulty with competitive structure, lack of information and help with tournaments, and difficulty for child playing at traditional level.

Confusion/difficulty with competitive structure. Parents felt a challenging factor of their participation in tennis came from of their lack of understanding and difficulty navigating the tournament structure. For recreational participants, their confusion with the competitive structure was a barrier to entering their child into USTA tournaments. Parents felt unsure of which tournaments they should sign their child up for as they were worried about their child losing to a player of much higher skill level. For example, Parent 6 stated,

If it were just like regular, average tournaments I might put her in one but I can't identify those from the ones that she'll get smoked out and I don't want her to hate tennis right if she goes up against, gets demolished, you know without winning a point 6-0.

Parent also had difficulty understanding the tournament structure with the different types of tournaments available and lacked the knowledge of how a tournament functions once there. For example, one parent spoke about not signing her daughter up for tournaments because she did

not understand how they work, “That always confuses me, cause she is a USTA member but I don't know what counts when she plays matches. I thought it was maybe tied, I, I'm not really sure how that all works really” (Parent 6),

Lack of information and help with tournaments. Lack of parent education on the tournament structure and lack of help for parents were also challenges. Parents reported little parent education conducted by their tennis club and coaches about tournaments. They felt that there was no education on how enter their child in a tournament and which tournaments their child should be playing. Parents also spoke about rule changes that were made without notifying parents such as Parent 1 who stated, “Like I think something just changed in January because it's different than when we did something this summer and I'm like well that's new, that must have been a new rule as of January. But no one said anything.” The USTA website used to sign up for tournaments was also perceived as unhelpful and confusing for parents to navigate as one parent said “Like I wouldn't know, you know there's a web, I think the USTA website stinks. There's a main website and then there's a tennis link website. You get a list of things, there's acronyms you don't know.”

Specialized Participants

Four parent-child dyads were categorized as continued specialized participation. The ages of the child participants ranged from 10-12 years old. There were two mother-daughter dyads, one father-son dyad, and one mother-son dyad. Two children and two parents were Caucasian, one parent-child dyad was Asian/Pacific Islander, and one dyad were both Hispanic. Although two dyads were Caucasian, it is important to note that both dyad parents were from European countries and moved to the United States after have their child. Two children had no siblings and two had only older siblings. Currently, specialized participants play almost all year round with

three playing 12 months per year and one playing 11 months per year and play 6-10 hours of tennis per week. All are currently participating in USTA tournaments and only two play Junior Team Tennis. All parents also reported that their child watches professional tennis. Two of the four children are participating in other sports, however through the qualitative interviews it was found that they play once or less per week and purely for recreational reasons to assist in their tennis participation. Parents in this category were all married had at least a bachelor's degree with three of the four parents having a graduate level education. Two of the four parents reported an average combined income of over \$200,000, while one reported an income between \$100,000-\$149,000. The fourth parent's combined income was between \$70,000-\$79,000 but it is important to note that this parent was a tennis instructor and therefore the cost for the child's participation was markedly lower than all other participants in the study. Two parents had recreationally experience in tennis, one parent play college level tennis, and one had no experience in tennis. Parents reported spending \$1,067 on average per month for their child's tennis participation.

The specialized participants reported their 10u program quality as the lowest among the three categorizations. According to parent's coaches did not interact with players during breaks, lecturing for more than one-minute, did not have positive body language, and had no apparent written lesson plans. As will be shown from the qualitative interviews this may be due to the quick progression that specialized players had through the 10u program.

Child Specialized Participants

Child specialized participants shared many different elements of their tennis participation. These topics were categorized into three general dimensions: 10u tennis experience, perception of the transition to traditional tennis, and motivation to continue tennis

participation. With data analysis, there were 10 higher-order themes, 29 lower-order themes and 278 raw data citations.

General Dimension 1: 10u tennis experience. Child specialized participants discussed two main topics of their 10u experience: tennis participation activities and others involved which were coded as two higher-order themes, with 6 lower-order themes, 15 sub-themes, and 85 raw data citations (See Table 10).

Table 10. Child specialized 10u program experience

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
10u Tennis Experience	Tennis participation activities	Quick progression	Little time spent in each ball type (3)
			Quick transition to traditional ball (2)
		Games approach in classes	Coach started rallies (2)
			Rallied (2)
			Played games in classes (3)
			Practice matches (1)
		Emphasis on tournaments	Focused on outcomes of tournaments (3)
			Played section level tournaments (2)
			Played variety of ball tournaments (4)
	Others involved	Multiple coaches	Had multiple coaches in program (4)
			Various coach personalities (4)
		Enjoyed friends	Had and made friends (3)
			Enjoyed playing with friends (4)
		Involved parents	Stayed and watched practice/matches (3)
			Supportive Role (3)

Tennis participation activities. Three descriptions of activities that participants experienced in 10u tennis were coded into this category. The three descriptions include a quick progression through 10u tennis levels, a games approach used in class and an emphasis on tournaments.

Quick progression. Specialized participants followed a quick progression through the 10u levels. Similar to recreational participants, specialized participants focused on ball changes and

did not report the court transition as a key element of their 10u program or the transition to traditional tennis. This quick progression was characterized by a small amount of time spent in each ball type. Many of the specialized participants spent little time playing with each ball and moved quickly into the next level. Participants also played with a mix of tennis balls at one time, rather than having separate classes in each type. In addition to a small amount of time spent in each type of ball, participants also transitioned to yellow ball quickly. This quick progression through the 10u program also led to the specialized participants transitioning to traditional tennis at an earlier age than recommended. For example, Participant 7 stated,

I started playing off of all three mixed together. That's my coaches style to play with, then I started playing with only green dots and then at early age I just started with yellow balls but after about a year. I just started with yellow at a real young age.

Games approach in classes. Coaches of specialized participants mostly used a games approach to teaching, the recommended approach for the 10u program. This approach was characterized by the focus on rallies during practice. Rather than the traditional approach of standing in line with coach fed repetition, specialized participants spoke about playing games, practice matches, and rally back and forth with teammates.

Emphasis on tournaments. Competitions were an important part of the 10u experience for specialized participants. All participants had played USTA tournaments and many played different levels of tournaments such as orange ball or green dot ball tournaments. Many spoke about having to play tournaments in a different ball color than they were practicing with. For example, Participant 7 was forced to play a red ball tournament when she was practicing with orange as she remembered,

I remember when they have, they have this age group thing now and when I was little I was already in orange ball and they made me play a red ball tournament and I was mad. Cause I didn't like that anymore.

The outcome of these tournaments was important and a mark of skill level for specialized participants. Winning tournaments and receiving trophies were spoken as highlights during the 10u program. For example, Participant 4 discussed her results at a section level tournament,

Well especially in green dot, I played qualifiers. I beat the third seed and then lost to the first and I made it to Midwest Closed when I was 10 and I did fairly well in that. I got, I think it was the south or northeast...and I got a trophy.

Others involved. In addition to class activities and tournaments, specialized participants also spoke about other individuals were involved in their tennis participation. Others involved included having multiple coaches, friends with whom they enjoyed tennis, and parents.

Multiple coaches. Specialized participants had multiple coaches throughout their 10u program. For one participant, having multiple coaches was due to of moving to a new state, other participants spoke about a purposeful switch to a better coach led by their parents. Their parents had decided that the coach was not coaching them well enough and switched them to a new coach who both child and parent perceived as better for their tennis development as they had faster and more improvement with their new coach. Having multiple coaches also meant that participants experienced a variety of coach personalities that ranged from strict, mean coaches to others who were described as nice and engaging.

Enjoyed friends. Specialized participants made friends and enjoyed playing with them during their 10u tennis program. As the specialized participants progressed through 10u tennis quickly, they spoke about making friends with older players in their classes. They also spoke

about making friends with other players who they are still able to play with in traditional tennis. Playing with friend during practices was a source of enjoyment for participants and was cited as a reason why tennis was fun.

Involved parents. Parents were perceived to be involved during the 10u tennis program in two ways. First, parents stay and watched their child play in both practices and matches. Second, parents were supportive of their child's tennis during 10u. Supportive behaviors included encouragement and happiness when the child succeeded in both practice and tournaments. This supportive behavior was illustrated by Participant 7 who said after a match, "I beat him 6-4 there and I, I was really happy, I got, I won I didn't win but I got second place. My parents were really happy for me, patting me on the back, they're taking pictures." Other supportive behaviors included teaching appropriate behaviors to the child on how to react when they won or lost and playing together outside of practice.

General Dimension 2: Perception of the transition to traditional tennis. Specialized participants discussed their transition to traditional tennis and this information was coded into six higher-order themes of differences from 10u tennis to traditional tennis, challenges, strategies to cope with challenges, positive aspects, sources of support, and skill level changes. Within the six higher-order themes, data analysis resulted in 17 lower-order themes, 44 sub-themes with 146 raw data citations (See Table 11).

Table 11. Child specialized perception of the transition to traditional tennis

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Perception of Transition to Traditional Tennis	Differences from 10u to traditional tennis	Playing higher level of opponents	Playing older kids (3)
			Higher skilled opponents (3)
		Learning new skills and strategies	Focus on strategy (2)
			Learning new skills (2)
			Increased competition in practice (2)
		Increase coach involvement	Coaches more serious and tough (4)
			Coaches teaching new skills (3)
		Change in parent behavior	Increased focus on winning (1)
			Teaching lessons through participation (1)
	Negative relationships (1)		
	Challenges of transitioning to traditional tennis	Competing against higher level, older opponents	Playing against older kids (3)
			Older kids with higher skill level (3)
			Playing higher level of players (2)
		Difficulty hitting with yellow ball	Difficulty adapting to yellow ball (3)
			Running more during matches and practices (2)
			Learning skills for yellow ball (2)
	Strategies used to cope with challenges of transition	External resources	Increase practice time (2)
			Take more private lessons (2)
			Practice with family (2)
			Practice off-court (1)
			Improve skills with coaches help (2)
Work with yellow balls before transition (2)			
Internal resources		Adjust strategy against better players (3)	
		Work harder in practice (2)	
		Positive aspects of transition	Competitions and tournaments
Increase in competition in traditional tennis (2)			
Winning competitions (2)			

Table 11 (cont'd)

		Friends	Enjoyment in playing tennis with friends (4)
			Enjoys socializing with friends (2)
		Improving skills	Getting better
			Learning new skills
	Sources of support	Parents	Logistical support (3)
			Tennis specific support (3)
		Peers	Help with tennis skills (3)
			Encouragement (1)
		Coaches	Improving skills to play at higher level (3)
			Individualized focus (3)
		Siblings/relatives	Plays with brother (2)
			Grandpa attendance at matches (1)
	Skill level changes during transition	Small skill level Decrease with overall improvement	Drop in skill level due to playing older, better opponents (4)
			Improved over time (3)
		Various ways of evaluating of skill Level	Coach feedback (1)
Ability to hit with yellow ball (2)			
		Tournaments (1)	

Difference from 10u to traditional tennis. Specialized participants perceived several differences from their 10u program to traditional tennis. The perceived differences include playing higher level of opponents, learning new skills and strategies, increased coach involvement, and changed parent behavior.

Playing higher level of opponents. Participants perceived that in the traditional level of tennis they were playing against older players with a higher level of skill. They noted that the older kids could hit the ball harder and with more spin as described by Participant 4 who said, “Well people are better, they can hit harder. They move you around more, not just one place.” The also reported a higher difficulty or challenge as compared to 10u tennis, noting that with the

higher level of play from 10u to traditional tennis, they were challenged more in traditional level practices than in 10u tennis.

When I played in 10 and under, um it was pretty like it was easy because the kids were like, either they just started or they start a long time ago but they are still kinda, a little bad. I started at like 6 and now I'm, like I played with these little kids and now I'm here playing with these 17-year olds that are much older than me... it's more challenging.

(Participant 8)

Learning new skills and strategies. Differences from 10u tennis to traditional tennis included learning new skills and strategy in practices and private lessons. Players were aware of the need to learn new technical aspects of the sport and adapt their strategy to compete at the higher level of tennis they were now involved in. They perceived the need to work on more aggressive game styles by learning strategy that capitalized on power and attacking. They also noted learning specific technical skills that were not needed in 10u tennis, "I learned more topspin and spin cause like you don't really need spin with the green dot ball, it just drops usually, you just need to hit it over the net" (Participant 5).

Increased coach involvement. Specialized participants perceived a shift in coaching behaviors from 10u to traditional tennis. Overall, they thought that coaches had become more serious and were tougher on them during practices. The participants spoke their coaches in 10u tennis as being nice and engaged but in traditional tennis they had higher expectations and were tougher on players. This was evident with the following quote,

I did play with one of the coaches when I was little and they were like, since I was a little kid they didn't really like scream at us but now that I like see it like if you do something

wrong they make you run around all the courts two times. They make you do push-ups and they like punish you. (Participant 8)

They also realized that once they had transitioned to traditional tennis and were playing a higher level of tennis, the coaches expected more out of them and were more straightforward, telling them exactly what they need to work on and helping them improve. For example, Participant 4, said “Coaches are more straightforward, they tell you what you need to improve”. Last, participants believed that their coaches started taking tennis more seriously once they had transitioned to traditional tennis and were more purposefully in what and how they were teaching. For example, Participant 7 described his coach taking his tennis more seriously as “He's trying to teach me my backhand get better. He's just, he's just doing, he's just doing everything like I, like he's taking it more serious now.”

Change in parent behavior. Parent behavior changed for specialized participants through their transition to traditional tennis. Specialized players believed their parents became more serious towards their involvement in tennis and were more focused on outcomes or effort/attitude rather than fun. This change in parental approach can be seen through participant five's statement “Well for 10 and under, they were like play for fun. Now they're like play to win.” And also by Participant 8 who discussed how her parents focused more on life lessons she could learn from her participation,

Well when I was little, my parents just like, when I played tournaments and I would lose, they would be like it's ok, it's fine next time. But now that, since I'm older and I play like yellow ball, they kind of teach me a lesson [effort more important than winning].

Although there was a change in parental behavior, only one participant thought this change was negative and hurt his relationship with his parent as he said “My parents, my parents always

when I get mad on the court, they are really strict or really mad. My parents, my mom and I used to have a better relationship” (Participant 7).

Challenges of transition to traditional tennis. Specialized participants perceived two major challenges that they encountered when transitioning to traditional tennis. Specifically, two higher-order themes were found for specialized participants: Competing against higher level, older players and difficulty hitting with the yellow ball.

Playing against higher level, older opponent. Participants found that playing older, more skilled players was one of the most challenging aspects of transitioning to traditional tennis. This challenge was not only in tournaments and competitions but also in practice as well. They found it challenging as older players were more familiar with the yellow ball while they were trying to adapt to the new speed and bounce of the ball as one participant perceived, “But for like class, I feel like it is more challenging because like the kids around me have been playing with, familiar, like familiar yellow ball” (Participant 5). With this familiarity, the older youth hit the ball harder and had more skills that made it challenging for participants to adapt to at the start of their transition to traditional tennis.

When I started playing um yellow ball, I knew that there would be older kids and um like people that would like maybe that play like really hard. Like they hit the ball really hard, I knew that. And maybe they would, maybe they would have tricks. (Participant 8)

Playing with older children at practice was especially difficult as they were also learning how to adapt to the yellow ball bounce and speed at the same time. With both challenges combined, participants reported have less success during competitive games at practices than they did in 10u tennis, as was the case for Participant 4 who stated, “I started playing older people so I didn't really know what to do and I got beat a lot”.

Difficulty playing with yellow ball. Participants discussed the difficulty of playing with the yellow ball as challenging aspect of transitioning to traditional tennis. They found that it was difficult to use a ball with a different air pressure as that changed the bounce and speed of the ball that they were used to in 10u tennis. For example, one participant said, “Sometimes I didn't really know, sometimes I didn't know how to hit it because the different pressure and air” (Participant 4) and another said “...it was kinda hard to transition because of the bounces, the bounces” (Participant 8). The different bounce made it challenging to perform skills that came easy for them in 10u tennis.

Like for the first year it was really hard. Like, just, cause I always like hit it into the net. And for my serves, like I added so much top spin but it did not go, it did not get in the box. (Participant 5)

They also discussed that with the difficulty in hitting the new yellow ball, they had to work harder and run more to the ball. This increase in amount of effort expended was challenging for some participants as evident by Participant 8 who said, “One bad thing would probably be that I had to work harder and run to the ball more. Like I had to work hard and I like you know, I had to work hard”. Tennis, for specialized participants was no longer was as easy as in 10u tennis but rather they had to work harder to perform at the same high level as those around them.

Strategies used to cope with challenges of transition. Recreational participants discussed two types of strategies to use when dealing with the challenges of transitioning to traditional tennis. The two types of strategies used were using external and internal strategies.

External resources. To overcome the challenges of playing older opponents and using a new tennis ball, the specialized group increased their amount of time spent on tennis, on and off the court. On court, participants discussed spending more time in practice as one participant

discussed increasing the number of days he played per week and adding another coach to work specifically on footwork, “I play Tuesday, Wednesday, Thursday, Friday, Saturday. Uh I play on Saturday two lessons and on Wednesday I go to my footwork coach [name] here” (Participant 7). While another participant spoke about asking her parent to increase the number of private lessons she had per week, “I practiced a lot, like I would um, those changes, I would practice like, I would, I would ask my mom, my parents for more lessons” (Participant 8). Participants not only increased the amount of time in formal practice but also increased the time spent in informal practice with family such as Participant 5 who said, “Well my brother played higher level so just kinda like... I think I practiced a lot during the summer. So, we played like every day it was nice out.”

Another strategy included using coaches as a resource to learn how to correctly hit the yellow ball. Participants relied on their coaches to teach them how to hit successfully with the new bounce of the yellow ball. For example, while discussing a struggle with making errors when playing with the yellow ball, Participant 5 said, “Then I asked my coach and he was like just add less topspin.” And Participant 8 referred to her coach showing how the bounce was different and how to adapt “Then coach [name] would show me how like, how the bounce is different and how to get to the bounce.”

Internal resources. Participants also used their own knowledge of tennis specific skills to adapt to the yellow ball and the higher level of opponents they were now playing in traditional tennis. They discussed having to adapt parts of their tennis game to overcome the challenge of playing higher-level opponents. For example, Participant 8 said, “I usually hit short balls to the net to maybe make them run and maybe I hit highballs.” While Participant 4 spoke about playing a more aggressive game style, “I had to work on not being so defensive and defending all the

time and attacking a little bit more.” Additionally, participants noted using mental skills as a strategy such as Participant eight who spoke about practicing skills of court as well by using visualization as she said, “Sometimes I go down into the basement and I like invisibly like practice that grip.” Last, to cope with the challenges of transitioning, players worked harder in practice and expended more energy trying to improve their skills.

Positive aspects of transition. Positive aspects of specialized participants were coded and resulted in themes that included competitions and tournaments, friends, and improving skills.

Competitions and tournaments. Specialized participants spoke about positive aspects of transitioning to traditional tennis as their enjoyment of competition and tournaments. The enjoyment of competitions was evident from all participants and was made clear by the following quote, “I enjoy like playing games. I enjoy match play because I get, like to feel competitive but like I also like to have fun” (Participant 5). While the increase in competition was enjoyable, participants also enjoyed having success in tournaments “Some good things that happened, I started getting more competition. I won two tournaments in a row my first two and I actually won my second one right here” (Participant 7). A third aspect of tournaments that participants enjoyed was competing against new people who they do not play in group practice. This was represented by the following quote from Participant 4,

Well I liked that I could travel and meet other people. And I didn't have to worry that I knew them and if, if one of those, like beat each other. I don't know, we didn't have to get mad at each other or anything.

Additionally, Participant 8 spoke about being able to compete against a variety of people as she said, “And one good thing is that like I would play against, you know, I'd play with different kids, different ages, different sizes.”

Friends. Specialized participants spoke about the enjoyment they had when playing with friends and spending time with friends in tennis. For example, Participant 5 discussed how he had older friends in tennis who, after he had transitioned to traditional tennis, was able to play with,

Well, like you get to play with the people that you want play, like... I had, I have a lot of friends that are older than me so they're all playing like my same level but then they're older than you so, they' were up and I was down.

Beyond playing tennis with friends, socializing and spending time with friends was also a positive aspect of the transition for specialized participants as they were spending more time in tennis once at the traditional level as one participated stated, “I'll be funny on the court with friends. I just love that you can make friends on tennis court” (Participant 7).

Improving skills. Once transitioned to traditional tennis, specialized participants noticed their skill level improved and that they were able to learn new skills and execute them successfully. Participants felt that as their groundstrokes improved, they could hit the tennis ball harder and felt more prepared for yellow ball competition. For example, this improvement was evident with Participant 7 as he discussed, “When I started playing 12 and Unders, then more rapid changes started to come, I started to become really good with everything.” Besides playing better tennis, participants also had an easier time learning new skills such as topspin and power, “I'm doing power and it's going pretty well. I'm getting a lot more, I'm able to play a lot harder and I'm gonna try and do the qualifiers this year” (Participant 4).

Sources of support. Through the transition to traditional tennis, specialized participants spoke of having support from a variety of sources. The sources of support included parents, peers, coaches, and siblings/relatives.

Parents. For specialized participants, parental support was provided in a variety of ways with each participant noting that their parents played an important role in their tennis participation. Parents supported their children with logistical support, such as buying equipment and scheduling practices and matches such as Participant 7 who spoke of how his mother helps with his string “I kind of injured my shoulder after a while because I, because the string I picked. So we had to switch that as well. So my mom is very careful about string I use now.”

Additionally, Participant 8 discussed how her parents find the best tennis equipment for her
Cause they would like buy me all these grips, they'd buy me, and then they would like want me to have the best racket. They would like buy me, they would ask, they would go to the store and they would ask um like all the people that worked there, which one is the best. Which one do you think is the best. And they wanted the best for me.

In addition to logistical help, parents also provided tennis specific support in the form of feedback and time spent playing together with their children. After watching matches, parents discussed with their child the good and bad things that happened during the match and how to improve for the next match. Some parents also spent time playing tennis with their children to help them practice. Playing tennis together with his family, was a source of support and helped through the transition for Participant 5, “I like I got to hit a ball I'm used to hitting cause I've been training with yellow ball most of my life.”

Peers. Friends were seen as a source of support for specialized participants during their transitional period. Participants discussed friends as helping them practice and become comfortable with the yellow ball during practices. Participant 5 shared that playing with his friends helped him practice strategy against different types of game styles in yellow ball, “Well they just help me get used to them and like get more familiar with the different types of playing,

OK, cause each player has like a different trait.” Participant 4 also found playing together with friends as a type of support and she said, “Well, we work with it [yellow ball] together because we were all were transitioning at that time.” Only one participant spoke about emotional support from peers during practices as her teammates would support her by reassuring her, “They said even though like, even though if you think you're bad, you're really not because you're not the only one. There are a lot of people. So they would, they would always like support me.” (Participant 8). However, Participant 8 was the only player to discuss emotional support from peers during the transitional period.

Coaches. Coaches support came mostly through helping participants improve their skills to play at the higher level of traditional tennis. All participants discussed how their coaches helped them by teaching them skills for the yellow ball. Such skills were more advanced and were necessary for participants to be successful at the next stage as evident by Participant 7,

They started teaching me the best thing, my coach started working me on slices and drop shots they're just helping me in moving them and getting making me move more, they're working me out more.

Coaches taught the different bounce of the yellow ball and how to moved correctly to the ball as illustrated by the following quote,

She would show me how like, how like, how the bounce was different. She would like grab all, she would grab the orange, she would grab the green, and she would grab the um regular and she would bounce them all at the same time and then she would show me what's different and how I need to move, like by what ball it is. (Participant 8).

Private lessons with coaches was also discussed as a source of support as coaches were entirely focused on the participant and would offer individualized feedback. For example, Participant 4 shared the value of private lessons,

So he kinda only focuses on you. Cause like in group lessons, it's you and then there's someone else and someone else who knows you. But then like private lessons, he's focusing only on you so he sees everyone single one of your shots. So they can help you improve.

Through private lessons, participants could obtain specific feedback on new skills that was not always available during group lessons.

Siblings/relatives. Siblings and other relatives provided support for the specialized participants. Two participants spoke about the support they had from their siblings. For Participant 5, his brother provided him support by being a role model and being at matches.

He [brother] helps, I see him and I'm like he's better than me, I need to learn from him. Also he's always there he's like when I'm losing, he's always there, he's in the background. Like when I look over, he's always there.

Participant 4's brother also had a supportive role by playing tennis together and providing emotional support after matches, "Yeah my brother, when he was here, cause he was in college at the time so I whenever he was here we pretty much played." Last, for another participant, her grandfather was a source of support by attending matches and giving her presents, "Well, my Grandpa is my friend but he would sometimes come here too [to tournaments] and he would bring me like if I won he would give me something, like he would like surprise me with something." (Participant 8)

Skill level changes during transition. Skill level changes for specialized participants were coded into two higher-order themes that included small skill level decrease with overall improvement and variety of methods for evaluating skill levels.

Small skill level decrease with overall improvement. A small drop in skill level was experienced for specialized players after transitioning to traditional tennis. They attributed this decrease in skill level to having to play older, more experienced players in competitions. For example, Participant 4 said, “It’s just a little drop. I’m playing, I’m playing 14 and under now so I’m, I’m going up to play in [section name] at 12 and under.” They also attributed this decrease in skill to the transition and needing to adapt their strategy to play with the yellow ball as did participant four who said, “Well that little drop was probably because um the transition and I had to work on not being so defensive and defending all the time and attacking a little bit more.” Although there was a decrease in skill right after the transition, overall participants believed they had improved and gotten better at tennis over time. This was evident from Participant 8 who said, “I struggled for a little but then when I started kinda getting used to it I think I improved.”

Various of methods for evaluating skill level. Participants used a variety of methods to evaluate their level of skill in tennis. These methods included their ability to hit with the yellow ball, coach feedback, and tournament results. First, participants spoke about how their skills, such as consistency and technique show then whether they are improving in tennis. Second, players used their coaches feedback as a method for evaluating their skills. Such as Participant 8 who discussed her coaches feedback on her performance in tennis:

Because my coaches are very proud of me like and they tell me like they improved a lot and we really hope you keep on playing tennis because we really want to, some day when were old we want to watch you on tv.

Last participants used tournament results as way to measure their skill level. Many of the participants spoke about winning matches or tournaments as a sign of their improvement such as Participant 7 who said, “I started getting a, I got a trophy, I got a winner, I got a second-place trophy, then a first place trophy, then a second place trophy in three weeks.”

General Dimension 3: Motivation to continue participation. The last dimension for specialized participants involves their reasons for continuing tennis participation and their goals in the sport. As seen in Table 12 these two high-order themes include five lower-order themes, 11 sub-themes, and 38 raw data citations.

Table 12. Child specialized motivation to continue participation

General Dimensions	High-Order Themes	Lower-Order Themes	Sub-Themes	
Motivation to Continue Participation	Reasons for continued participation	High perceived competence	Good at tennis (3)	
			High level at early age (1)	
		Inspiration from professional players	Watching professionals (2)	
			Specific professional role models (2)	
			Friends	Have fun playing with friends (3)
				Friends motivate to attend practices (2)
	Goals for tennis participation	Outcome goals	Reach Professional Level (3)	
			Earn College Scholarship (3)	
			Play Tennis in High School (3)	
		Task goals	Improve skills (2)	
Improve reputation (1)				

Reasons for continuing participation. Three themes were found for specialized participants motivation to continue their participation in tennis. The three higher-order themes were high perceived competence, inspiration from professional players, and friends.

High perceived competence. Specialized participants felt there were three main reasons for continuing their participation in tennis: High perceived competence, inspiration from professional players, and friends.

High perceived competence. Specialized participants high perceived competence was discussed as a reason for continuing participation in tennis. This competence came from their belief in their high skill level but also in their improvement since transitioning to traditional tennis. All specialized participants discussed how they believed they were successful in tennis. For example, Participant 5 said, “Well tennis I'm really successful with. Baseball I was also successful with like but like I wasn't getting into any teams cause it was all other players better than me.” Participants also had a sense of pride in their tennis ability and that they transitioned to traditional tennis at a younger age than average. Not only did participants feel they had been successful in tennis, they also felt that they would continue to do so in the future.

Inspired by professional tennis players. Specialized participants also attributed their motivation to continue in tennis from the inspiration they felt from professional tennis players. The participants were inspired by watching the professionals but also the individual professionals themselves. Many participants spoke about watching professional tennis players and wanting to play at that level, “I just started watching tennis and I looked at them and I was like I have to do this, that looks awesome” (Participant 7). Beyond watching professional matches, participants were also motivated by specific professional players. This motivation came from the work ethic that professional player exhibited by also by their attitude on the court. For example, Participant 8 was highly inspired by Maria Sharapova as she described, “I was looking at Maria, I was always on Maria, always, it was only her and I was and I was getting really inspired and um she inspires me every day to get stronger and stronger.”

Friends. Playing with friends and making friends was a source of motivation for specialized athletes. Three of the four specialized participants spoke about the fun they had when they played tennis with friends. Such as Participant 7 who said, “Also I'll be funny on the court with friends. I just love that you can make friends on tennis court.” Friends were a source of enjoyment for participants that made them motivate to attend more practices. While specialized participants mostly played tournaments and only participated in JTT for practice, friends were a major reason why they continued playing JTT.

Goals for tennis participation. Three types of goal were found for specialized participants. The three goals included reaching the professional level, play tennis in college, and playing in high school. Most goals were outcome related for specialized participants, with only one participant mentioning improving skills.

Reach professional level. Three of the four specialized participants had the goal to become a professional tennis player. As this was a source of inspiration and motivation to continue tennis, their long-term goal was to play at the professional level of tennis. Participant 7 spoke about how becoming a professional is the only career goal for him,

I always thought I would grow up and become a professional tennis player. I never thought something else. And I never thought about getting another job or nothing like that. I thought about going and just becoming a professional tennis player, that's all I thought of.

Participant 8 also had this goal, to play in a professional tournament and referred to her tennis participation as her career. Finally, Participant 5 also spoke about how he would like to become a professional in tennis as well.

Play tennis in college. Earning a college scholarship and playing college level tennis was also a goal for the specialized players. While one participant wanted to earn a scholarship to help pay for college, the others wished to just play at that level. For example, Participant 4 stated, “I want to get a scholarship, to help pay for college and I still have no idea what I want to do so I want exposure.” For this participant a scholarship would help her pay for education but also allow her to explore career interests. For the other participants, they wished to reach the level of play at the collegiate level and especially reach NCAA Division One college tennis.

Playing in high school. Playing on a high school team was also a goal for the specialized group. Although they had goals to play at a level beyond high school, they saw the social benefits of participating on a high school team. Participant 5 stated that because other his friends are playing high school tennis, he would like to play as well by stating, “Yea, so like I have some friends, my brother has some friends in high school that play tennis,” This was also described by Participant 4 who stated, “Another goal I have for tennis is to make a team in high school. Cause I want to see where people outside the club are and how play against a lot of other people.”

Parent Specialized Participants

Parents of players who specialized had a variety of experiences and perspectives from their involvement in their child’s tennis participation. This information was categorized into three general dimensions: perception of child’s participation, parent involvement, and considerations for child’s participation. These three general dimensions contained six higher-order themes, 18 lower-order themes, 47 subthemes, and 201 raw data citations (See Table 13).

General Dimension 1: Perception of child’s participation. Specialized parents discussed perceptions rated to their child’s transition to traditional tennis as well as their reasons

for continuing in tennis. Both were coded as higher-order themes with five lower-order themes, 15 sub-themes, and 64 raw data citations.

Table 13. Parent specialized perceptions of child’s transition

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Perception of Child's Participation	Perception of child's transition to traditional tennis	Successful transition	Smooth transition (3)
			Child prepared for the yellow ball (3)
			Improvement through transition (2)
			Successful in traditional level tournaments (2)
			Fast progression to traditional tennis (2)
		Difficult aspects of transition	Challenges playing older opponents (3)
			Losing in Tournaments (2)
			Difficulty dealing with losses (2)
	Small physical size (1)		
	Perceptions of child's motivation to continue tennis	Family influence	Parent influence (2)
			Family plays (1)
		Child enjoys competition	Competitive (2)
			Motivated by Losses (2)
			Like challenge of playing against older kids (2)
			Loves to win (2)
Improvement in skill		Motivated to improve (2)	
	Improving skills (1)		

Perception of child’s transition to traditional tennis. Parents offered their perspective of their child’s transition to traditional tennis. Through data analysis, there were two themes associated with this high-order theme of successful transition and difficult aspects of transition.

Successful transition. Parents discussed five main themes that were related to their child’s successful transition to traditional tennis. First, parents felt that the process of the transition went smoothly and was not perceived as a major event in their tennis career. Second, they felt that the

10u program prepared them for playing with the yellow ball by increasing their competence and confidence in the sport. Specifically, the parents thought that using the green dot and the yellow ball combined was an effective method for preparing players for traditional tennis. Third, parents perceived that their child improved their skills in tennis through the transition as evident by the following quote, “I mean you can see it when he plays, he's getting better at things. Certain things. He improved quite fast.” (Parent 7). Fourth, parents perceived their fast progression through the 10u program as a sign of a successful transition. The fast pace through the 10u progression was common for specialized players who reached the yellow ball faster than the recreational players. Last, specialized children were having success in tournaments at the traditional level, winning matches and tournaments with the yellow ball.

Difficult aspects of transition. While parents believed that overall their child had a successful transition to traditional tennis, they spoke of challenges that arose when they reached the traditional level. Parents observed some elements of tennis they became more challenging for their child as they started to play against older opponents. Older players would often hit harder, making their opponents move more and their child experienced some losses in tournaments that they did not have in the 10u program. Another difficult aspect was dealing with losses in tournaments as the players moved through the 10u program quick, parents thought they were emotionally immature as they did not have time to experience losing and adversity in their 10u program. For example, one parent stated,

He does not accept losing. I mean, I don't know. So in tennis or life, you cannot really be, I mean you're going to lose, you're going to make mistakes. So it's very hard for him to accept. Specially because he moved up so quickly. You know and when things were a little more challenging but then it's hard. (Parent 7)

Also, their child was usually one of the physically smaller players especially in practices. As one parent said “So she's you know been littler or the smaller one. So it's, so I think that size is important, the size of the kid, and the strength of the kid” (Parent 4).

Perceptions of child's motivation to continue. Parents discussed the reasons they perceived for why their child continued playing tennis. The reasons were coded into three themes family influence, child's enjoyment of competition, and skill improvement.

Family influence. Parents believed they had a role in the child's decision to continue playing tennis through their parental direction and the family's involvement in tennis. First, parents felt that their role in channeling their child into tennis influenced the decision to continue participation. For example, Parent 5 stated, “So that natural aspect of being out there and playing something but channeling them to play tennis as a sport of choice with the initial basket of choices that is a parental motivation, keep them focused.” Tennis also had a role in family life, with many participants playing tennis with their family. Their participation was directly related to spending time with the family, which served as a motivator to continue in tennis.

Child enjoys competition. Three parents spoke about how their child enjoyed the competitive aspect of their tennis participation. Parents spoke about their child loving competition and having a competitive personality. Parents also spoke about how their child loves to win and how winning matches and tournaments serves as primary motivator for them to work hard to improve their skills. Similarly, parents perceived their child as being motivated by losses in tournaments. For example, Parent 8 stated, after discussing a match her child lost, “She would get more, she would be upset but she would be so upset that she wanted to play against the same person and win.”

Improvement. Parents felt that a reason for their child deciding to continue their participation in tennis came from their perception of their skill improvement. As they improved skills through the transition to traditional tennis, they were more motivated to continue playing. For one parent, they felt that their child perceived the yellow ball as the better ball and thus was motivated to continue as he perceived himself as improved enough to play with the better, older players as evident by the statement “Of course going and playing with the older boys and the better boys, you know, makes you look good, better” (Parent 7). Another parent discussed how their child saw their progress in tennis which made them excited to continue. This parent said, “They like that about that, that it's just that uh you know, they were very excited when they were able to see progress in their own personal ability to play better.”

General Dimension 2: Parent involvement in child’s tennis participation. Parent’s perceived involvement in their child’s tennis participation was described and coded into two higher-order themes of parent role and parent goals for child’s tennis participation. Within the two higher-order themes, there were five lower-order themes, 11 sub-themes, and 47 raw data citations (See Table 14).

Table 14. Parent specialized involvement

General Dimensions	High-Order Themes	Lower-Order Themes	Sub-Themes
Parent Involvement in Child’s Tennis Participation	Parent role in child’s participation	Help with mental aspect of tennis	Teach life lessons through tennis (2)
			Teach psychological skills (3)
			Keep child's focus on process (2)
		Provide emotional support	Reassurance and support (3)
			Low pressure environment (3)
			Collaborate with coaches (2)
	Increased involvement in child’s tennis	Increase time tennis child and parent (3)	
		Play at college level with scholarship (4)	
		Reach professional Level (2)	
		Go as far as child wants (2)	
		Progress in sport (1)	
Parent goals for child in tennis	Outcome goals	Go as far as child wants (2)	
		Progress in sport (1)	
Child directed goals	Child directed goals	Go as far as child wants (2)	
		Progress in sport (1)	

Parent role in child's participation. Parents discussed three main aspects of their role in their child's tennis participation. The three aspects included helping with the mental aspect of tennis, providing emotional support, and increased involvement in child's tennis.

Help with mental aspect of tennis. Parents saw their role as assisting with the mental aspect of their child's participation in three ways. First, parents felt that it was their role to teach life lessons through tennis such as the importance of hard work, being a leader, and the value of the time and financial commitment for their participation. For example, Parent 8 used tennis as an opportunity to teach her child to be a leader as she discussed,

The challenge is sometimes she can't concentrate because of like a friend would be talking on the court and she would get distracted, so I told her you cannot be a follower, you need to be a leader. That's how you'll be number one and you get better in life.

Parents also spoke about helping their child with psychology of the tennis such as one parent who debriefs with their child after the match to reflect on their mindset as evident by the quote,

And then even the psychology around um not, not to get to a place where you think you got it because I'm all, the whole thing can flip on its back. Where, what's your state of mind and emotions when you've won the first set and you're playing second set, what would the opponent be going through and are you going to let your hair down or put your defenses down. What happens when it happens. So, we debrief, we kind of have those conversations. (Parent 5)

Last, parents helped their child focus on the process of tennis participation rather than the outcome or results at tournaments. Parents would remind their child of the purpose of playing

tournament and competitions by focusing on their process goals as one parent remember what she had told her daughter when playing up an age group,

[I told her] You know as you were little in the 10 and Under's and you didn't win as much. You know, you might, you know maybe just getting ready for next year when older kids age out that's going to give you an opportunity for you to succeed. (Parent 4).

Provide emotional support. To provide emotional support, parents supported their child after losses and created low pressure environments. As their child reached the traditional level of tennis at a young age, parents felt they needed to support their children through losses associated with playing older opponents as evident by this quote, "Of course you know I always said that these are older kids, they've been playing more, things like that. Helping him overcome those fears and emotions kind of" (Parent 7). Parents also supported their child after losses by making losing acceptable and encouraging them to do their best rather than focusing on the outcome. Creating low pressure environments by not focusing on rankings, refraining from yelling after losses, and watching where the child can't see them was also cited as a means of supporting their child.

Increased involvement in child's tennis. As their children transitioned to traditional tennis, parents saw their role and involvement in tennis increase. Parents discussed collaborating extensively with coaches, spending more time in tennis for both parent and child, and playing together outside of organized practices. Increasing the amount of communication with coaches and collaborating with them on their child's tennis was reported as a role for specialized parents. This role was illustrated with the following quote,

I am actually holding the coordination between the private lesson coach and with the group lesson coach and with the match play, connecting the dots to say okay what's your

goal, what are you going to work on, putting it together and actually now I go to almost all tournaments and I take notes and I debrief with them. What do you think went well today, what do you think bad and I actually loop it back to the coach. (Parent 5)

Parents also spoke about increasing the amount of time spent in tennis for their child and for them as parents. Once transitioned to traditional tennis, they increased the amount of time their child spent in tennis. This also led to parents increase their involvement with the amount of time for spent organizing practices and navigating the logistics of tournaments. Two parents also added fitness sessions once a week and one added a mental skills coach.

Parent goals for child's tennis participation. Specialized parents had two primary types of goals for their child's participation in tennis that included outcomes goals and child-directed goals. Outcome goals were primarily discussed with the hope for their child to play at the collegiate level and earn a scholarship as the most common goal.

Outcome goals. Parents had two main outcome goals for their child's participation in tennis; playing college tennis with a scholarship and reaching the professional level. First, parents wished that their child would play competitively in college, preferably at a NCAA Division I program. With this, they also wished for their child to earn a scholarship. The hope for a scholarship was evident in the following quote:

She's talented and um, these days it's pretty easy to get a college scholarship and for financial reasons that would be very nice. Since I started from scratch in my mid-40s after the divorce and I just finished putting a kid through college, so she could get a college scholarship that would be great for, that something that looks really good in a resume when you go look for a job. And it shows dedication and discipline. (Parent 4)

Additionally, two parents had the goal for their child to reach the professional level and be able to watch them play tennis at a major professional tournament.

Child directed goals. Other than their goal for their child to reach the college and professional level, parents discussed goals that reflected the child’s own goals in tennis. Parents supported the goals of the child and wanted them to go as far as their child wanted in the sport. For example, Parent 7 stated, “You know, he can go as far as he wants to but if it doesn't, it doesn't...I mean I'm never going to push him to just do tennis.” Additionally, parents spoke about the general goal of their child just having progress in the sport. This was clear by Parent 8 who said, “Building the confidence and moving on and moving forward. I want her to move forward as fast as possible, I don't want her to get stopped forever, you know what I mean.”

General Dimension 3: Parent’s considerations for child’s participation. For this dimension, specialized parents discussed the factors they considered when deciding whether to have their child continue in tennis and also the challenges they face as parents through their child’s participation. An Inspection of Table 15 shows that these two higher-order themes were comprised of seven lower-order themes, 17 sub-themes, and 85 raw data citations.

Table 15. Parent specialized considerations for participation

General Dimensions	High-Order Themes	Lower-Order Themes	Sub-Themes
Parent Considerations for Child's Participation	Factors considered for participation	Opportunity for college scholarship	Can get scholarship (2)
			Benefits of scholarship (2)
		Potential and talent of child in tennis	Physically built for sport (1)
			Talented (2)
			Potential to succeed (2)
		Coach characteristics and behaviors	Effective coach behaviors (3)
			Accessibility to Parent (2)
		Potential benefits from participation	Lifetime participation (2)
			Future employment opportunities (2)
			Social benefits (1)

Table 15 (cont'd)

	Parent challenges in tennis participation	High cost of participation	Expensive cost of participation (3)
			Whether participation is worth cost (2)
		Issues with coaches	Individual coach characteristics (3)
			Lack of direction from coaches (1)
		Tournaments frustrations	Frustrating tournament structure (3)
			Different levels of skill at tournaments (1)
			Other parents cheering inappropriately (1)

Factors considered for participation. Factors that parents considered when continuing their child’s participation in tennis were coded into themes. The five themes were opportunity for college scholarship, potential and talent of child in tennis, coach characteristics and behaviors, convenience of participation, and potential benefits for child.

Opportunity for college scholarship. When considering their child’s participation in tennis, parents thought about the opportunity for their child to earn a scholarship. For parents, they believed that their child had an opportunity to earn a college scholarship in tennis. For example, Parent 4 stated, “There's a lot of um college scholarships available not necessarily like you know, top division ones but there's a lot of smaller schools that are always, you know, looking for um girls at the last minute.” Additionally, parents felt that there were benefits to earning a scholarship such as financial assistance to pay tuition and the advantage it would offer from having a scholarship on their resume. Specialized parents appeared to be confident in their child’s ability to earn a scholarship.

Potential and talent of child in tennis. Parents considered the level of talent their child had when they made the decision to continue their participation in tennis. Parents felt that their child had talent based on the feedback they received from other people and coaches in the sport. With this talent, parents believed that their child had the potential to succeed in tennis and had

the potential to reach the goals parents had for this child. Last, one parent mentioned how they felt that their child was physically built for tennis as they were tall and strong which she felt was related to long-term potential.

Coach characteristic and behaviors. The coach's characteristics and behaviors were a factor that played a role in the decision to continue participation in tennis. Parents felt that their coach engaged in positive behaviors that would assist with their child's development in tennis. Such behaviors included being strict on court with child, correcting child in action with personalized feedback, and helping with mental toughness. Correcting in action was important for Parent 5 who stated,

That they are able to sense that they are able to make tangible improvements in their tournament play based on input they have received from the coaches and that the coaches correct them in action, in the motion, and they, they stop them and course correct. Parents also liked how their coaches were nice, knowledgeable, and were accessible for parents to seek help and advice.

Potential benefits for child from participation. The last factor that parents took into consideration was the potential benefits that participation in tennis offered. Parents felt that participation in tennis could lead to lifetime participation, where their child would benefit with the opportunity for long-term physically activity. Second, parents spoke about the opportunity that their child could have to use tennis as employment and earn money by teaching tennis. Last, parents felt there were social benefits to participation such as Parent 8 who stated,

I just think you know it's great because you can meet different people, great people. It's good for the future if she not going to become Sharapova, I don't know. But it's always good to, you know, play. It's just a social sport.

Parent Challenges in Tennis Participation. Specialized parents discussed four major challenges they faced in their child's continued participation in tennis. The four major challenges were coded as high cost, child playing at a higher level, issues working with coaches, and tournament frustrations.

High cost of participation. Parents discussed two challenges surrounding the cost of participation in tennis. First, parents acknowledged the high cost and expensiveness of tennis participation that included paying for lessons, group practices, tournaments, and equipment. One participant noted that many other kids are not be able to continue in tennis because their parents cannot afford the cost of participation. Additionally, parents discussed the value or worth of the financial support they were providing for their child's participation. For example, participant five stated,

It's just more about the cost and financial viability of tennis. If we were to pursue that as a competitive sport because it's, it's not a cheap sport. It's not a cheap sport. The question, it's always come down to, are we deriving the right value or is this kind of a sink hole.

(Parent 5)

While all participants spoke of the high cost of participation, all believed that there was value and worth in the money they were spending.

Issues with coaches. Parents spoke about switching coaches and working on finding the right coach to work with their child as a challenge. While in this search, parents encountered challenges with individual coach characteristics and the lack of direction given by coaches. First, parents spoke about the individual coach characteristics that motivated them to find a new coach for their child. Some coach characteristics discussed included the lack of engaging behaviors,

being too tough, and not showing up for team matches. One example of a characteristic that was a challenge for a parent came from Parent 7 who said,

We started, actually we started with a different coach and we didn't like that coach... very negative and with [child's name] you can't have that because he is tough on himself, he just tough, it just didn't work out. He's very, very, he was, I mean technically you know, he knows tennis, it's good. But the way he was mad, I mean the levels that he was trying to push [child's name].

A second coaching issue that parents experienced in transitioning to competitive traditional tennis was the lack of guidance and direction given by coaches. For one parent specifically, there was not systematic partnership between the coach and parents to help their child advance in develop in the sport. This was evident by the following quote,

There is no systematic way where there's a goal setting process for talking to even the kid and to the parent to say hey what do you, how far do you want to take this, what does it mean do you, what do you want to do with it, what are you trying to help, work on, and then looping that back to the parent and engaging the parent. That whole ecosystem is missing. (Parent 5)

Tournament frustrations. Three main tournament frustrations were discussed by parents and included the confusing tournament structure, varying level of skill at tournaments, and dealing with other parents. The structure of tournaments was confusing for parents as they were unsure of which tournaments to play and found the website confusing. Parents also felt there was no parent education about the procedures of tournaments. With this confusion, at tournaments, there would be variety of skill levels with their child sometimes playing against opponents of

much lower skill level and other times against players with much higher skill level. Last, other parents cheering inappropriately was an issue for one parent who said,

You know what else I don't like when you know how parents get obnoxious so like if your child is losing and the parent of the other kid, they stand there clapping and woo-hoo, woo-hoo, you know, I hate that too. (Parent 7)

Dropout Participants

Four children and their corresponding parent child dyads were categorized as dropouts. The ages of the child participants ranged from 12-13 years of age. The age of drop out from tennis ranged from 11-13. The dyads consisted of two father-daughter dyads, one mother-son dyad, and one mother-daughter dyad. All four parents and three children were Caucasian with one child biracial. Prior to dropping out of tennis, participants played 4 to 12 months in tennis per year with two participants playing four months per year, one participant playing 9.5 months per year, and one playing all 12 months per year. Three participants were participating in USTA tournaments and all played Junior Team Tennis. Currently, three dropout participants are involved in other organized sports while one is involved in sport informally with the parent (downhill skiing on weekends). Three of the four parents in this category are married, while one is divorced. Two have a bachelor's degree and two have a graduate level education. Combined incomes were relatively high with one parent reporting an income of over \$200,000, two reporting between \$100,000-\$149,000 and one between \$90,000-\$99,000. As per tennis experience, two had played recreationally, one played in high school, and one parent had no experience in tennis.

The dropout dyads reported their 10u program quality as the highest amongst the three categorizations. Only one participant reported lectures longer than one minute and no

cooperative activities during classes. For organization, only written lesson plans were reported as absent from 10u programs.

Child Participants

Child dropout participants spoke about a number of different topics related to their participation in tennis. The topics were categorized into three general dimensions: 10u tennis experience, perception of the transition to traditional tennis, and reasons for dropping out of tennis. The three general dimensions contained ten higher-order themes, 26 lower-order themes, 55 subthemes, and 204 raw data citations.

General Dimension 1: 10u program experience. Child dropout participants discussed two categories of their 10u experience: tennis participation activities and others involved which were coded with 5 lower-order themes and 52 raw data citations (See Table 16).

Table 16. Child dropout 10u program experience

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
10u Tennis Experience	Tennis participation activities	Standard progression	Started with red (3)
			Full progression (3)
		Mix of games approach and traditional approach	Mix of both approaches (3)
	Others involved	Engaging coaches	Nice (1)
			Engaging behaviors (3)
		Enjoyed friends	Had friends (3)
			Enjoyed playing with friends (3)
		Mixed levels of parent involvement	High-Involvement (2)
		Low-Involvement (2)	

Tennis participation activities. During their 10u tennis experience, dropout participants provided comments that coalesced into two themes of following the standard progression and a mix of games approach and traditional approach in classes.

Standard progression. Dropout athletes generally followed the standard progression of levels in the 10u program. This progression started with the red ball on the short court and then progressed through the orange and green dot levels. The time spent on each ball varied for each participant but most reported having played with all three balls throughout their 10u experience and then transitioning eventually to yellow ball.

Mix of games approach and traditional approach. Elements of both a games approach to teaching and the traditional approach to teaching tennis were evident in the 10u program. Participants spoke of rallying during classes with partners across the net and also games such as ‘hit the cone’ in which participants rallied back and forth aiming to hit a cone in front of their partner. The traditional approach was also used with participants remembering that coaches sometimes fed the ball to them, resulting in a mix of both approaches as evident from one participant who stated,

Um we did a little bit of both, I remember sometimes it was like cause I also did one on one classes, so then it was just him hitting to me. If it was a group class we usually did a mix of both. (Participant 11)

Others involved. Participants spoke about others who were involved during their 10u tennis participation. Others included engaged coaches, had and enjoyed friends, and a mixed level of parent involvement.

Engaging coaches. The relationship with the coach was reported as a positive one with the coach being nice and displaying engaging behaviors. One participant felt that their coach was nice both on and off the court as she stated, “He was always nice to me on and off the court, especially when we went to [a professional level tournament] and everything” (Participant 11).

Other participants felt their coach exhibited engaging behaviors such as being, happy, making jokes, and greeting players before classes.

Enjoyed friends. In 10u tennis, participants remembered having friendships with other players in their classes and group practices. Participants spoke about having developed relationships with other players such as Participant 10 who said, “I didn't know anybody when I came in but yeah, I developed relationships throughout the years.” Friends were a source of enjoyment for participants as they had fun playing tennis together with their friends through laughing and spending time together as Participant 11 mentioned, “They were really nice um yeah they were just my friends, we just like hung out, it was fun.”

Mixed levels of parent involvement. Dropout participants reported having two levels of parent involvement during 10u tennis. Two participants discussed their parents staying and watching their matches and practices. They also spoke about playing tennis together with their parents and also getting feedback from parents after matches. The other two participant’s parents did not stay and watch their tennis and instead would either drop off and leave or workout in the club. Additionally, these participants reported not doing anything extra outside of tennis with their parents.

General Dimension 2: Perception of transition to traditional tennis. When discussing their transition from 10u tennis to traditional tennis, dropout athlete’s responses were coded into six higher-order themes of differences form 10u tennis to traditional tennis, challenges, positive aspects, support, and skill level changes. Within the five higher-order themes were 15 lower-order themes, 33 sub-themes, and 103 raw data citations (See Table 17).

Table 17. Child dropout perception of transition to traditional tennis

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Perception of Transition to Traditional Tennis	Differences from 10u to traditional tennis	Changes to practice focus	Focus on gameplay (2)
			Learned more advanced technique (3)
		Higher level of play	Other kids bigger and stronger (3)
			Higher level of other player (2)
		Friends changes	Some friends quit (1)
			Switched classes from friends (2)
	Challenges of transitioning to traditional tennis	Difficulty playing with yellow ball	Difficulty performing skills with yellow ball (3)
			Ball bounce was faster (2)
			Ball bounced higher (2)
		Higher level opponents	Older players had higher level (2)
			Other people improving more (2)
		Lack of enjoyment of competition	Competitions stressful (3)
	Not having as much success in competition (2)		
	Strategies used to cope with challenges of transition	Internal resources	Increase confidence (1)
			Try hard (2)
			Use losses as motivation (2)
			Stop playing competitively (1)
	Unsure	Don't know (2)	
	Positive aspects of transition	Enjoyed social aspect	Enjoyed meeting new people (3)
			Playing with friends in JTT (2)
		Benefits of yellow ball	Hit ball harder (2)
			Run more (2)
			Challenge adapting to yellow ball (2)
		Enjoyed recreational tennis	Liked practices (2)
	Could play with parent more (1)		
	Sources of support	Parents	Increase involvement in tennis (2)
			Logistical help (2)
		Coach	Made transition easier (2)
			Helped technique in yellow ball (2)
	Skill level changes during transition	Same or decrease in skill level with little improvement	Decrease in skill level (3)
Similar skill level (1)			
Improved small amount (1)			
Evaluate skills based on peer comparison		Others improving more (3)	

Differences from 10u to traditional tennis. Three higher-order themes were found related to differences between 10u tennis and traditional tennis that included changes to practice focus, higher level of play, and friend changes.

Changes to practice focus. Once transitioned to traditional tennis, participants found that the focus of practice shifted from learning basic skills to working on game play and rallying. Activities in practice involved rallying in a competitive setting such as for Participant 10 who stated,

Well as I moved through the balls we would back up um so we would start doing rallies in the serve, in the boxes and then once I got to yellow um we would do like the up and down the river thing.

Up and down the river is a competitive rally game in which points are tracked and at the end of each game the winner moves up a court and the loser moves down and play continues. Practice also included learning more advanced skills such as topspin and working on the serves.

Participants felt that they were learning more advanced technique after transitioning to traditional tennis.

Higher level of play. Within traditional tennis, players felt that the level of play increased after the transition. First, in their new classes other kids were often older than them, as much as two to five years older. Additionally, as they were older they were also bigger physically as well. Second, participants reported that other players in their new classes had a higher skill level than in 10u tennis. They felt that there was better competition in practice against other players as they were older, bigger physically, and higher skilled.

Friend changes. Through the transition from 10u tennis to traditional tennis, dropout participants perceived changes related to the friends they had in tennis classes. First, as the

moved into a different class due to transitioning, they did not know many of the other children in class as some of their friends were still in 10u tennis. Second, participants noticed that other players were quitting tennis during this time period and not as many of their friends were still playing in their classes, “Well a lot of people quit around that period so it was kinda like yeah so not as many people were participating in the academy when we went to yellow” (Participant 10). Last, participants noticed that with each class change their friends also changed as some players moved up to the next level and some stayed in the same classes.

Challenges of transitioning to traditional tennis. For dropout athletes, three major challenges were discussed for the transition to traditional tennis. The three themes were found and included difficulty playing with the yellow ball, more skilled opponents, and lack of enjoyment of competition.

Difficulty playing with the yellow ball. The most cited challenge for dropout participants was the difficulty in adapting their skills to the yellow ball. They believed that their skills started to struggle with the yellow ball and found they were not performing as well as they were in 10u tennis. For example, participant 10 stated,

I noticed that when I would get tired my technique would get like awful and then also I noticed that um that I would like hitting it long all the time and I would just, and my consistency would just go down.

Additionally participants felt that they had to work harder to get to the yellow ball and run faster because the yellow ball bouncing higher making it more challenging to hit as evident by the following quote, “Well it would just bounce a lot higher and farther and so that adds on to it to the technique and the amount you had to run. Which I couldn't always make it to” (Participant 9).

Higher level opponents. The difference in the level of play and stature of the older players made it challenging for participants in traditional tennis. Participants felt that the older players were intimidating and tougher to play against as evident from the following quote,

They were like, for like, first because I didn't expect it to be more like tougher but...they were hitting the ball harder and they were like, they go to more balls, like, like when I, they got to more balls that I hit. (Participant 12)

Additionally, participants noticed that other players began improving and surpassed their skill level. For example, one participant noted that other players started improving more than her in tennis classes, “Because I think I had a tiny bit of skill but then when I went up other people started catching up to me. If that makes sense” (Participant 11).

Lack of enjoyment of competition. Once in traditional tennis, dropout athletes did not enjoy tournaments and competitions. Rather than fun, participants felt that tournaments were a source of stress and anxiety for several reasons. First, competitions were stressful and participants did not like being on the court by themselves, “I noticed that like during tournaments they would get kinda stressful and after playing soccer and basketball I just wasn't really into the like um like individual sports where you just had to like rely on yourself” (Participant 10). More stress was also experienced at tournaments as players did not like being watched by parents at their matches. Second, meeting new people and going to new clubs was uncomfortable for dropout athletes. Third, going to competitions and playing older, higher level players was stressful for dropout athletes as they did not enjoy tournaments where they felt they were less successful in yellow ball tournaments than they were in 10u level tournaments.

Strategies used to cope with challenges of transition. To overcome the challenges of transitioning to traditional tennis, dropout athletes spoke of one type of strategy that was to use internal resources, while others were unsure of what strategies they used.

Internal resources. Dropout participants discussed using internal resources as strategies for coping with the challenges they experienced. One participant tried to increase her confidence in her tennis ability through the transition by trying to win competitive games during practice. Other participants tried harder during the transition in practices to improve their skills. As dropouts were experiencing losses in competitions at the traditional level, they tried to use losses as a source of motivation to work hard and improve. For example, when asked how she coped with losses Participant 10 mentioned, "I kinda used it as motivation so during practice uh I would like really focus on the things I noticed I wasn't doing well in tournaments." Last, to deal with the stress of competitions, one participant decided to withdraw from tournaments and stop playing tennis competitively.

Unsure. When discussing how they dealt with the challenges they faced through the transition to traditional tennis, two drop out participants were unsure and did not know what strategies they used. Participant 9 did not have a strategy for dealing with the anxiety she felt during competitions, while Participant 12 could not think of a strategy he used to deal with the higher level of opponents he faced in traditional tennis.

Positive aspects of transition. Three aspects of transitioning to traditional tennis were perceived as positive for dropout participants. The three themes were enjoying the social aspect of competition, the benefits of hitting with the yellow ball, and recreational tennis participation.

Enjoyed social aspect. Dropout participants enjoyed the social aspect of traditional tennis. Specifically, they enjoyed meeting new people and playing together with friends in junior

team tennis. While meeting new people at tournaments was stressful, participants thought meeting new people in practices classes was fun as they were able to make new friends. For example, Participant 11 stated, “I got to meet some new friends because in my other class some people didn't move up and some new people were there.” Additionally, team tennis was a positive aspect as they enjoyed playing with friends on a team together working together and playing against other club teams.

Benefits of yellow ball. While the yellow ball bounce made performing skills difficult, some aspects of hitting the yellow ball was perceived as positive. With the yellow ball, participants could hit the ball harder than with the 10u tennis balls. For example, Participant 9 stated,

I just liked that I was able to hit it even harder than what I did before. And when I moved up from orange ball to green ball, I noticed that I had to hit like a lot harder and it was pretty hard for me at first. But then I got used to it and I wanted to like hit it even harder. Hitting the ball harder also meant participants had to run faster to reach the ball, which participants reported as an enjoyable aspect. Last, participants enjoyed the challenge that came with using the yellow ball in practice as compared to using the 10u level tennis balls as evident by the following quote,

I just sorta liked the challenge because like I said before the, the green dot ball was a little bit easier for me so then then when I went up it was kinda fun to see how the challenge was compared to the other one. (Participant 11)

Sources of support. Dropouts perceived support from both parents and coaches through their transition from 10u tennis to traditional tennis. Parents support was provided in the form of tennis specific support and emotional support. However, some participants felt little support from

parents. Coaches provided tennis-specific support by helping ease the transition to traditional tennis.

Parents. Parental support was described in three ways; tennis specific support, emotional support, and low-involvement. First, parents provided tennis specific support through acting as a parent-coach and working with their child on their tennis skills. Other tennis specific support including helping the child prepare for matches by preparing equipment and increasing the number of classes their child was taking. Second, parents provided emotional support through encouragement and also by helping with nerves before competition as evident by the following quote, “Well my dad would be take me to matches of course and try to like get me ready or calm me down if I was ever like, like, like, all like, anxious” (Participant 9). However, two participants spoke of low involvement and little support from parents through not watching matches and just dropping off for practices.

Coaches. Tennis-specific support was provided by coaches in the form of making the transition easier and helping with technique. Participants spoke about their coaches helping make the transition to traditional tennis easier by improving skills to help participants adapt to the yellow ball for tennis classes. Additionally, coaches helped by slowly incorporating the yellow ball into 10u tennis classes as to help players adapt to the new bounce. Coaches also assisted by helping with technique and improve the players strokes by correcting them in practice.

Skill level changes during transition. Skill level changes for dropout participants were coded into two themes that included the same or decrease skill level with little improvement and skill evaluation based on peer comparison.

Same or decreased skill level with little improvement. Through the transition to traditional tennis, participants felt that their skill level either stayed the same or decreased in

traditional tennis. As compared to their skill level in 10u tennis, participants rated themselves with a lower skill level in traditional tennis. One participant also felt that their skill level stayed the same as they had progressed with the same players in their 10u classes. With this small decrease, there was little improvement as they progressed in traditional tennis. This is evident through the following quote, “Then also but towards the end I was dropping because I wasn't really into it and I like stopped really practicing.” (Participant 10)

Evaluate skills based on peer comparison. Dropout players spoke about their skill level relative to their peers and other children they were playing with or against in competitions. When asked how they felt their skill level changed participants spoke about not having as much success in tournaments like Participant 10 who stated, “The first couple tournaments I did, I wasn't as successful as I was in the green dot.” Another participant spoke about how their peers improved at a faster rate once they transitioned to traditional tennis:

They didn't really, they got better. I think I had a tiny bit of skill but then when I went up other people started catching up to me they were just like, they probably better than me at that point. (Participant 11)

General Dimension 3: Reasons for dropping out of tennis. When discussing their reasons for dropping out of tennis participants answers were coded into two higher-order themes of reasons for dropout and other sport goals. The two high-order themes contained six lower-order themes, 13 sub-themes, and 48 raw data citations (See Table 18).

Table 18. Child dropout reasons for dropping out of tennis

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Reasons for Dropping Out of Tennis	Reasons for dropout	Lack of enjoyment of competition	Tournaments and matches stressful (3)
			Not having fun at tournaments (2)
			Felt pressure from others (1)
		Other sport interests	Starting other sports/programs (4)
			Lost interest in tennis compared to new sport (2)
			Like team sports more than individual sports (2)
			Friends playing other sports (1)
	Academic transition	Lack of time for tennis with other sport commitment (2)	
		Overwhelmed changing to new school (1)	
	Other sport goals	Low perceived competence	Skill level decreased (2)
		Outcome goals	College/pro-level in other sports (3)
Have fun (2)			
Task goals		Improve skills (2)	

Reasons for dropping out. Participants discussed four major reasons for dropping out of tennis which were coded as the as lack of enjoyment of competition, other sport interests, academic transitions, and low perceived competence.

Lack of enjoyment of competition. Dropout athletes attributed their decision to discontinue tennis to their dislike of competition. First, the stress and the anxiety they felt before and during competitions made tournaments and matches unenjoyable. Participants felt stress from having to beat someone else to win and were anxious when matches were close. Second, participants felt pressure from parents and coaches to win and put pressure on themselves as well. Third, participants did not like being watched on the court by parents and spectators.

Other sport interests. There were five aspects of other sports that influenced their decision to drop out of tennis and pursue their other sport interests. First, during the same time as the transition to traditional tennis, participants began playing other sports such as basketball and soccer. Second, with the excitement of learning and playing a new sport, participants felt they lost interest in tennis such as participant eleven who stated,

I just think that near the end, I just started to lose interest and um I was also doing Volleyball right near the end of when I quit and I started to like that a little bit more I think. Like I think it was just a new experience. (Participant 11)

Third, with participation in multiple other sports, participants felt they had less time to give to tennis and commit to the hours need to stay in competitive tennis. Fourth, for one participant their school friends were participating in basketball which was a team sport in the middle school and playing basketball versus tennis was a way for the participant to spend more time with friends. Last, two participants spoke about liking team sports more than individual sports such as Participant 10 who said in team sports, “I develop relationships and you saw the like chemistry, really like pay off in games and you can see the things you work on in practice as a team um really show in games.”

Academic transition. One participant attributed her decision to drop out of tennis because of a change that occurred in the school life. During the transition period, the participants switched from elementary school to middle school. This change included a new school, new classmates, new teachers, and a new schedule. Being overwhelmed with all the changes influenced her commitment from tennis as she stated,

I was about to start middle school um like I had to like change, switch classes, walk around the school. And there were going to be all these huge eight graders, which there

are. And so, it was just a lot but just starting with these new kids and these classes and completely like learn almost everything all over again. (Participant 9)

While other participants had changes to the academic part of life, they did not attribute this change to their decision to drop out of tennis.

Low perceived competence. For two participants, their low perceived competence in tennis as compared to their peers was a reason for them to drop out of tennis. One participant felt that her skills were not as strong when she transitioned to the yellow ball which caused her motivation to decrease. The second participant believed that her peers became higher skilled than her and although she tried harder, she seemed to make a lot of mistakes and had less success in competitions against them as evident by the following quote,

I wasn't winning very many so then I kept trying to get better and better and better but no matter what I did, I used to just always think about how hard it was and then I'd just mess up somehow. (Participant 11)

Other sport goals. While not currently participating in tennis, dropouts did have goals for the other sports they were currently playing. Participants had two types of goals, outcome and task goals.

Outcome goals. Drop out athletes had two outcomes goals for their participation in other sports. Two participants wished to play at the college level in one of their other sports. While in tennis, participants had no aspirations to play at the college level and rather played just for fun. Second, one participant wished to reach the professional level of another sport as well.

Task goals. Participants also discussed task goals for their sport participation as well. These goals consisted of having fun and improving skills. While three participants currently played other sports, two wished to just have fun in one of their two sports. For example, one

participant stated, “Um for basketball, it's for fun, I really like it. For volleyball I just want to try to get into college but I don't know if that's for sure right now” (Participant 10). Improving skills was also a goal for participants in their other sports as one participant said, “Soccer, um I need to improve my left foot. Same as in basketball. My left hand” (Participant 12).

Dropout Parent Participants

Parents of dropout participants discussed a variety of perspectives and experiences associated with their child’s 10u tennis participation. This information was categorized into three general dimensions: perception of child’s participation, parent involvement, and considerations for child’s participation. As can be seen in Table 19 these three general dimensions contained six higher-order themes, 15 lower-order themes, 27 sub-themes, and 148 raw data citations.

General Dimension 1: Perception of child’s participation. Dropout parents shared information related to their perceptions of their child’s experience in tennis. Their perceptions were coded into two higher-order themes of perception of child’s transition to traditional tennis and perception of child’s reasons for dropout with four lower-order themes, 12 sub-themes, and 44 raw data citations.

Table 19. Parent dropout perception of child’s transition

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Perception of Child's Participation	Perception of child's transition to traditional tennis	Improvement	Skill improvement (3)
			Mental skill improvement (3)
		Difficult aspects of transition	Difficulty with skills (3)
			Other players physically bigger (1)
	Perception of child's reasons for dropout	Dislike of individual sports	Prefers team atmosphere (3)
			Anxiety being alone on court (2)
			Dislikes individual competition (1)
		Other sport interests	Wants to play multiple sports (1)
			Lack time for tennis with other sports (3)
			Tennis in same season as other sport in high school (1)
			Picked other primary sport
			Tennis not available in middle school (1)

Perception of child’s transition to traditional tennis. Two themes were discussed by parents relative to their perception of their child’s transition to traditional tennis. These themes were improvement and difficult aspects of transition.

Improvement. Through their child’s transition to traditional tennis, parents perceived improvement in both physical skills and mental skills. Overall, their child’s physical skills improved through the transition with parents observing the growth in their child’s ability to perform tennis skills. For example, one parent stated, “Her skill level, her increase in skill level. She didn't even know how to hold the ball when she's serving. Now she can collect the balls and serve the second ball” (Parent 11). Additionally, parents perceived improvement in mental skills as well such as increased confidence, mental toughness, and ability to handle emotions.

Difficult aspects of transition. While some skill improvement was observed, there were aspects of the transition that parents perceived as challenging for their child such as difficulty

performing skills with the yellow tennis ball and the larger physical stature of other players. Parents observed that when their child transitioned to traditional tennis, they struggle with adapting to the yellow ball and transitioning to the full court. For example, one parent stated,

That's when we kinda, when we saw her, she sort of hit a little bit of a plateau I would say. Um when we saw like, when we saw some challenges with, with her footwork. She was a little slow-footed. (Parent 11)

Parents also noted the difference in height and size between their child and other players as a challenge with one parenting stating, “One kid I remember was nearly a couple hundred pounds. He was huge. And she's one of the smallest kids. So that's the big thing and they're bigger, stronger, faster.” Parents believed that the size difference was intimidating for their child once they transitioned to traditional tennis.

Perception of child's reasons for dropout. The data regarding parent's perceptions of why their child decided to drop out of tennis collapsed into two themes: Dislike of individual sports and other sport interests.

Dislike of individual sports. Parents believed their child's decision to drop out of tennis was influenced by their dislike of individual sport characteristics. Parents discussed the struggle for their child of competing independently and anxiety that their child felt during competitions. For example, one parent noted,

But the one thing that she had a hard time with was um, you know with tennis it's a one-person sport. It's just you. And uh she struggled with that for a, for a couple times. And [child's name] would have a little bit of apprehension when she knew she had to go out there um and play singles. (Parent10)

Another aspect about individual sports that caused anxiety for their child was being alone on the court while people watched the match. Parents perceived their child did not liked being watched by themselves on the court and believed it created a sense of fear and anxiety. This was evident by the following quote, “So it was really, it stressed her out a lot. You know the anxiety of it, the nervousness of it all, and having people watch you all the time” (Parent 9).

Other sport interests. When making their decision to drop out of tennis, parents observed the role that other sports played. With their child wishing to participant in multiple sports, there was a lack of time to commit to other sports and still participate in tennis at a competitive. Three of the dropout athletes were currently participating in other sports that took time away to play tennis. As parents perceived, to participate in tennis there is a high time commitment required and if not given, it is difficult to stay competitive in the sport. Therefore, participation in multiple sports was challenging for the child while remaining in tennis. One reason for choosing other sports rather than tennis was due to the competition high school tennis has with other popular sports. For example, one parent explained, “Why tennis is in the spring, I have no idea. But it fights with um soccer, track and field, um softball. There’s really no future, there's no way she's going to play it in high school” (Parent 10). Additionally, another parent noted that other sports, such as basketball, as available in middle school which was attractive for their child as they could play with their friends in school on the team. Last, one participant at this point had chosen their primary sport and was specializing which left less time for tennis participation.

General Dimension 2: Parent involvement. The involvement of dropout parents in their child’s tennis participation was coded as two higher-order themes: parent role and parent goals for child’s sport participation. Within the two themes were five lower-order themes, 12 sub-themes and 43 raw data citations (see Table 20).

Table 20. Parent dropout involvement

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
Parent Involvement	Parent role in child's participation	Emotional support	Emotional support (2)
			Encouragement (3)
		Active sport parent	Parent-coach (4)
			Challenge child (2)
			Watch matches and practice (2)
		Decreased involvement through transition	Work with coach (4)
	Stopped playing tennis with child (1)		
	Parent goals for Child's sport participation	Child-directed goals	Watched child play less frequently (1)
			Support child's goals in sport (2)
		Task goals	Fulfill potential (2)
Be competitive (1)			

Parent role in child's participation. Parents' role in their child's tennis participation consisted of three themes that were: provided emotion support, provided tennis-specific support, and decreased involvement through transition.

Emotional support. Parents of dropout participants saw one of their roles as providing emotional support for their child during the transitional period to traditional tennis. First, parents discussed trying to build self-esteem and confidence while supporting their child before and after matches. For example, one parent stated, "I mean mostly I think it was a lot of emotional support, especially when we were in match play and things like that" (Parent 11). Parents used encouragement and talking with their child about tennis as means of providing emotional support. Parents also cheered for their child during matches and used positive encouraging statements. For example, one parent stated, "I definitely support him through the game. Like go, you did good job, you can do it, go for it" (Parent 12). Additionally, parents had discussion with their child when they noticed stress or anxiety was occurring before a match.

Active sport parents. Parents provided tennis specific support in four ways including acting as a parent-coach, challenging their child in tennis, watching matches and practice, and working with the coach. First, several parents spoke about acting as a parent coach such as Parent 9 who stated, “Certainly, I'm the, I'm the parent, I'm the, what's it called, the coach parent at home. That's my thing. My dad was doing that for me and it just kinda a natural avenue.” Other parents spoke about providing feedback and helping their child focus on specific factors in matches such as the other players weaknesses or execution of specific skills. Parents also spoke of challenging their child in tennis by pushing them into competitions and also spent time practicing with their child by playing with tennis with them. Last, parents spoke about working with the coaches to help their child improve in tennis and overcome the fear and anxiety they were experience in competitions.

Decreased involvement through transition. Two parents lowered their level of involvement through the transition to traditional tennis. One parent spoke about not playing together with their child as much as they did during 10u tennis due to the lack of time available and the child surpassing their parents level of skill. The second parent did not watch her child play tennis as much for both practices and matches and instead began to just drop her child off. Her reasons for not watching was again because of a busy schedule and lack of time.

Parent goals for child's sport participation. Two themes were coded for parent’s goals for their child’s sport participation. These themes included child-directed goals and fulfilling potential with 3 lower-order themes, and 10 raw data citations.

Child-directed goals. The primary type of goals parents had for their child’s sport participation was based on their child’s goals. Parents wanted their child to accomplish their own goals in sport and tried not to impose their goals on them. This type of goal was apparent with

the following quote, “I have none. Whatever she wants to do, I'll fully support. It's really what she's interested in” (Parent 9). Another parent, when speaking of their child’s other sport participation also supported her child’s own goals as she stated, “I need him to be as he wants you know, have a scholarship for college if that's what he wants” (Parent 12).

Task goals. Parents also adopted task related goals for their child’s participation which included their goal for their child to fulfill their athletic potential. Parents discussed how they wished their child would fulfill the athletic potential they believed their child possessed. For example, one parent stated, “We um like I said she's an athletic kid, so we wanted her to start to fulfill what we thought was potential” (Parent 11). Another parent also spoke about fulfilling potential as he noted,

I mean I wanted her to be the best that she could be. For her to be the best that she could be. I mean, it's, it's that simple. I mean it's, the bottom line when you get to this level, you can't force them to do anything. (Parent 10)

General Dimension 3: Parent considerations for child's participation. For parents of dropout athletes, they spoke about the factors and challenges they considered for their child’s participation in tennis. As can be seen in Table 21 within those two codes, were six lower-order themes, eight sub-themes, and 61 raw data themes.

Table 21. Parent dropout considerations for participation

General Dimensions	Higher-Order Themes	Lower-Order Themes	Sub-Themes
	Factors considered for participation	Required commitment for tennis participation	High cost (2)
			High time commitment (3)
		Competition characteristics	Lack of recreational pathway (1)
			Difficulty finding local tournaments (1)

Table 21 (cont'd)

Parent Considerations for Child's Participation			Competitive level of tournaments (3)
		Parent perception of sport	Enjoyed watching matches (2)
			Positive perspective of sport (3)
			Lifetime participation (2)
	Parent challenges in tennis participation	Financial and time commitment	High Cost (2)
			High Time Commitment (2)
		Individual sport issues	Decreased emphasis on team competition (1)
			Difficulty for child to play long match by themselves (1)
			Child anxiety of solo competition (2)
		Coach issues	Coach lacked ability to coach adolescent age (1)
			Negative coaching (3)
			Coach change (1)

Factors considered for participation. Parent discussed three themes when sharing the considerations that had for their child’s participation in tennis. The three themes included the required commitment for tennis participation, competition characteristics, and parent perceptions of sport.

Required commitment for tennis participation. For their child’s participation in tennis, parents considered the financial and time commitment required for their participation in tennis. First, parents perceived tennis as an expensive sport. For some parents, the expense of the sport was surprising such as for Parent 9 who stated “I had no clue. Um so that was, that was eye-opening. The financial part of it, it can be expensive. Court time is expensive. I didn't think it would be as expensive.” Other parents spoke of the need for families to be of high socioeconomic status to be able to participate and that talent alone isn’t enough for children to succeed in tennis. Beside the high cost of participation, the time commitment was also

considered by parents when deciding whether to have their child continue or dropout of tennis. Overall, parents perceived that there was a significant time commitment if their child wanted to stay competitive in tennis.

Competition characteristics. Three factors related to tournaments and competitions were considered by dropout parents. First, parents considered if there was a recreational competitive pathway for their child to participate in. As many of the dropout athletes were also playing other sports and lacked the time to commit fully to tennis, parents considered whether there was a recreational pathway that required less time but allowed their child to still be competitive. This was illustrated by the following quote,

Could we have kept her in it recreationally? And we did have some of those conversations with coach [name]. Could we have kept her in a recreationally once a week, you know just for the fun of it sure but then we still wanted to start going to tournament and be successful and those kind of things. (Parent 11).

Related to this consideration, parents also looked for local tournaments that required less of a time commitment than higher level tournaments which require more travel time. Last, parents felt that other players in tournaments had already specialized in tennis and were therefore at a high skill level than their own children. Parents then had to consider whether they should have their child primarily focus on primarily on tennis in order to remain competitive at tournaments or continue participating in multiple sports that would make tournaments and competition more challenging.

Parents perception of sport. Parents own perception of their child's tennis participation was considered and this theme consisted of the enjoyment parents had seeing their child compete, the positive perception they had for tennis as a sport, and the potential lifetime

participation that tennis offered. First, parents enjoyed seeing their child play in tournaments and seeing them compete. For example, one parent stated, “I loved the competition, I loved going to the USTA tournaments. Um so there's, there was that. Um I loved seeing her compete” (Parent 10). This enjoyment led parents to want their child to continue participation in sport. Second, parents had an overall positive opinion of tennis with many parents repeatedly stating that tennis was a great sport that they have enjoyed throughout their own lives. Last, the potential for lifetime participation in tennis served as a factor for considerations such as for Parent 12 who said, “I think it's a very good sport. He can play tennis any time during his life, with his family.”

Parent challenges in tennis participation. Dropout parents reported three major types of challenges for them as parents with their child’s participation in tennis. The three types of challenges were the high financial and time commitment, individual sport issues, and coach issues.

Financial and time commitment. While all parents discussed the high cost of tennis, only one parent cited this as a challenge. For this parent, the high cost of tennis restricted the ability for their child to participate in multiple sports. For the high amount of recommended hours to spend in the sport, this parent felt it was prohibitive to also participate in other sports as she said, “So when you start doing the math, when we started hearing 10-12 hours, that's a pretty cost prohibitive practice or sport if you also want to do other things” (Parent 11). The high time commitment was a challenge for two parents as they felt that while participating in other sports, there was a lack of time to continue playing tennis at the competitive level where most other players were specialized.

Individual sport issues. Three factors related to individual sport characteristics were discussed as challenges to continued participation in tennis. First, parents felt that there was less

emphasis on the team aspect of tennis as their child transitioned to traditional tennis. While junior team tennis was often discussed an enjoyable format for their child, team tennis was not perceived as a competitive level activity once in traditional tennis which led to a lack of recreational pathway for participants. Second, parents perceived that competing in a long match by themselves was challenging and not enjoyable for their child. Last, as discussed previously the anxiety and fear that competition created for their child was also a challenge for parents for wanting their child to participate in tennis.

Coach issues. Several parents spoke of issues related to coaches through the transition that included the coach not transitioning their style to the adolescents age. The parents felt that the coach used the same approach as they did in 10u tennis that did not challenge their child enough. Parents also observed negative coaching behaviors that served as a challenge such as for Parent 12 who noted, “We went to find another club because one of the coaches wasn't really, has a good motivation like... not positive sometimes. Just you know listen, go fast, just throw the ball, hit the ball back, not give them instruction.” (Parent 12). Last, one parent experienced a coach change that occurred during the transition which led to their child having a less competent coach making their child less excited and enthusiastic about going to practice and playing tennis.

Dyad Idiographic Narratives

While the nomothetic analysis provides a general understanding of the experience for children and parents in their transition from 10u tennis to traditional tennis, there is a loss of the unique elements of each participant dyads experience and perspective. With the nomothetic approach, data can be misrepresented through the quantification of qualitative data. By sorting themes and raw data citations into categories, there may be overlap between themes and categories that is not apparent. Therefore, to circumvent the weakness of the nomothetic

approach, idiographic narratives for each participant dyad in the form of case studies were created. The ideographic approach provides a more complete understanding of each dyad and shows the unique experience of each child and parent through the transition from 10u tennis to traditional tennis. While narratives were written for each of the 12 parent-child dyad, for the purpose of this results section four dyad narratives will be included. The remaining parent-child dyad narratives can be found in Appendix I.

Participant dyads participated at a variety of different tennis clubs and played with a diverse set of coaches. With this experience and the unique backgrounds and personality differences, parent-child dyads have different perspectives on the transition to traditional tennis and their reasons for either continuing tennis or dropping out. Four parent-child dyads were chosen for this results section represented each category of participation: recreational, specialized, and dropout. Additionally, all three levels of parent involvement were included and almost all transition types. All four show the range of experiences and perspectives that parents and children have towards 10u and traditional tennis.

Table 22. Participant dyad ideographic narrative demographics

Dyad	Names	Relationship	Category	Transition Outcome	Parent Involvement
2	Frances and Andy	Mother-Son	Recreational	Successful-Delayed	Low
8	Leslie and Allison	Mother-Daughter	Specialized	Successful	High
11	Susan and Lauren	Mother-Daughter	Dropout	Crisis	Moderate
5	Ralph and Ben	Father-Son	Specialized	Successful	High

Recreational Successful Transition Dyad Two

Dyad 2 consisted a mother, Frances, and her son, Andy, aged 10 almost 11, who started 10u tennis at age 5 and transitioned to traditional tennis at age 10. Frances was stay at home and the father a business owner and they were married. They have a daughter who is younger, age 8, who has not played 10u tennis. Frances had a graduate level education and her husband had a bachelor's degree and they earned an average yearly income of over \$200,000. Both had high school level tennis experience.

Andy went through the standard sequence of ball type in the 10u program and played junior team tennis. He liked junior team tennis because was able to use what he learned in practice in his matches and felt he got better through playing team tennis. He had two coaches in 10u tennis and fortunately his first coach, who was strict and not nice, switched clubs and he was able to play with his second coach who was really nice and encouraging. Andy now plays group tennis once a week, has one private lesson a week, and plays junior team tennis all with the yellow ball, although does not play USTA tournaments. During his transition to traditional tennis, Andy found challenges in that some of his friends moved up before him and were no longer in his classes, the ball bounced higher and was harder to hit, and he now has two coaches again. An especially challenging aspect for him is that his two coaches are teaching technique and skills in different ways. However, some good aspects of the transition include his skill improvement and making new friends. Andy's transition occurred when his coach told him he was going to move up. He started a new yellow ball class but was soon moved to a lower level as he was having trouble keeping up with the other kids. A significant source of motivation to continue in tennis comes from his coach and the relationship he has with her. He also wanted to

continue because he got better at tennis, has friends in his classes now, and enjoyed the sport. Andy's goals were to get better and play tennis in high school.

Frances signed up her son for tennis because it is a lifetime sport and because her husband is good at tennis. She liked the 10u program he was in and especially liked the consistency of the same coach through the levels and the games approach used in the classes. However, some challenges were the transitions between the balls with some kids moving up before others that changed the dynamics of the personal relationships within the children. The reasons that Frances had kept her son in tennis included the fun he was having, that he truly liked it, and his potential to go further in the sport. Some challenging factors she encountered was the high cost of the sport, the difficulty her son is having playing with the yellow ball, and the different levels of ability amongst players in his classes. An especially challenging factor results from him being moved down to a lower level class after transitioning to yellow ball and this has caused him to be coached by two different instructors. His new instructor now does not teach as well as the first coach. She has not signed him up for any tournaments because she has not really paid attention to them and he has another sport that he plays on the weekends, so time is not available to participate. Frances sees her role as a driver and financer of his tennis participation but also to play with tennis with him and motivate him. Her goals for her son in tennis is to have him continue to play and be happy and positive about tennis.

Specialized Successful Transition Dyad Eight

Dyad eight consisted of a mother, Leslie, and her daughter, Allison, age 10, who started 10u tennis at age 6 and transitioned to traditional tennis at age 8. Allison does not currently play any other sports but had previously participated in swimming but quit after her tennis coach told her it was not helping her tennis and was instead taking time from practice. Leslie is a

neurodiagnostic tech and her father is self-employed, both with graduate level education. Their average yearly income is between \$100,000-\$149,000 and while the mother had no experience in tennis, the father played recreationally. Allison is an only child, is very inspired by Maria Sharapova, and refers to tennis as her career. Her parents spend about \$700 a month on her tennis participation.

Allison started 10u tennis with the orange ball and she progressed to play with the green dot ball for about a year or two. After changing coaches to a more engaged and strict coach, her skills improved, and she began playing tournaments. At her first tournament with the orange ball, Allison finished in 8th place but won a medal and received a certificate. Her transition to traditional tennis happened suddenly when her coach surprised her with yellow balls at her private lesson. She was nervous about the transition and struggled at the start but has now gotten used to the playing with the yellow balls. Allison currently plays in group classes, has private lessons, plays team tennis, and has a footwork coach. She enjoys the fun drills and games she plays in practice and knows she is doing well from her coach's feedback and pride in her tennis game. She also enjoys the challenge that traditional tennis brings with tougher coaches and learning new skills.

Some challenges that Allison has encountered in traditional tennis includes learning how to hit the new bounce of the yellow ball, having to work harder and run more, and playing in groups with older youth who have more trick shots and hit harder. However, she also noted that sometimes the older kid's skill level is lower than hers, which makes her bored, which happens often in junior team tennis matches. To overcome these challenges, Allison increased her practice time, asked for more private lesson from her parents, and spends time off court visualizing her technique. For support, leans on her parents who buy her the best tennis

equipment and support her as well as her coach who recommended training session for footwork. Allison's sources of motivation start with the inspiration she has from watching Maria Sharapova. She is also motivated because tennis is more fun for her with the yellow ball and her pride that she started 12 and under competition as a 10-year-old. Her goals for the sport include learning more trick shots, making the high school tennis team, and getting a college scholarship.

Leslie signed Allison up for tennis classes because her family all played tennis growing up and she thinks it's a great sport. Leslie liked the progression she took through the 10u program and thought that practicing with the green dot ball for a long time helped her with footwork and confidence. The best aspect of the 10u program was their second coach, who Leslie loves and saw lots of improvement in Allison's game after switching. The factors that she considered as a parent when keeping her daughter in tennis included the coach, who she thought was strict and does not waste her money. Other factors included how fast her daughter was making progress, the potential her daughter has, and how much she loves it. Leslie also considered long-term factors as well such as always being able to play tennis, it's a social sport, potential to teach, and earning a college scholarship.

The barriers to her daughters continued participation is that she wonders why she's spending so much money as it is an expensive sport. Leslie also sees a lot of cheating occurring during her daughter's tournaments and does not like dealing with obnoxious parents who cheer loudly and get in fights. Last, she finds the USTA website very confusing, knowing how and which tournaments to sign her daughter up. To keep her daughter in the sport she goes to the coach for advice, has added personal training, increased the amount of tennis, and spend more money on workouts and private lessons. Leslie sees her role as supporting and teaching her daughter lessons through tennis such as hard work and understanding that everyone loses. She

also sees herself as financial support paying other people to guide and navigate her daughter and will do whatever she needs to do as a parent. Leslie goals for her daughter's tennis participation including getting a college scholarship, seeing her play at Wimbledon, and hopefully one day supporting her mother. Last, she wants her to move forward as much as possible and not get stopped in tennis.

Dropout Crisis Transition Dyad Eleven

Dyad 11 consisted of a mother, Susan, and her daughter, Lauren, age 13, who started 10u tennis at age five, transitioned to yellow ball tennis at age 10, and dropped out of tennis at age 12. She is currently playing basketball and volleyball. Her mother is a stay at home mom and her father is a college basketball coach. They both have bachelor's degrees and have an average yearly income of over \$200,000. While the mother has no experience in tennis, the father has played recreational tennis during his youth. They have another daughter and son both younger who are and will participate in 10u tennis.

The daughter progressed through all levels of 10u tennis and played tournaments mostly in green dot ball. She felt she got better in 10u tennis and like her coach who was nice to her on and off the court. After transitioning to traditional tennis, she played in both group classes and took private lessons, while still participating in tournaments. Her yellow ball classes were harder and she was not as good as she was in the 10u program. She also thought her friends were getting better than her and other people started catching up to her skill level. However, she liked the challenge of hitting the yellow ball and meeting new friends.

Some challenges Lauren encountered during her transition to traditional tennis were that tournaments were beginning to be stressful and she was not winning as much as she used to. She continued to try to get better but would get nervous when thinking about how hard it would be.

She also noted that her classes got harder and other players were improving more than her. Lauren attributes her decision to drop out of tennis to a loss of interest as she had played the sport for so long it became boring. She decided to stop playing tournaments because of the stress it caused. Last, she started to like volleyball more because she enjoyed trying a new sport and having new experiences. Her goals are to have fun with basketball and hopefully play college volleyball.

Susan signed Lauren up for tennis class as it was offered at the club they were members and thought it would be a good introductory, entry level sport to build hand-eye coordination. She liked her daughter's progression through the 10u program and liked the progression itself as she thought it made sense and felt it was a good mix of skill development and fun. The factors Susan considered as a parent included the time commitment necessary to compete in tournaments. This time commitment was prohibitive in allowing for multi-sport participation that she and her husband favored. Additionally, she considered the high cost of the sport that also made it difficult to financial support multi-sport participation and was more costly than other sports. Susan noticed her daughter was having difficulty with footwork, which would require more time into the support to improve. Last, she noticed that at tournaments there was a big difference between her daughter and the best, who were often specialized in the sport already.

Some barriers Susan experienced included the prohibitive schedule, the lessening emphasis on the team aspect, the difficulty for 10-year-old kids to play long matches without help, and their coach not transitioning well from coaching a child athlete to an adolescent athlete. Susan attributes her daughter's decision to drop out to wanting to play numerous sports and that other kids in the tournaments were a higher level. She believes her daughter would have continued to play if there was a competitive recreational pathway. Susan saw her role as taking

her to and watching all practices and matches, giving feedback, and positive encouragement. Her goals include wanting her to be competitive and fulfill her athletic potential.

Specialized Successful Transition Dyad Five

Dyad 5 consisted of a father, Ralph, and his son, Ben, age 10, who started 10u tennis at age 7 and transitioned to traditional tennis at age 9. Ben does not currently play any sports but may start recreational soccer soon. He sampled a variety of sports including baseball and flag football but continued with tennis because his parents thought it was safe and where he had potential. Ralph is a healthcare executive with a graduate level education and his wife is a home maker with a bachelor's degree. Their average yearly income is over \$200,000 and both have recreational level tennis experience. They have two other sons who are both older and participated in 10u tennis.

In his 10u experience, Ben mostly played with the green dot ball and never played with the orange or red ball in practice. At most, he played only 2-3 months of green ball in classes and then began to use the yellow ball. As a result of his family moving, Ben had a variety of coaches during his 10u experience, one who was nice and two who he described as mean. However, Ben did play one orange ball tournament where other players cheated on line calls. When other players cheated, he would get frustrated and have to call a line judge. His current participation consists of group classes, singles and doubles match play, private lessons, and junior team tennis all with the yellow ball. Ben has not been able to play a yellow ball tournament yet, although he was signed up for one, he had to cancel due to a thumb injury.

Some challenges Ben faced during his transition to yellow ball included playing more difficult opponents who hit harder and had some difficulty with hitting the net often and serves constantly landing out. However, he believes nothing was very difficult during his transition and

he enjoys playing with friends and socializing the most. Ben's transition to yellow ball occurred after he took a test and his coach moved him up but it didn't feel like much of a transition because he always played with yellow ball with his family. However, it is important to note that he reported a drop-in skill level from the 10u program to traditional tennis.

Things that have helped Ben during the transition included practicing with brother, playing more tennis, asking his coach for more help. His sources of support come from his dad, who has gone to USTA meetings and sets up his practices as well as his coaches and brother. He was motivated to continue because he sees what other players and the professionals are doing and wants to reach that level. Ben is also motivated because he's successful at tennis and likes being good. Finally, he like being around his friends and playing the sport. His goals for tennis include playing division one college tennis, becoming a professional tennis player, and playing in high school. Ultimately, Ben believes that they should get rid of the youth progression as it is making people leave the sport because they are forced to play on a lower level ball when they are able to play with yellow.

Ralph chose to sign his son up for tennis as it is a safe sport and has the greatest potential for his son to shine and give his personal best. At the start, he was unaware that a youth progression (10u tennis) existed and was more aware of the variations of technique taught by different tennis coaches. Ralph believed his son played with orange ball for a year and then moved to yellow ball which is different than what his son reported. At the start of his son's tennis participation he found that there is no consistent curriculum that coaches teach with and that there is no parent education on the 10u progression. The factors Ralph considered when deciding to have his child continue participation in tennis was that tennis is a lifetime sport and is convenient in that it does not take much equipment to play. He also thought it would help them

with college. Although it is not a cheap sport, Ralph decided that the value his children are deriving from the sport warrants the continued financial commitment.

Challenging factors Ralph encountered included the lack of ecosystem between the coach, parent, and child in terms of goals for the game. He felt that he was often unaware about where the child is going in sport and coaches are not educating parents and guiding the path between practice and competitions. To overcome this, Ralph has become a very involved parent as the coordinator between his sons two coaches and even interview potential coaches on how they can help his son's tennis. Ralph has also had confusion on the tournament structure and frustration about how tournaments point systems are designed. To learn more and understand the way competitions work Ralph has called, written, and attended USTA meetings on the tournament structure. He reports spending 5-6 hours a week on his child's tennis, setting up match play, extensively collaborating with coaches, and going to all tournaments and taking notes. Ralph's goals for his son's tennis participation including dreaming of him reaching the pro level but at minimum at least playing Division 2 college tennis.

Summary. The case-study narratives show the unique experiences and perspectives of participant dyads during their transition from 10u to traditional tennis. While many experienced similar challenges and considerations for their involvement, the case-study analysis shows how the experience could shape the dynamic between parent and child. Additionally, while some participants played tennis at the same club, the narratives provided evidence that allow the situation is similar, individuals perceive the same situation differently depending on the background and personal characteristics.

CHAPTER V

DISCUSSION

The purpose of the current study was to understand why adolescents decide to continue or dropout of tennis and the role the transition to traditional tennis has on their decision. In this chapter, the results from the content analysis on 12 parent-child dyads (24 interviews total) will be discussed relative to similarities and differences amongst the three categories of participants and current research on engagement, attrition, and within-career transitions in youth sports. The study strengths and limitations as well as future research directions and practical implications for tennis players, parents, and coaches will also be discussed.

Similarities and Differences Amongst Participants

Transition to Traditional Tennis

Similarities. There were a number of similarities for all three categories of participants in terms of their transition from 10u tennis to traditional tennis. First, all participants had a positive perspective of their 10u experience. Participants believed they had improved their skills in tennis during 10u tennis and felt prepared for when they transitioned to traditional tennis. Child participants also spoke about the friends they had in 10u tennis and how their friendships were a sense of motivation to play tennis during their time in 10u tennis.

Once transitioned to traditional tennis, all participants noticed three major differences from 10u tennis. The three differences included learning new skills and advanced technique, difficulty adapting and hitting the yellow ball, and playing more skilled opponents. Parents also discussed these differences as difficult aspects of their child's transition to traditional tennis. However, not all child participants referred to these differences as challenges. To help cope with the challenges, all participants turned to their parents and recreational and specialized

participants used their coaches as resources. Last, all participants perceived a decrease in their skill level during the initial transition to traditional tennis.

Differences. While similarities did exist between all 12 child participants, there were also marked differences in their transition to traditional tennis. First, the progression through the 10u levels was different for each category of participants. Specialized participants reported a quick progression, as did their parents, while recreational participants had a mix of progression types, and dropouts followed the standard progression. The level of parent involvement through the transition also varied, with specialized participants perceiving a higher level of involvement from their parents. In addition to high parental involvement, specialized participants felt their coach also became more involved in their tennis development during the transition. For dropout participants, parent involvement decreased through the transition, while recreational participants had a mix of parent involvement levels. Related to parent involvement, specialized participants were the only group to discuss a perceived change in their parent's behavior from a focus on fun to one on outcomes and effort. This change may reflect a reciprocal relationship in which as the more a child becomes involved in tennis, the more parents increase their involvement that increases their child's involvement.

Competition was not enjoyable for dropouts in traditional tennis and through the transition was perceived by both child and parent participants as a challenge. However, for specialized and recreational participants, competition was cited as a positive aspect of their tennis participation and a reason for continuing participation as perceived by parents. While both specialized and recreational players spoke of strategies they used to help them through the transition, only recreational players used emotional strategies such as staying positive and optimistic. Additionally, to help them through the transition, specialized participant also felt

support from peers and siblings while recreational participants used support from parents and coaches and dropout participants only spoke of support from parents. This additional family support was also noted by parent specialized participants as they spoke of the family influence as a reason for their child's participation. Last, recreational participants felt that over time their skills improved in traditional tennis after the initial decrease at the start of the transition. Dropout athletes did not perceive an improvement in skills and rather felt they had the same skills level as in 10u tennis or a continual decrease of their skill as compared to peers.

Child Motivation to Continue or Dropout

Similarities. Some reasons for continuing in tennis and dropping out of tennis were similar for participants in all categories. Perceived competence had a role in the decision to continue or dropout which was also reported from specialized and recreational parents as a source for their child's motivation to continue in tennis. Additionally, for all participants, the enjoyment they had spending time and playing tennis with friends was a strong source of motivation. There was also a similarity in the goals participants had, as all categories of participants had a task related goals for skill improvement.

Differences. Specialized, recreational, and dropout participants had differences in their reasons for continuing and dropping out of tennis. For example, recreational participants cited their relationships with others, such as the coach and peers, as a source of motivation to continue. Specialized participants spoke about the inspiration they had from professional tennis players which was also perceived by their parents as a source of motivation. For dropouts and also perceived by parents, their interest in other sports was a primary reason for their decision to quit tennis participation. Another primary reason for dropouts was their dislike of competition as it caused them stress and anxiety. Additionally, one dropout spoke about the role of her academic

transition as a reason for dropout which parents attributed to the individual aspect of tennis competition. Last, while all participants had a goal to improve their skills, their outcome goals differed. Specialized participants had the goal to play tennis at the collegiate level and earn a scholarship and eventually become a professional tennis player while recreational participants wished to reach just the high school level.

Parent Involvement

Similarities. From both qualitative interviews and the 10u program quality survey, it was evident that all categories of participants had a favorable view of the 10u program, especially with the format which they believed was developmentally appropriate and enabled their child to learn tennis easily. Another similarity came from the types of support parents provided which included both emotional support and being an active sport parent by watching practices and matches, working with coaches, and playing tennis together with their child.

Differences. While all three categories of parents provided emotion and tennis-specific support, specialized participants provided mental support to help their child become more mentally tough and learn life lesson through their involvement in tennis. Additionally, specialized parents began to spend more time on their child's tennis while other categories did not report the same increase. Another difference came from the goals that parents had for their child's tennis participation. Specialized participants were focused on their child earning a college scholarship while recreational participants wished for their child to gain the social and physical benefits that result with sport participation and to also fulfill their athletic potential. One factor of consideration, potential lifetime participation, was evident for all three categories of participants.

Specialized parents considered the potential for college scholarship opportunities through their child's participation, while recreational participants had a rule for their child to participate

in one sport in order to stay physically active. For dropout parents, the difficulties they had with competition characteristics were considered. For both dropout and recreational participants, the required cost commitment was considered and for specialized and recreational participants the skill level/talent of their child was also considered. The last differences for parent participants was with challenges they faced in their child's tennis participation. Specialized and recreational parents felt that tournament characteristics were challenging as they were confused on the USTA tournament structure and the financial commitment and coach issues were also a challenge for both specialized and dropout parents.

Parent-Child Differences

Between parent and child participants there were common differences in their perspective of the transition to traditional tennis and reasons for continuing or dropping out of tennis. Parents perceived issues with the coach and coach behaviors more so than child participants did. Child participants recognized an initial decrease in skill level once in the yellow ball which parents did not observe this change in competence. While all participants mentioned the role friends had in their decision to continue, parents did not see friends as a motivating factor. Last, specifically for dropout participants, children cited lower perceived competence in tennis after transitioning to traditional tennis which was not observed by parent dropouts.

Motivation to Continue Tennis and Reasons for Dropping Out

The results of this study showed that players had number of reasons for either continuing or dropping out of tennis. Many of the factors discussed by participants were similar to those found in past research on motivation and dropout in youth sports and included both intrinsic and extrinsic sources of motivation (Gould, Feltz, Horn, & Weiss, 1982; Rottensteiner, Laakso, Pihlaja, & Konttinen, 2013; Ryska, Hohensee, Cooley, & Jones, 2002). Descriptive reasons for

participation included many of those found in the literature such as having fun, improving skills, doing something their good at, winning, and making friends. Reasons for dropout also matched descriptive reasons of past literature such as change of interest, desire to focus on school, wanted to play another sport, and not good as wanted to be. However, for the participants in this study there were many descriptive reasons found in past literature that were not apparent in dropouts such as excessive parental pressure, and interpersonal issues with teammates. Unique to this population was the stress of individual competition and being watched by spectators and parents.

Beyond the descriptive reasons given by participants, there were underlying themes related to their decision to continue or dropout of tennis. First, perceived competence in tennis was a significant reason for choosing to continue or dropout of tennis. This was not surprising with the many motivational theories and research on sport dropout and engagement which cite perceived competence as a predictor of sport participation such as the Competence Motivation Theory and the Self-Determination Theory (Deci & Ryan, 1985; Harter, 1978). Two sources contributed to perceived competence according to the participants and seemed to be based on their achievement goal orientation. Specialized and dropout participants who had more of an ego-orientation spoke of their competence to win matches and beat other players, while recreational players with more of a task orientation described their motor competence in performing tennis skills.

Dropout participants reported having less perceived competence or improvement in tennis skills through the transition than did recreational and specialized participants. This is similar to previous literature that has shown a positive relationship between perceived motor competence and sport engagement (Meester et al., 2016). In fact, in a review of the literature Balish et al. (2014) found that low perceived competence was the factor most consistently related

dropping out of youth sports. This low perceived competence was often discussed in relation to peer comparison for dropout participants and how their peers seemed to be improving at a faster rate. This is similar to the perception of control aspect of the competence motivation theory that states that if an individual feels little control in their ability to learn, negative emotions will result and they will have decreased motivation to continue participation (Harter, 1978).

As mentioned previously, dropout, recreational, and specialized participants had varying achievement orientations. Based on the descriptions provided by Nichols (1984), dropout and specialized participants were more ego-oriented and based their perceptions of competence on tournament outcomes and peer comparison in group classes. Recreational participants were more task-oriented as they mainly judged their improvement based on ease of performing skills and feedback from coaches. This difference in achievement orientation helps to explain why participant chose their level of participation they did. Specialized participants in their transition to traditional tennis had success in tournaments that increased their motivation to continue as per the achievement goal theory (Nichols, 1984). Dropout athletes however, experienced less success in traditional tournaments than in 10u tournaments that decreased their motivation to continue participation in tennis.

Interestingly, specialized participants were the only group to cite professional athletes as a source of motivation that aligns with previous literature on sport participation motives for minority youth (Stodolska, Sharaievska, Tainsky, & Ryan, 2014). As noted in the results section, two of the specialized parent-child dyads were of minority background and the remaining two had strong ties to their country of birth, which may lead them to feel in the minority in the US. This may be because youth tend to over-identify with the athletes of similar racial and ethnic makeup (Coakley, 2005). Specialized participants reported being fans of professional tennis

players that were from the countries in which they were originally from, providing support for the notion of over-identification with professional athletes of similar racial and ethnic makeup.

Enjoyment also had a role in whether athletes decided to continue or dropout of tennis. While enjoyment was only cited as a reason for continued participation for recreational participants, dropout and specialized participants also spoke about the fun they had in tennis throughout their interviews. Sport enjoyment is a primary predictor of sport engagement and the results of this study support the critical role enjoyment plays (Casper, Gray, & Babkes-Stellino, 2007; McCarthy, Jones, & Clark-Carter, 2008; Visek et al., 2015; Weiss et al., 2001).

Recreational and specialized participants both cited competition as an enjoyable aspect of their tennis participation while dropout participants spoke of competition as a source of stress and anxiety. Considering that competition against someone of the same ability level is enjoyable for 10 to 11-year-olds and playing against someone of higher-ability level is fun for 12 to 13-year-olds, it makes sense that dropout participants enjoyed competition less as they perceived their skills as lower than their peers (Gano-Overway et al., 2001). Also, with the increase in competition in traditional tennis as compared to the focus on fun and skill development in 10u tennis, it makes sense that participants began to dislike tennis due to their lack of enjoyment of competition. With the decreased enjoyment dropout participants were having in tennis, the results of this study provide support for the critical role sport enjoyment has in continued tennis participation and commitment (Weiss et al., 2001)

A primary reason for dropout participants decision to quit tennis came from the anxiety and stress that resulted from tournament competition. While this reason may be related to pressure that participants felt to be successful, only one participant spoke about perceived pressure that they felt was self-imposed. Their dislike of competition rather was in the context of

self-presentation and social evaluation and the anxiety that resulted from having to perform in front of others. Within the literature, social evaluation is a source of competitive stress and anxiety (Bray, Martin, & Widmeyer, 2000). Moreover, Simon and Martens (1979) have shown that individual children's sports are associated with greater stress than team sports. For dropout participants, they were not able to cope with the anxiety that resulted from being evaluated by others on the court. While not expected as a reason for dropping out of tennis, this finding shows support for the role personality may play in a child's decision to continue or dropout of a sport. For dropout athletes, this anxiety was not as prevalent in the team environment of the other sports they played and instead was more apparent in individual sports as they were on the court by themselves.

Interest in other sports was another primary reason why participants dropped out of tennis. This was not surprising as in the early years of sport participation many players are sampling a variety of sports and as they get older, begin to specialize in a chosen sport (LaPrade et al., 2016). For tennis players specifically, this provides support for the mediational model of sport enjoyment (Weiss et al., 2001) which includes attractive alternatives as negatively correlated to tennis commitment mediated by tennis enjoyment. Other sports, such as basketball, volleyball, and soccer provided participants with new experiences and the participants enjoyed the team aspect of other sports. Their preference for team sports made sense with the anxiety they felt performing on the tennis court by themselves and the desire to be around friends and peers typical of this age group. It may be helpful for coaches to be able to recognize children who are susceptible to performance anxiety and provide them the resources to cope with their stress rather than avoiding participation and choosing another sport.

For the four participant dyads categorized as specialized, the child's average age was 10.5 years which is considered early sport specialization. The early age of specializing is concerning for multiple reasons. First, research has found that early specialization leads to burnout, overuse injuries, and decrements in performance (LaPrade et al., 2016). Second, as dropout parents believed, the required early specialization in youth tennis hinders multiple sport participation that is related to longer sport careers and positive youth development. The USTA may need to continue the 10u program beyond just 10 years as an effort to promote multi-sport participation for prepubertal children.

A source of motivation to continue came from interpersonal relationships participants had within their tennis participation. Peer relationships were a common theme for participants in this study. All participants spoke of the positive friendships they had developed with other players in their classes. For specialized participants who spent the most time in tennis, friends were cited a source of motivation to continue but also as a source of support. For recreational participants, who all participated in Junior Team Tennis, friends were a positive aspect of their participation through their encouragement during matches. The importance of friends was not surprising as friendships have been found to have a role in sport engagement (Fraser-Thomas et al., 2008). The coach relationship was also a source of motivation with supportive and engaging coach behaviors cited as enjoyable aspects of participation for both child and parent participants. This is similar to past research that has shown the relationship with the coach as a critical factor in continue sport participation (Fraser-Thomas et al., 2008; Pelletier et al., 2001).

For participants in this study, environmental factors were not a barrier to participation. Participants in this study were from, on average, high SES families many with incomes of over \$200,000. Only two dropout parents spoke of the cost of participation as a challenge or barrier to

participation and only because their child was playing two additional club sports that also required a financial commitment. One specialized parent who had the lowest income of all participants noted that her ability to afford tennis was because the cost was much lower than average as she was a tennis coach at the club her daughter played. All other participants did acknowledge the high cost of participation but felt fortunate enough to afford the cost without too much difficulty. As tennis participation is associated with a high financial commitment, the high average income of participants shows that cost may be a barrier to even enter the sport at the developmental level. The high level of participant income however was not surprising as in general, sports that are played in the club context are more popular among people of high SES (Santos, Esculcas, & Mota, 2004).

Overall all participants rated their 10u program as high quality and had a positive perception of the 10u format of modified equipment and games approach to coaching. Parents believed the progression prepared their child for traditional tennis and believed there was value in spending time with the modified equipment. This was an unexpected finding as past research on 10u coach's perceptions of tennis parents showed that parents lacked buy in and did not understand the developmentally appropriate 10u tennis format and instead were driven in a "race to the yellow ball" (Gould et al., 2016). Parents in this study had the opposite opinion with many citing early success and ability to learn the sport as a result of using the modified equipment. However, the previous study was conducted over four years ago and the 10u format may be more established in tennis clubs now and more effective in how they are implemented and designed by coaches. Interestingly, child recreational and dropout participants both spoke of their excitement to reach the yellow ball and perceived it as the better, cooler tennis ball. Specialized participants

may not have felt the same way as they progressed to the yellow ball quickly and did not have the same feeling of being “stuck” with the modified equipment.

While parents discussed a number of factors that they had considered and many challenges they had faced in their child’s tennis participation, all parents referred to the decision to continue or dropout out of tennis as a decision their child made on their own and not one that was influenced by outside factors that affected their ability to participate. For example, although some dropout parents referred to cost as a challenge, they also mentioned that if their child had wished to continue, they would not have had any trouble paying for their participation. However, there was factors that parents considered when deciding whether their child should increase their involvement in tennis or play at the recreational level such as the time commitment, the child’s potential to earn a scholarship, and the potential benefits that would result from participation such as a social network and the opportunity for lifetime physical activity.

A surprising result was that one of the most common challenges amongst parent participants was the lack of knowledge of the USTA tournament structure and the difficulty navigating the website to sign up for tournaments. Parents had difficulty recognizing which tournaments matched the skill level of their child and worried about entering their child in a tournament where they would play older players with a much higher skill level. For recreational participants, the lack of knowledge of the USTA tournament structure was a barrier for their child to compete in tournaments as they were unsure how to sign them up through the website and did not know what happened at tournaments when they arrived. The parent’s difficulty and confusion regarding the USTA tournaments and website may be alleviated in the future as USTA has revealed a new structure of youth tennis “Net Generation” which aims to make the website

easier to navigate and participation easier for parents to facilitate through a coach and program search feature.

Other factors that parents considered for their child's participation in tennis included the opportunity for lifetime participation in tennis, the potential and talent of their child, potential benefits gained through participation and the required time and financial commitment of participation. A unique aspect of tennis that all participants perceived as a benefit of participation was the lifetime opportunity for participation. Other considerations about the benefits gained through sport participation are similar to those found in past research on parent perceived benefits of sport participation such as friendships and physical activity (Wiersma & Fifer, 2008). One surprising factor that was not discussed by parents was positive youth development through participation. While making friends may have led to building social skills, parents did not consider whether their child was learning life skills such as teamwork or leadership through the sport. While one parent used tennis to teach life lessons, no parents discussed how their child was learning life skills solely through participation. Past literature on parent's challenges and benefits of participation has shown that parents believed that through sport, their children could learn life skills that would transfer to other parts of life (Holt, Kingsley, Tink, & Scherer, 2011). However an interesting consideration from specialized participants was the potential for their child to use tennis as employment in adulthood.

One challenge faced for dropout parents was the high time commitment associated with participation which supports previous research conducted with tennis parents who reported sacrificing significant amounts of time for their child's tennis development. For dropouts, their children wished to play multiple sports. However, with the required time commitment to stay competitive in junior tennis there was not enough time for them to also play another sport. For

the dropout participants, there was not a recreational pathway available that required a lower time commitment but still allowed their child to play tennis competitively.

Parents also reported that early specialization of other athletes in tennis made it difficult for their child to stay competitive providing evidence of the increase in professionalism that is occurring in youth sports today (Coakley, 2015). This professionalism of tennis at a young age was a barrier perceived especially by dropout parents as they wished for their children to participate in multiple sports. Alarming, parents reported that they were advised to spend the same number of hours in tennis as the age of the child which prohibited their child to play multiple sports. The inability to participate in tennis and other sports is concerning because of the negative consequences associated with sport specialization such as burnout and injury (DiFiori et al., 2014) and the benefits associated with multi-sport participation.

The Role of the Transition on the Decision to Continue or Dropout of Tennis

Although the transition from 10u tennis to traditional tennis was assumed to be a normative transition, most participants in this study had non-normative transitions. Instead of the normative transition due to age as anticipated by the researcher, many participants transitioned based when the coach deemed their skill high enough to transition or when their peers moved up. Additionally, for specialized players, they had transitioned to traditional tennis in practice but were required to play 10u tournaments in order to be eligible for traditional tennis. Because the transition was non-normative and not predictable, this may have added additional challenges for the participants (Stambulova, 2000).

Overall, the results from this study supported previous literature on within-career transitions. Specifically, similar to the Holistic Athlete Career Model (Wylleman et al., 2016) participant's transitions were influenced by other developmental pathways at the psychological,

psychosocial, and academic levels. At the psychological level, it was clear that participants had difficulty coping with wins and losses during their transition. In traditional tennis, there was more of a focus on competitions which lead to participants experience winning and losing more so than in 10u tennis. Around age 9-11, children's self-concept is based on peer comparison and perceived competence is often based on outcome of contests (Haywood & Getchell, 2014). For dropouts, the losses they experienced when they transitioned to traditional tennis may have had a large role in their lower ratings of perceived competence in tennis because of their stage of psychological development.

Within the psychosocial level, during the 9-12 age range, children in tennis are motivated to be around their friends and peers (Gould & Nalepa, 2016). This was evident from participants in this study and their need to be with friends influenced their transition. For specialized participants, they increased the time they spent practicing and playing tennis which allowed them to be around their friends more so than recreational and dropout athletes, which may be why they cited time spent with friends as a reason for continuing their participation. For recreational participants, though they did not increase their time in tennis, they were playing junior team tennis which gave them time to play and spend with friends together. However, for dropout participants, they neither increased their time in tennis nor played junior team tennis which meant less time spent with friends in the sport. This may be why they became more interested in team sports, as participation allowed them to be surrounded by peers and friends.

Almost all participants experienced an academic change during their transition, however only one participant felt that their academic change influenced their transition to traditional tennis. This participant switched from elementary to middle school during her transition to traditional tennis. This transition overwhelmed her as it correlated with changes to tennis classes

as well and ultimately influenced her decision to drop out. However, as no other participant felt that their change in schools or grade change influenced their transition to traditional tennis, it is unclear as to whether academic transitions play a significant role in sport participation at this age. This finding is in contrast to previous literature on within career transitions which found that balancing school and sport participation was a significant source of stress for athletes during a transition (Pummel et al., 2008). However, this disparate finding may be due to the age of participants as most were in middle school which may be less demanding for older participants in high school.

The process of the transition from 10u tennis to traditional tennis was similar to the process explained by the Athlete Career Transition Model (Stambulova, 2003). This model asserts that there are specific challenges that arise when a transition occurs that athlete's need to be able overcome with coping strategies in order to have a successful transition. Challenges reported by participants were similar to those in previous literature on within-career transitions such as feelings that competitors are at a higher level and the feeling that others are watching (Pummel et al., 2008). A unique challenge for participants in this study of transitioning from modified to traditional tennis was adapting to the adult sized equipment. The change in equipment was a major source of challenge for all participants when they transitioned to traditional tennis. All participants discussed difficulties adapting to the speed and bounce height of the yellow tennis ball. Additionally, dropout athletes reported a challenge of performance anxiety that was not reported by the other category of participants.

Most participants used internal strategies such as being positive and trying hard, however recreational and specialized participants were able to use the coach as resource to improve skills who worked with them with the yellow ball before the complete transition. Specifically, with the

coaches help continued participants were able to adapt their strategy to play successfully with the yellow ball. Dropouts did not use the coach as a resource and therefore did not develop the ability to adapt their game style for the yellow tennis ball. This lack external resources for dropouts to use as strategies led to an imbalance between challenges and strategies and their inability to cope with the challenges of traditional tennis. This imbalance negatively influenced their perceived competence, enjoyment, and interpersonal relationships in tennis leading to their decision to drop out. Dropout participants transition experiences provides support for Stambulova's (2003) model which states that when challenges cannot be overcome and there is an imbalance between challenges and coping ability, negative outcomes may result.

Based on the dynamic between challenges and strategies both types of transition outcomes were experienced by participants, successful and crisis, similar to those found in previous research on within-career transitions (Stambulova, 2003). Specialized participants were all classified with successful transitions while recreational and dropout athletes had both successful and crisis transitions. As specialized participant had external support available to them to use as strategies, they were able to cope with the challenges they experience which resulted in their successful transition. However, some recreational and most dropout participants did not have access to external resources to use as strategies which resulted in their crisis transition outcome.

However, the coach as a source of support also had a significant role in the transition outcome of participants. When the coach as a resource was used as strategy, recreational participants had a delayed successful transition while dropouts who did not use the coach as a resource continued in their crisis transition. According to past literature on within-career transitions, there is the possibility that recreational participant's coach was more aware of the

struggle they were experiencing through the transition and intervened (Morris, Tod, & Oliver, 2015). With this awareness, the coach may have stepped in and intervened to assist the participants by improving their skills and giving them necessary knowledge to eventually have a successful transition. As per Stambulova's (2003) model this support from the coach during their initial struggle in the transition could be considered the intervention, which serves to help athletes experience a successful but delayed transition.

Whether participants had access to external resources to use as strategies was also related to parent involvement. All specialized participants had moderate to high parent involvement, while recreational and dropout participants had moderate to low parent involvement. The highly involved specialized parents increased the amount of time spent in tennis by having their child take more private lessons, providing sessions with fitness coaches, and spending time practicing tennis as family. Parents of specialized participants also reported increasing their involvement in tennis by working with the coaches, signing up for tournaments, learning more about the sport, and increase the amount of time their child spent practicing and competing. This high parent involvement provided the necessary resources for specialized players to have a successful transition to traditional competitive tennis. The important role of parents through the transition supports past research that has shown parents are an integral source of support for athletes transitioning to a new level (Pummel et al., 2008).

It is also important to note that specialized participants reported a larger support network during their transition as they had support from peers, siblings, and other family members which recreational and dropout athletes did not report. Coach's and parent's important role in the transition from 10u tennis to traditional tennis mirrors that found in previous within-career transition research which shows emphasis for the role of social support in successful transitions

(Lavallee, 2005; Pummel et al., 2008). Furthermore, parents and coaches may play a more critical role in the transition from modified to traditional tennis as athletes are younger and more dependent of adults than older ages where most within-career transition research is conducted.

Proposed Tennis Developmental Pathway

From the results of this study, it was clear that players took various pathways through 10u tennis and when they transition into traditional tennis. The focus of their development also varied by participant and by age as well. While the USTA has developed the 10u program as a pathway through developmental stages of tennis, it is clear a long-term approach is needed to keep children participation in tennis beyond the 10u stage. For this reason, a developmental pathway for youth tennis participants is proposed with five stages and three pathways.

1. Red Level (ages 6-7). In the first stage of tennis participation, the focus is enjoyment and the development of basic motor skills. Using primarily the red ball, children should be having fun and learning how to perform basic motor skills of running, jumping, throwing, etc through tennis. Coaches should be engaging and positive providing both structured and unstructured play. Unstructured play will help children be creative and use their imagination while structured play will allow coaches to direct skills. There should be no competition at this level and parents should be encouraged to play tennis with their child outside of their organized play.
2. Orange Level (ages 7-9). At this second stage, the focus of tennis participation should remain on promoting enjoyment. Basic tennis skills should be taught at this stage such as the forehand, backhand, etc using the orange tennis ball. Coaches should be engaging and positive and structure activities with a games approach where players work together and play cooperatively to learn skills through experience rather than being taught through

repetition. Competition should be limited during this stage. At this stage of tennis participation, coaches should start to engage in parent education on both the USTA structure as well as safe athlete development practices.

3. Green Level (ages 9-11). During the green level, higher level skills of tennis should be taught such as topspin and footwork. While coaches may want to increase training during this time for children who show early talent, it is crucial to not over-train or promote sport specialization in this stage due to the negative outcomes that can result. Rather, coaches should focus on task improvement and try to keep players in similar classes as their friends. Competition can be introduced at this level however restricted to in group classes and group practices. Coaches should help players through competition by providing feedback on effort, attitude, and skill improvement rather than on outcomes. While in the latter half of this level, the yellow ball should be introduced progressively to allow players to slowly learn how to adapt to the higher bounce, faster pace, and heavier weight of the ball before reaching the next stage of participation.

4. Yellow Ball Level (ages 11-13). Players should now be working with the yellow ball at this stage, however the green ball can be used as well in order to teach specific skills and making learning easier. At this stage, players should be participating in Junior Team Tennis playing both singles and doubles. While time in training may increase during this time, coaches should still facilitate participation of multiple sports as this has been shown to have a positive impact on overall sport development. As competition becomes an enjoyable aspect of participation during this age, coaches should focus on matching players with opponents of similar skill levels. Coaches should also be providing players

the tools to cope with losing and teach them mental skills to use competition as a positive source of motivation.

5. Competitive, Recreational, or Multisport Pathways (ages 13-18). At this stage of participation, athletes can take one of three pathways. First, players can choose to become competitive players in which they focus primarily on tennis and coaches are developing them to become high-level players. Individual competitions is started at this stage, with players competing without their junior teams. At the early stages of this path, coaches should focus on the process and development rather than results of competitions with appropriate training-competing ratios. Once older, players can start focusing on competition with year-round participation and train to win. The second pathway consists of recreational participation in which players continue with Junior Team Tennis as their primary source of competition. These players should progress together with their similar aged peers to keep competition fair and enjoyable. Coaches should prepare players for high school tennis participation and give them the tools for active tennis participation through adulthood and life. The third pathway is for player who wish to remain multisport athletes and wish to play other sports along with tennis. This pathway consists of once-a-week drop-in tennis sessions in which players can participate in tennis in low pressure environments. Sessions should consist of both skill development but also fun competitive drills and games. The focus should be on providing players the skills needed to become lifelong participants in tennis.

Applied Implications

The results of this study offer insight into why adolescents continue participation in tennis or chose to dropout. This information has implications for both parents and coaches of

tennis players reaching the transition to traditional tennis. Additionally, as the purpose of 10u tennis is to promote long-term participation in tennis, the results can inform the USTA on best practices to promote continued participation during early adolescence. Practical implications for parents, coaches and the USTA follow.

Parents

- While the child may make the decision to continue or dropout, parents should consider the factors related to the level of involvement their child wants to have. Factors that should be considered are the time commitment, the financial commitment, child personality characteristics, and the child's achievement orientation. Parents should consider whether they have the financial resources and time available to support their child's involvement in tennis, especially if the child wishes to pursue the more competitive USTA track as this seems to require a much more intense time and financial commitment.
- The transition to traditional tennis is accompanied with an increase in competition and a higher skill level with older opponents. Through the transition, players may struggle initially to adapt the yellow ball. This may result in losing more in traditional tennis than 10u tennis. For this reason, parents should focus on providing support and feedback on aspects under their child's control such as skill improvement, effort, and attitude. In other words, create a task-oriented motivational climate. Parents should avoid emphasizing outcomes, results, and social comparison during the transitional stage.

Coaches

- The coach has a critically important role in the success of the transition from 10u to traditional tennis. The coach should be aware of the how the child is progressing through the transition. By communicating with the child and being observant, coaches can proactively help players overcome the challenges they are having in the tradition. Additionally, coaches should prepare players for the transition by incorporating the yellow ball into practices over a period of time to help players adapt easier when transitioned. Introducing the child to more competitive situations where they experience small dosages of failure towards the end of 10u tennis may add in the transition as well. Of course, this assumes that the coach also helps the player learn how to deal with such “controlled” failures and disappointments while still having a fun 10u experience.
- Coaches should be educated on child development principles such as psychological and psychosocial development. The transition to traditional tennis is influenced by areas of development beyond skill level and therefore coach should be aware of the appropriate time for the transition to traditional tennis to occur. Additionally, they should be aware of how different aspects of development will influence the transition in order to format practices and group classes to fit the needs of the early adolescent age group. Lastly, they should know how to provide supportive coaching environments while also increasing the amount of challenges players will face. Child development focused coaching education should be required by tennis clubs for coaches!

- Coaches and clubs need to incorporate parent education into their tennis programs. This should start from the child's first initiation to tennis and parallel progressions the child makes in their level of play. Parents should be educated on 10u tennis format and pathway and the importance of developmentally appropriate sport for young children. Ways to allow for sport sampling and continued multi-sport participation until at least age 15 should be stressed. To promote USTA tournament play, coaches should also educate parents on navigating the tournament structure. Parent need to be taught which tournaments to sign up for, how to sign up for tournaments, and the logistics of playing in a tournament. Coaches should distribute informational booklets and hold parent education sessions.

USTA

- The USTA should create a recreational participation pathway with a team focus and a low required commitment (e.g., one night a week practice). This will help to retain participation in tennis without requiring specialization. It is essential that the USTA needs to incorporate a recreational pathway in which athletes can still participate in tennis while playing other sports. This pathway should incorporate a team aspect, such as JTT, and require a small time and cost commitment. An environment should also be created where participating in this recreational pathway is not seen as second class to the more competitive USTA junior tennis pathway. Rather, just a different option.
- As the transition to traditional tennis occurs at a time psychological, psychosocial, and physical development, USTA should require coaches to be educated on child development in order to provide an environment that both supports and optimally

- challenges the child. As the coach makes the decision to transition the child to traditional tennis, they need to be aware of when the transition is appropriate both physically and psychologically for the player. If transitioned too early, players may struggle emotionally and socially in traditional tennis. Therefore, it is important to recognize that this not only involves the child's tennis skills but their appetite for competition and stress and need to have their affiliation needs met by peers. USTA should provide online education courses that focus on child development and require that all clubs make this education mandatory for their tennis instructors.
- The USTA website used to enter tournaments needs to be designed in a more user-friendly way to promote participation in USTA tournaments. This website should include information for parents, educating them on the tournament structure and the process of signing up and participating in a tournament. Luckily, this is beginning to happen through the USTA Net Generation program. These efforts should continue and parent experiences using the website should be evaluated consistently.

Strengths and Limitations

This study has a number of strengths. First, this study included both parent and child perspectives in identifying reasons for continuing or dropping out of sport and making the transition to 10u to traditional tennis. By interviewing both parent and child, the researcher gained an in-depth account of the youth tennis experience which would not have been possible by only interviewing one set of participants. With both participants, the researcher obtained a more holistic view of the factors that influence whether a child continues participation in tennis and the role of the transition on this decision. Second, this study was the first to examine within-career transitions between initiation and development levels of sport participation. While most

research focuses on the transition to elite level sport or professional sport, this study offers new information on how transitions influence participation at the lowest levels which can help to promote continue participation before the highest dropout rates occur. Last, this study included both continued participants and dropout participant which allowed the researcher to compare the two experiences and to examine differences in transition outcomes.

However, like all studies this project had limitations. Only four dropout parent-child dyads were included in the sample of participants. While they did offer a variety of experiences, it is difficult to draw more general conclusions amongst all dropouts. Additionally, a convenience sample was used for this study due to the difficulty finding and obtaining dropout participants. For this reason, recreational participants all played at the same club, which may make it challenging to apply their experiences to other clubs. Another limitation comes from parents who required to be present for the child interview. While it was encouraged by the researcher that parents not be present for the child interview, to allow the child to feel comfortable being honest about their experience, some parents insisted on being present. This may have led to some children not fully disclose elements of their experience, especially parental pressure. Last, not interviewing coaches was a limitation of this study as this would have provided more insight into the how classes were being taught, the relationship with the athletes, the coaches philosophy on development as well as their opinion of the 10u program and goals for their participants.

Last, the sample of this study was relatively homogenous with mainly well-educated parents, high-income families, and most were employed with others making the choice to be stay at home parents. Having such a homogenous sample may have resulted in data that was not representative of all participants in tennis. However, the demographics of this study are similar to

recent statistics on tennis participation demographics (Tennis Industry, 2017). According to recent statistics 68% of tennis participants are Caucasian which is similar to the participants in this study as 78% were Caucasian. However, the income level and education level of participants in this study were higher than of the general tennis population of tennis participants.

Future Directions

Future research should employ a longitudinal methodology to understand the process of transitioning from 10u tennis to traditional tennis as it occurs. Tracking athletes through the transition from 10u to traditional tennis would provide an in-depth understanding the transition and the challenges that participants encounter along with the strategies used. Specifically, a longitudinal quantitative study with multiple data collection points measuring skill competency, sport enjoyment, perceived competence, friendships, parental support through the transition will provide further insight into changes athletes experience during the transition. Additionally, a qualitative design with multiple interviews with players, parents, and coaches offers a holistic understanding of the experiences from 10u to traditional tennis. Longitudinal research could also show shift in motivation and the role of others in process. For example, some of the specializing players were often training more hours than their age which some have suggested increases the probability of overuse injuries, stress and burnout (Jyyanthi et al., 2015). Similarly, it would be interesting to track which players continue on in recreational tennis into their adult years or even track participation outcomes through adolescence and early adulthood. Another future research direction is to examine differences between tennis-specific and sport-general dropouts. This would provide information on which challenges or factors lead to complete discontinuation of sport participation.

Interviewing tennis coaches who work with players during the transition to 10u tennis may offer additional information on the factors that lead to a successful or unsuccessful transition to traditional tennis. Comparing coach experiences of coaching through the transition may offer insight toward best practices for promoting continued participation in tennis. A large-scale survey may also be helpful in examining the relationship between the coaches knowledge of child development and their philosophy toward 10u tennis and the transition to traditional tennis. As was perceived by the researcher during participant recruitment, coaches have contrasting views on the value of modified sport. Coaches who do not believe in the benefits of modified sport may transition players earlier than coaches who promote modified sport participation. The outcomes of tennis participants between the two types of coaches should be included in future research. Identifying specific criteria (e.g., skills tests) for determining when a child is ready to progress to the next ball or court format would be useful as well. Finally, studying if there are optimal ways for phasing in yellow ball play during the final year of 10u tennis would be in order.

Conclusion

Overall, the transition from 10u tennis to traditional tennis influenced participants' decision to continue or dropout of tennis. This influence was a result of the dynamic between the challenges of the transition and strategies used to cope. Internal resources used as strategies, such as higher effort and positivity, were not enough to lead to a successful transition. While recreational and specialized participants were provided external resources to cope with challenges from their parents and coaches, dropout athletes did not have the same external support cope with the challenges they experienced through the transition. With their inability to cope with the challenges, dropout athletes experienced crisis transitions that negatively impacted

dropout's sources of motivation by lowering their perceived competence, decreasing their enjoyment of tennis, and affecting their peer relationships. With this loss of motivation, drop out participants either became more interested other activities or withdrew from organized sport completely. For recreational participants, the help and assistance offered by the coach helped them to overcome the challenges they experienced. Although some recreational participants experienced crisis transition, their coach support helped them have a delayed, successful transition. For specialized participation, it was clear that in order to have a successful transition to competitive level tennis, both high parent involvement and coach involvement was necessary for a successful transition to occur. Although overall the transition to traditional tennis influenced some sources of motivation, other factors still had a role in the decision to continue or dropout such as achievement orientation and level of performance anxiety.

Moving forward, parents should create a task-oriented motivational climate for their child during the transition to traditional tennis and search for a coach who is knowledgeable in child development. Coaches need to educate themselves on child development principles and provide support coaching environments while also increasing competition slowly at the start of the transition. Future research should include longitudinal designs to provide an in-depth understanding of how children, parents, and coaches experience and navigate through the transitional period and also focus on coach differences for participants have successful or crisis transitions from 10u to traditional tennis.

APPENDICES

APPENDIX A

Research Project Summary

Research Project Summary for Coaches/Club Directors

Jennifer Nalepa
Michigan State University

Rationale: Participation in youth sport involves numerous psychological and physical benefits. However, dropout of youth sport rises during adolescence which may contribute to childhood obesity rates due to a lack of physical activity. To promote continued participation in sports through childhood and adolescence, modified youth sports were created. Modified youth sports are designed to be developmentally appropriate for the size and strength of children, making the sport easier to perform. One such modified youth sport is USTA's 10 & Under Tennis which includes developmentally appropriate equipment such as smaller tennis rackets, lighter tennis balls, and smaller court sizes. While 10 & Under Tennis is promoted to increase success and continue participation in the sport, limited research has examined how children make the transition from 10 & Under Tennis to traditional tennis and how that transition influences their decision to continuing playing the sport or dropout.

Purpose: To determine the factors that influence a child's transition from modified 10 & Under tennis to traditional tennis.

Participants: 12 parent/child dyads will be interviewed across multiple tennis clubs.

Child participants:

- Current age between ages 11-13
- Participated in 10 & Under tennis between the ages of 7-10
- Either continued playing club level tennis or have dropped out after attempting traditional tennis.

Parent participants:

- One parent for each child participant

Process: Interviews will be conducted separately and will last between 30-60 mins. Parents will also fill out a parent demographic form and the researcher will observe the 10 & Under program.

APPENDIX B

Parental Consent Form

Research Participant Information and Parental Consent Form

Michigan State University
Department of Kinesiology

You and your child are being asked to participate in a research study. Researchers are required to provide a consent form to inform you about the research study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title: Experiences in Modified Youth Sport and the Transition to Traditional Sport in Promoting Continued Sport Participation

Researcher and Title: Jennifer Nalepa, Doctoral Candidate

Department and Institution: Kinesiology, Michigan State University

Address and Contact Information: 308 W. Circle Drive, Room 134

Sponsor: Dr. Daniel Gould

1. PURPOSE OF RESEARCH

You and your child are being asked to participate in a research study exploring the experiences of youth in modified sports and the transition into traditional sport. You and your child have been selected as a possible participant in this study because of your participation in 10 & Under Tennis. From this study, the researchers hope to learn more about youth sport engagement after participating in modified youth sport. Modified youth sport is developmentally appropriate for the physical and cognitive levels of youth and was designed to promote future participation by increase enjoyment and skills. While many sports have created modified youth sport, there is a lack of research on whether the programs are reaching their intended goals. Therefore, the purpose of this study is to gain an understanding of youth experiences in modified sport and how it impacts their decision to continue playing or to drop out. You and your child's participation in this study will take about one hour each. Your child's name was identified by other participants in this study as a possible participant. In the entire study, 24 participants are being asked to participate.

2. WHAT YOU WILL DO

If you and your child agree to participate in this study, you and your child will be asked to participate in an interview with the researcher separately. Parental consent and child assent will be obtained prior to the start of the study. The interview will be scheduled with you and your child at a time and place that is convenient. The interview will last about one hour and will consist of questions regarding their experience in 10 & Under tennis, their decision to continue playing or to drop out, and their transition to traditional sport (if applicable). All interviews will be audio recorded for accuracy and will be required for participation. After the interview is completed, the researcher may send you and your child a summary of the results for your review. As the parent, you will also be asked to complete a demographic survey that consists of questions about your child's experience in tennis and your family background.

3. POTENTIAL BENEFITS

You will not directly benefit from your participation in this study. However, you and your child's participation in this study may contribute to the understanding of how to promote continued participation in youth sports. The results of this study will help to inform the development of sport programs for youth.

4. POTENTIAL RISKS

There are no foreseeable risks associated with participation in this study.

5. PRIVACY AND CONFIDENTIALITY

The data for this project are being collected anonymously. Neither the researchers nor anyone else will be able to link data to you or your child. Information about you will be kept confidential to the maximum extent allowable by law. The only access to recorded interviews will be by the researchers and research staff involved in the study and the Human Research Protection Program (HRPP) at Michigan State University. The results of this data may be published or presented at professional meetings but the identities of all research participants will remain anonymous. Data will be kept for at least three years after the project closes.

6. YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW

Participation is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you and your child are otherwise entitled. You and your child may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. You and your child have the right to say no. You and your child may change your mind at any time and withdraw. You and your child may choose not to answer specific questions or to stop participating at any time.

7. COSTS AND COMPENSATION FOR BEING IN THE STUDY

You will not receive money or any other form of compensation for participating in this study.

11. CONTACT INFORMATION

If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher:

Jennifer Nalepa
nalepaje@msu.edu

(810) 522-7666

308 W. Circle Drive, Room 134

Michigan State University

East Lansing, MI 48824

Dr. Daniel Gould

drgould@msu.edu

(517) 432-0175

308 W. Circle Drive, Room 210

Michigan State University

East Lansing, MI 48824

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 4000 Collins Rd, Suite 136, Lansing, MI 48910.

12. DOCUMENTATION OF INFORMED CONSENT.

Your signature below means that you voluntarily agree to participate in this research study.

Signature

Date

Your signature below means that you give parental consent for your child to participate in this research study.

Signature

Date

You will be given a copy of this form to keep.

APPENDIX C

Child Assent Form

Child Assent Form
Michigan State University
Department of Kinesiology

Hi. My name is Jenny Nalepa. I'm a student at Michigan State University. Right now, I'm trying to learn about your experience in tennis. I would like to ask you to help me by being in a study, but before I do, I want to explain what will happen if you decide to help me.

For about an hour I will ask you questions about your experience in tennis. Specifically, I will ask questions about when you played 10 & Under tennis with the colored tennis balls on the shorter court, your decision to keep playing or stop playing tennis, and what the transition was like to traditional tennis (if you made the transition). I will audio record our conversation so I can listen later and hear what you said.

Your parents, coaches and friends will not know what you say to me. When I tell other people about my study, I will not use your name and no one will be able to know who I am talking about.

Your parents said it's okay for you to be in my study. But if you don't want to be in the study, you don't have to be. I won't be upset, and no one else will be upset, if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand you should tell me so I can explain it to you. If here are any questions you do not want to answer, that is also okay.

You can ask me any questions about the study. If you have a question later that you don't think of now, you can call me or ask your parents to call me or send me an email. Do you have any questions for me now?

If you sign this paper, it means that you have read this and that you want to be in the study. If you don't want to be in the study, don't sign this paper.

Your signature: _____ Date: _____

Your printed name: _____ Date: _____

APPENDIX D

Child Interview Guide Continued

Child Interview Guide Continued

1) Background in sport (questions to build rapport and experience in 10u)

- How long have you been playing tennis?
- What is your favorite thing about tennis?
- What other sports do you play
- Who got you involved in tennis/How did you start playing?
- Are you a fan of any professional tennis players? Have you been to any tournaments?

2) The transition to traditional sport (perception, challenges, experience)

- Tell me about your 10 & Under tennis class (ball type, court, activities, coach, friends, parents)
- What is tennis like now?
 - What was different?
- What was it like going from 10 & Under tennis to traditional tennis?
 - Good/bad?
 - How did you deal with these bad things?

3) Social Support (peers, family, coach)

- Who helped you during your transition from 10u to traditional junior tennis?
 - Parents
 - Friends
 - Coaches

4) Psychological (motives for continuing, goals, perceived competence)

- Why do you think you decided to keep playing (or dropout of) tennis after playing 10 & Under tennis?
- Do you know any other kids who played 10 & Under tennis with you but decided not to play or stopped playing junior tennis?
 - Why do you think they stopped?
- How good do you think you were at tennis in your 10 & Under class?
 - Has that changed in your current tennis class?

- What kind of goals do you have for your tennis? What would you like to accomplish?

5) Academic transitions.

- What kind of changes happened at school while you've been playing tennis?
 - Has it influenced your decision to keep playing tennis?

APPENDIX E

Child Interview Guide Dropout

Child Interview Guide Dropout

1) Background in sport (questions to build rapport and experience in 10u)

- What grade are you in?
- What sports do you play/have played?
- What is your favorite thing in that sport (or school)
- Are you a fan of any professional athletes? (Tennis players)?

2) The transition to traditional sport (perception, challenges, experience)

- Who got you involved in tennis/How did you start playing?
- Tell me about your 10 & Under tennis class (ball type, court, activities, coach, friends, parents)
- What was tennis like when you played with yellow ball?
 - What was different?
- What was it like going from 10 & Under tennis to traditional tennis?
 - Good/bad?
 - How did you deal with these bad things?

3) Social Support (peers, family, coach)

- Who helped you during your transition from 10u to traditional junior tennis?

4) Psychological (motives for continuing, goals, perceived competence)

- Why do you think you decided to drop out of tennis after playing 10 & Under tennis?
- Did you know any other kids who played 10 & Under tennis with you and decided to keep playing? Why do you think they kept playing?
- How good do you think you were at tennis in your 10 & Under class?
 - Has that changed in your traditional tennis classes?
- What kind of goals do you have for your other sports/tennis?

5) Academic transitions.

- What kind of changes happened at school while you were playing tennis?
 - Has it influenced your decision to stop playing tennis?

APPENDIX F

Parent Interview Guide - Continued

Parent Interview Guide Continued

1. Background (build rapport and tennis experience)

- What is your experience in tennis?
- Why did you sign your child up for tennis classes?
- What track did your child take in 10 & Under tennis?
- What was your child's 10 & Under experience like?
- What was your involvement like during the 10 & Under program?

2. Transition (perception of transition, factors that influenced)

- Why do you think your child decided to keep playing (or dropout of) tennis after participating in 10 & Under tennis?
- What factors did you consider when deciding to have your child continue (or dropout of) playing tennis?
 - Outside factors (financial, time, resources)
 - Individual factors
- What were some barriers or challenges you faced when your child transitioned from 10 & Under to traditional tennis?
 - What strategies did you use to overcome these challenges?

3. Support (types of support)

- What role did you have during your child's transition from 10 & Under tennis to traditional tennis?
- How is your involvement in yellow ball traditional tennis different than 10 & Under tennis?
- What expectations/goals do you have for your child's participation in tennis?

APPENDIX G

Parent Interview Guide – Drop Out

Parent Interview Guide Dropout

1. Background (build rapport and tennis experience)

- What is your experience in tennis?
- Why did you sign your child up for tennis classes?
- What track did your child take in 10 & Under tennis?
- What was your child's 10 & Under experience like?
- What was your involvement like during the 10 & Under program?

2. Transition (perception of transition, factors that influenced)

- Why do you think your child decided dropout of tennis after participating in 10 & Under tennis?
- What factors did you consider when deciding to have your child dropout of playing tennis?
 - Outside factors (financial, time, resources)
 - Individual factors
- What were some barriers or challenges you faced when your child transitioned from 10 & Under to traditional tennis?
 - What strategies did you use to overcome these challenges?

3. Support (types of support)

- What role did you have during your child's transition from 10 & Under tennis to traditional tennis?
- How was your involvement in yellow ball traditional tennis different than 10 & Under tennis?
- What expectations/goals did you have for your child's participation in tennis? In other sports?

APPENDIX H

Demographic Questionnaire

Parent Demographic Survey

(I) Child Information

1. Child's Age: _____

2. Child's Birthdate: _____

3. Child's Gender:

_____ Male _____ Female

4. Child's Race/Ethnicity

- a. American Indian or Alaskan Native
- b. Asian or Pacific Islander
- c. African American
- d. Caucasian
- e. Hispanic
- f. Other (specify): _____

5. Number of older siblings: _____

5a. Did older siblings participate in 10 & Under tennis? (circle below)

Yes No

6. Number of younger siblings: _____

6a. Are younger siblings participating (have participated) in 10 & Under tennis?

Yes No

7. Age and sex of siblings: _____

(II) Child's Sport Experience:

10 & Under Tennis:

8. What age did your child start playing in 10 & Under Tennis? _____

9. How many years did your child participate in 10 & Under Tennis? _____

10. How many months out of the year did your child participate in 10 & Under Tennis?

11. How many days a week on average did your child participate in 10 & Under Tennis?

12. For how many hours a week on average did you child participate in 10 & Under Tennis? _____
13. At what age did your child transition out of 10 & Under tennis? _____
14. Did your child play any tournaments/competitions during 10 & Under tennis?

- 14a. If yes, how many? _____
15. Did your child participate in any in-club play opportunities? _____

10 & Under Program: *Complete the following questions based on your observations of your child's 10 & Under experience.*

Coach Engagement	Yes	No	Unsure
1. Did the coach smile throughout the class?			
2. Were the kids smiling throughout the class?			
3. Did the coach greet the players and use their first names?			
4. Are water breaks less than three minutes?			
5. Did the coach interact with kids during water breaks and when picking up balls?			
6. Did the coach lecture/instruct for about one minute or less?			
7. Were the kids working cooperatively together rather than the coach primarily feeding the ball?			
8. Did the coach give the children individualized feedback?			
9. Did the coach have energy and enthusiasm while teaching?			

10. Did the coach use mostly positive language rather than negative?			
11. Was the coach engaged and active during the class?			

Organization	Yes	No	Unsure
12. Did the coach use the appropriate court and equipment for the age group/level (e.g., red balls on the 36' x 18' court)?			
13. Were the types of tennis balls separated into different baskets/carts (e.g., red, orange, green dot)?			
14. Was the coach to child ratio 8 children or less to 1 coach?			
15. Did the coach appear to have a written lesson plan?			
16. Was the equipment prepared prior to the start of the class?			

Current Tennis:

16. How many months out of the year does your child play tennis at the tennis club?

17. How many days a week on average does your child play tennis at the tennis club?

18. For how many hours a week on average does your child play tennis at the tennis club?

19. Does the tennis club your child play at offer other sports or activities? _____

a. Do they participate in other sports at this club? _____

b. Do their siblings participate in other sports at this club? _____

20. Does your child play any competitive tennis tournaments? _____

a. If yes, at which level do they typically play tournaments? (circle all that apply)

a. Level 1

b. Level 2

c. Level 3

d. Level 4

e. Level 5

f. Level 6

g. Level 7

h. Unsure

21. Does your child watch any professional tennis matches? _____
22. Has your child attended a professional tennis tournament as a spectator? _____
23. Does your family play tennis outside of organized tennis together? _____
- a. If yes, who plays together? _____
- b. How often? _____
24. About how much does your child's current participation cost per month? \$ _____

Other Sports:

24. Does your child currently play any other sports at or for a club or organization?

- a. If yes, what sports? _____

25. Did your child play other sports in the past at a club or organization, but does not currently play? _____
- a. If yes, what sports? _____

- b. What age did they stop playing? _____
- c. For what reason did they stop playing? _____

(III) Parent Information

26. What is your relationship with the child?
- a. Mother
 - b. Father
 - c. Guardian
 - d. Stepmother
 - e. Stepfather
27. Marital Status
- a. Single

- b. Married
- c. Divorced
- d. Rather not say

28. What is your occupation? _____

29. What is your spouse's occupation? _____

30. What is the highest level of education obtained by the following people?

Education Level	You	Spouse
Less than high school		
High school graduate (or GED)		
Education after high school other than 2-yr or 4-year college (e.g. trade school)		
Some college		
College graduate		
Graduate/professional degree		
Don't know		

31. Average yearly income, before taxes, for your family: (Please mark one)

- | | |
|----------------------|------------------------|
| a. Below \$15,000 | a. \$70,000-\$79,000 |
| b. \$15,000-\$19,999 | b. \$80,000-\$89,000 |
| c. \$20,000-\$29,999 | c. \$90,000-\$99,000 |
| d. \$30,000-\$39,999 | d. \$100,000-\$149,999 |
| e. \$40,000-\$49,999 | e. \$150,000-\$200,000 |
| f. \$50,000-\$59,000 | f. \$200,000+ |
| g. \$60,000-\$69,000 | |

32. Your Race/Ethnicity

- a. American Indian or Alaskan Native
- b. Asian or Pacific Islander
- c. African American
- d. Caucasian
- e. Hispanic
- f. Other (specify): _____

33. Spouse's Race/Ethnicity

- a. American Indian or Alaskan Native
- b. Asian or Pacific Islander

- c. African American
- d. Caucasian
- e. Hispanic
- f. Other (specify): _____

34. Your tennis experience:

____ Recreational ____ High School ____ College
____ Professional ____ None

35. Spouse's tennis experience:

____ Recreational ____ High School ____ College
____ Professional ____ None

APPENDIX I

Participant Dyad Narratives

Recreational Successful Transition Dyad One

Dyad one consisted of a mother and her son, aged 12, who started playing tennis at age 8 and transitioned to traditional tennis at age 10. He played 10u tennis and continues to play tennis at Club A. His mother is a stay-at-home mom and his father is a physician. They are currently married and both parents have a graduate level education with a combined yearly income over \$200,000. They both have recreational tennis experience and have a younger daughter, age 10, that has recently started 10u tennis.

Child Experience. The son is currently only playing tennis. He used to play baseball but gave it up to focus on tennis although he has not specialized in the sport. He went through the standard sequence of the 10u program, playing with red, orange, and green dot tennis balls and played junior team tennis but would get nervous before competitions. He enjoyed working with coaches, playing with friends in his classes, and believed he improved his skills through the 10u program. Currently, he is playing tennis in group classes and takes private lessons with his two coaches. He sometimes plays USTA tournaments and is focusing on more advanced technique. In his transition to traditional tennis, he thought nothing much had changed and thought he had moved up because others, like his coach, thought he was ready. His transition happened suddenly when his coach switched the green dot tennis balls for yellow ones one day at practice. He thought the switch went fine because he had played with yellow tennis balls with his parents before he made the switch in class.

One challenge he experienced in his transition to traditional tennis was an initial drop in skill level as he difficulty controlling the yellow ball. A major challenge that he experienced was

playing against competitors of a higher skill level in tournaments. One particular tournament he was “crushed” by an older player which made him want to stop playing tournaments. His sources of motivation to continue playing tennis came from the friendships he had with players in his classes, the enjoyment he has when playing, and playing tennis together with his family. His goals in tennis are to use tennis as a source of fitness, enjoy the social life that comes with tennis, and possibly play tennis in high school.

Parent Experience. His mother signed him up for tennis because she had played tennis in her youth and both her and her husband wanted their kids to learn the sport. His mother liked their experience in 10u tennis, particularly the slower pace of the ball and small court as it made it easier to learn the sport. She also liked that junior team tennis taught movement and that his coach was positive and gave her feedback. However, she was frustrated that competition occurred so early as kids were not ready.

The factors that she had to consider for her son’s participation was how skilled her son was at tennis and the lifelong social and physical benefits it offered. She also considered whether they had the financial resources to stay involved and the good relationships she had developed with the coaches. A major challenge to keeping her son in the sport was the lack of information and understanding about tournaments. She did not know where to look for tournament information and did not know which tournaments to sign up for as she was scared of putting her son in a tournament where he might get “crushed” again. She felt that the USTA website was vague and inconsistent. Further, her club offered no parent education on the tournament structure and even after contacting the USTA multiple time through phone calls and emails, USTA management did not respond to any of her concerns. As to her involvement in tennis, she saw her role as a source of encouragement and support for her child. She also talked with his coaches

often and reported back on match performance. Her goals for her son in tennis are to use tennis as a social lifetime activity, play high school tennis for the social environment, and to continue playing together as a family.

Recreational Successful-Delayed Transition Dyad Three

Dyad three consisted of a father and his daughter, age 12, who started 10u tennis at age 9 and transitioned to traditional tennis at age 10. She does not currently play any other sports. The father is a procurement director and the mother an English teacher. They are married and both have recreational tennis experience. They each have a graduate level education and have a combined yearly income of over \$200,000. They have another daughter, age 10, who has not participated in 10u tennis.

Child's Experience. The daughter did not follow the standard progression of 10u tennis, having started with the orange ball rather than the red ball. She liked her coach during 10u tennis who was fun and smiled a lot. However, she felt like she didn't improve at the start of 10u tennis because she was often playing with lower level players and didn't have any friends in the class. In her current tennis, she plays junior team tennis and wants to play more matches. She plays twice a week, both in groups, with coaches who are nice but a little stricter. She has made friends in her classes and enjoys the social aspect and learning game strategy. She continues to play junior team tennis but does not play USTA tournaments. Her parents do not watch her at practice as her babysitter drops her off.

During her transition to traditional tennis, she found it challenging to hit the yellow ball and is now playing people better than her in junior team tennis matches. She has yet to win a match and is frustrated that she is losing. She feels more professional with the yellow ball and she likes trying to figure out other players weaknesses. She felt her transition to yellow ball was

“kinda weird” and sometimes frustrating and has found her skill level has dropped compared to her peers. She found support through her transition with her parents who play tennis with her and encourage her and with her peers who give her positive feedback during matches. She is motivated to continue in tennis because she likes the solitary element of the sport and not having to rely on a team. She also likes that it’s a quiet sport that’s not dangerous and does not have a lot of running. She is also motivated because she feels like her skill level is improving and feels rewarded when she does something right. Her goals in tennis are to improve her skills and play high school varsity tennis.

Parent Experience. Her father decided to sign her up for tennis because he has a rule that his children must play a sport and in tennis it is less obvious when skill level may be lacking. He liked the 10u program and believed it made sense and helped his child have success even though she may not be very athletic. However, he did not like that the less skilled kids get the less experienced coach which he believed slowed her development. He also found the junior team tennis process confusing and felt like it didn’t have a team atmosphere.

Some factors he considered included his rule that she has to play a sport and that tennis seemed to suite her personality. Fortunately, although tennis is expensive, it was not a hurdle for them. Some challenges or barriers he encountered as a parent was the time required to fully commit to the sport. He also found the tennis competitive structure to be confusing and the website hard to use. He specifically found it challenging to identify tournaments that would be equal to her level. He was nervous about her transition to traditional tennis due to her surprise and difficulty when hitting with the yellow balls. He sees his role as making sure she has fun and to provide positive feedback. He spends time reading sport parenting articles and tries to track the good things she does in matches. He also spends time playing tennis with her and the family.

Over her tennis participation, he has become more involved by being team captain for her junior team tennis. His goals for her are to make the high school team so she can have a constructive group of friends, stay busy, and use tennis as a lifelong sport.

Specialized Successful Transition Dyad Four

Dyad four consisted of a mother and her daughter, age 12, who started 10u tennis at age 5 and transitioned to traditional tennis at age 10, although she started playing at age three in her parents basement. She does not currently play other sports although she used to swim and do gymnastics but quit because of the time and financial commitment it required. Both the mother and step-father are tennis coaches and played tennis in college. The mother has a graduate level education and the step-father has a bachelor's degree and their average yearly income is between \$70,000-\$79,000. The mother has a son who is 23 years old who also played tennis but did not participate in 10u tennis as it was not available when he was younger.

Child Experience. The daughter played mostly with the green dot ball but followed the standard progression of 10u tennis. In 10u tennis she had multiple coaches, including her mom, and enjoyed the different games they played in class. She enjoyed her friends in her classes and played USTA tournaments with every color ball. At a section level tournament, she won a part of a compass draw and received a trophy. She liked that she got to meet new people at tournaments and did not have to play her friends. She felt her skill level improved in 10u tennis and she became more consistent. Currently, she plays in a tournament level group and plans to go to the qualifiers this year in yellow ball. She has noticed that her tennis class now is a big group with more drilling and older/taller players.

She finds playing older players is challenging because they hit harder and move her around more. Other challenges included not initially understanding how to hit balls with different

air pressure and getting beat a lot in her practice matches. However, she has begun to practice more hours during the week and started working with a private coach more to learn how to have a more aggressive game style. She also leans on her mom for help to understand how the yellow ball bounces and plays tennis together with her brother, mom, and step-dad. As for her transition to yellow ball, she felt she moved out of green ball fast but has continued to practice with green ball to work on strategy. Her motivation to continue tennis comes from her confidence that she can do better and has done so in the past, the support she has available to her, and her joy of competition. Her goals in tennis include earning a college scholarship to help pay for school. She also wants to make the high school team, play against more people outside of her club, and become more consistent and improve her skills. Additionally, she is a fan of both Rafael Nadal and Garbiñe Muguruza as they are both from Spain where her mother grew up.

Parent experience. The mother signed her child up because of the great experience she had in tennis and wanted her daughter to have that experience. It is important to note that the mother works at the club the daughter plays at and has worked with her through her tennis training. The mother liked the 10u program she was involved in as she made sure that the coaches who worked with her daughter had the same philosophy as her. She liked that they didn't push the advancement to the yellow ball quickly and that the modified equipment made it easier to learn strategy and correct technique.

As a parent, some factors that she had to consider when keeping her daughter in the sport included the availability and opportunity of a college scholarships and the long-term potential for financial help. She also considered the talent level of her child and the convenience of her participation in the tennis. As a coach at the club, she did not have to pay the normal cost of classes which was a barrier for her to play other sports. Some challenges or barriers to her

daughters continued participation included the lack of understanding of the tournaments and the frustration that resulted. She also noted the difficult transition between elementary to middle school as this is when kids often go through puberty and hormonal changes. Last, as her daughter is physically small, she had to consider that other kids may be stronger and bigger which could be dangerous and could result in her child being beat badly in a match. She felt that her daughter had a smooth transition as she had time to acquire strength and good technique prior to moving to the yellow ball. She sees her role as being supportive and reassuring as her daughter is one of the youngest in her classes and at tournaments. She does not usually watch matches as she fears it will put too much pressure on her child but makes sure her daughter understands the sacrifices with time and money, that she makes for her participation. Finally, her goal for her daughter in tennis is to earn a college scholarship.

Recreational Successful Transition Dyad Six

Dyad 6 consisted of a mother and her daughter, age 12, who started 10u tennis at age 9 and transitioned to traditional tennis at age 11. She does not currently play other sports nor has she in the past. Her mother is a homemaker and her father a director of a hospital. The mother has a bachelor's degree and the father has a graduate level education and are married. Their combined yearly income is between \$100,000-\$149,000 and both have played tennis in high school. They have a younger daughter, age 8, who is currently participating in 10u tennis.

Child Experience. Since she was tall, the daughter started 10u tennis at the green dot level but was quickly moved down to orange once the coach realized she was new to tennis. However, she has progressed through the different levels of the 10u program following the initial switch. While she was in 10u tennis, she was unaware that there were different types of tennis balls but thought they were all the same just had different colors. She played junior team tennis

during 10u and liked her coach as she personalized her experience and was nice. She believes she got better during 10u tennis and it prepared her for when she started traditional tennis. Currently she plays twice a week in group classes and takes private lessons. She was excited to transition to traditional tennis because the cool kids used yellow balls. Her coach made the transition easier as she brought the new balls to class and integrated them with the green dot balls.

Some challenges she's experienced during her transition to yellow ball included difficulty hitting the higher bouncing and faster ball, having to switch classes because of homework, and leaving her friends because of the class switch. For support through these challenges she practiced a lot over the summer with her dad and took more private lessons. She believed her skill level stayed the same after transitioning and since then she has improved her skills.

Although she does not currently play USTA tournaments, she would consider playing if she knew her opponents would be of similar age and ability. Her motivation to continue playing comes from how nice the other people are in her classes, the fun she has playing tennis with her dad, her relationship with her coach, and that tennis lifelong sport she can play through high school and college. Her goals for her tennis participation include having good sportsmanship, improving her consistency, and playing high school team. She is unsure of whether she would like to be a professional as she's not sure she would like it.

Parent Experience. Her mother signed her up for classes because she believed tennis is a good, lifetime sport that her daughter will be able to play forever. Also, that there are nice kids who play tennis too. The mother was unsure of the progression her daughter took but knew she felt prepared for the yellow ball. She liked the coach her daughter had at the club as she was positive and told her which classes her daughter should be in. Some factors that she considered

when having her daughter continue in the sport include the long-term participation in the sport, the amount of skill improvement in such a short amount of time, and the encouraging and caring coaches. While cost was high and hard to pay up front for participation, she believed it was worth the money because her daughter was improving and getting better. Challenges she has encountered included confusion of the USTA tournament structure. She was unsure of how tournaments worked, and which matches counted in terms of junior team tennis. She was also confused on what the youth progression entailed and thought there was lack of parent education. She sees her role as being encouraging her daughter, practicing with her, and being excited for matches. She also noted her financial role. She does not stay and watch practices as she doesn't want the coach to think she is judging her. Finally, her goals for her daughter's tennis participation include playing in high school and playing competitively in the long-term.

Specialized Successful Transition Dyad Seven

Dyad seven consisted of a mother and her son, age 11, who began 10u tennis at age 8 and transitioned to traditional tennis at age 9. He currently also participates in swimming, however just recreationally to help with his tennis. The mother is a nurse and the father self-employed, both with bachelor's degrees and are married. Their combined yearly income is over \$200,000 and both have recreational experience in tennis. He is an only child and is a fan of Roger Federer and Simona Halep.

Child Experience. The son started his 10u tennis with a mix of all three colors of balls together and then only with green dot balls. After only one year he progressed to traditional tennis in practice playing with yellow balls. He played several tournaments during his 10u experience and was successful, however had difficulty staying mentally tough on the court. Currently, he plays tennis five days out of the week, playing twice on Saturday. He also takes

privates lessons from two different coaches, has a footwork coach, and has sessions with a sport psychologist. His transition to traditional tennis occurred after he won three green dot tournaments in a row and his coach spoke to his mom about moving up, who was nervous about the transition. He won his first tournament in yellow ball. He likes the competition and how it feels to win a trophy. He feels that his skill level has dropped a bit only because he is playing up an age group. He also enjoys making friends and being funny with them on the court.

The challenges that he has encountered on the tennis court include his friends moving up to the next age group. The most challenging aspect has been his relationship with his mother. He believes that his mother has started focusing on only the negatives, criticizes his mistakes often, and he sometimes gets in trouble for using the wrong shot too often in matches. He is also struggling with the mental side of the game. He reports not having a good reputation with referees and his mother even took away tournaments for a few months because of his behavior on the court. For support in his tennis, he leans on his parents who have begun taking his racket string very seriously and his coach who is helping him develop a similar forehand to Roger Federer. His motivation for continuing in tennis comes from his goals of being a professional tennis player. He has started watching professional tennis matches and wants to reach the professional level. He is also motivated to improve to avoid criticism from his mother. He believes that if other kids want to quit tennis, they should just work on getting better instead. His goals include becoming a professional tennis player and winning a sectional level tournament so he's known more to other players.

Parent Experience. His mother liked how fast he went through the 10u program, however felt like he could have played with green dot balls bit longer. She was unsure why he was moved up so early but believed it might be that his coach thought he was ready and did not perceive it as

a big transition. Some factors that she considered when having him continue participation in tennis included the desire for him to have something to focus and work towards other than videogames and that he loves playing the sport. She also cited that other people had told her he had a lot of talent and with the financial resources available decided to go for it. She did recognize that many kids may not be able to afford the cost of participation.

Some challenges to his continued tennis participation included the tough competition in tournaments at his level and the increased focus on rankings at tournaments. She also noted that her son has difficulty accepting losses as he wins often and has very few losses, which may have been a result of his quick progression through tournament levels. Additionally, coaching has been a challenge with balancing the many opinions that his multiple coaches offer. He also had one coach who would yell and be too tough on her son. However, she relies on the coach to suggest which tournaments to play and to guide his development in tennis. As per her role in her son's tennis participation, she tries to never focus on statistics and helps him try to overcome his fear of failure and control his emotions. Her expectations and goals are few but center around him going as far as he wants in tennis. She realizes that he would like to be a professional tennis player but thought it would be nice if he played in college.

Dropout Crisis Transition Dyad Nine

Dyad nine consisted of a father and his daughter age 12, who started 10u tennis at age 9, transitioned to traditional tennis at age 10 and dropped out of tennis at age 11. She is currently participating in downhill skiing with her father on the weekends but has never played any other sports. Her father is an engineer and her mother a stay at home mom, who are married and both have a graduate level education. Their combined yearly income is between \$100,000 and \$149,000 and each parents has recreational experience in tennis. She is an only child.

Child Experience. She started with the orange ball in her 10u program for about a year, then progressed to green dot for two months, and played yellow ball tennis for about 6th months. She liked her coach in 10u tennis and playing with her friends on the court. She felt she improved her skills through the 10u program. When she transitioned to yellow ball tennis, she was playing in group classes twice a week, had a private lesson every week, and also played junior team tennis matches. Once moving up to yellow ball tennis, she had to play with older kids and didn't know them all but enjoyed the challenge of running fast and the games they played in practice.

The challenges she encountered when transitioning to yellow ball tennis include playing bigger, taller kids who were intimidating and having to meet new kids. She was not comfortable playing with the older kids as they hit harder, and the ball bounced higher and farther making it difficult to make it to the ball in time to hit. Another challenge she encountered were the junior team tennis matches. She was often nervous before competitions as she had to play better people and didn't like being watched. She also did not like having to go to class at different times than in her 10u program. She turned to her father to help her calm down and get ready for competitions and also her coach for encouragement. The reasons she decided to drop out of tennis centered on all the changes that occurred at the same time. Just starting middle school, she had to navigate new classes and a new building. She was uncomfortable with the bigger kids in the hallway and at the same time started orchestra for the first time. The amount of change at school and changing tennis classes at the same time made her uncomfortable. She wanted to be comfortable in new school environment and dropped out of tennis to focus on navigating her new school situation. Her goals are to be comfortable at school and to maybe one day play tennis again but not compete.

Parent Experience. Her father signed her up for tennis classes because he saw an advertisement in the community education booklet and thought it was a great sport that he enjoyed during his youth. He liked the 10u program and the ball progression and saw exponential skill improvement in his daughter. He also liked the coach who was caring and warm. The factors that he considered as a parent that contributed to the decision to drop out included the full-year time commitment of the sport, which made participating in other sports difficult. He noted how expensive the sport is for court time and equipment. He also he did not want to travel around the country for tournaments. To him, tournaments appeared to be hyper-competitive. He was unaware of what to expect at tournaments and thought there was a lack of transparency in what tournament play entailed.

Additionally, the coach had a role in the decision to drop out as their primary coach left on maternity leave and the coach who replaced her yelled more, was less encouraging, and used a harsher voice. He attributes his daughter deciding to drop out to three issues; the coach change to a more disciplinarian coach, the physical differences of kids in traditional tennis who were bigger and stronger to her small physical size, and her fear and anxiety when in competitions. He saw his role as the coach parent, pushing and challenging her. He encouraged, supported, and built up her confidence. Additionally, he would watch every practice and match, and was a team captain for her team tennis. Although she dropped out, he fully supported her continuing to play tennis. His goals for her in sport include finding other lifetime sports to participate in and supporting her in whatever she wants to do.

Dropout Crisis Transition Dyad Ten

Dyad ten consisted of a father and his daughter, age 13, who started 10u tennis at age 5, transitioned to traditional tennis at age 10 and dropped out of tennis at age 12. She is currently

playing basketball and soccer. Her father is an engineer and her mother a professor, who both have a graduate level education and are divorced. Her father's yearly income is between \$90,000-\$99,000. Her father played high school tennis while her mother has no tennis experience. She has a younger sister who does not participate in 10u tennis.

Child Experience. She started with the red ball in 10u tennis and then progressed through orange and green dot, finally transitioning to yellow ball. She liked her coach who was fun and had a good personality and played a few tournaments with the green dot ball. When she transitioned to yellow ball, she began playing in a group for four hours, four days a week. She was playing against older kids, some who were very good and others that were around her skill level. She enjoyed the team competitions and playing against new people. She never really played tennis with her parents as they typically dropped her off and left.

Some challenges she experienced during her transition to yellow ball included an initial difficulty hitting the yellow ball and trying to be consistent. She also found that she was having less success in tournaments as compared to green dot tournaments and also started get nervous playing against older, better players. She enjoyed that she was able to play tennis with her father with the yellow ball and started using bigger tennis rackets that helped her have more control. Her coach was her main source of support through the transition by helping her with technique. The reasons she attributed for dropping out of tennis included the stress she experienced during tournaments and being scared to play matches. She was not having fun at tournaments because she put pressure on herself to impress her coach and parents. She also did not like the individual aspect of tennis and having to rely on herself. Further, she attributed her lack of motivation to continue to her rocky transition to yellow ball and not being consistent. Last, she began playing

competitive basketball, so she had less time for tennis. Her goals are to play college basketball and while she was still playing tennis she wanted to be successful at tournaments.

Parent Experience. Her father signed her up for tennis when he noticed she had good hand-eye coordination. He did not remember that a progression of tennis balls existed in the 10u program but eventually did remember that his daughter wanted to switch to the real ball. He believed she was in great hands with the coach and thought that the color of the balls didn't really matter. He remembered playing a lot of tennis together with his daughter, although she did not remember playing with him. The factors he considered as a parent included the high cost of the sport and the financial requirement, noting that even with talent, kids can't get into the sport without financial capable parents. In the last tournament she played, which she won, they played at a Hoity-toity country club and all the players had the latest rackets and gear.

He also considered her lack of passion for the sport and the small likelihood that she could fit the sport into her high school experience. He could not understand why high school tennis a spring sport for girls with fall being a better choice as there are less sports to play in the fall. However, he felt that it was a great sport to teach life skills and gain life experiences. He attributed his daughter dropping out of tennis to her apprehension when playing matches in tournaments and being alone on the court and considers her to be a more team sport athlete. He saw his role in tennis as playing with her and being the parent coach but realized he couldn't force her to play at this level. He loved going to her competitions and looked back fondly on the days when she played tennis. His goals for his daughter include her competing at the highest level and the best she can be.

Dropout Successful Transition Dyad Twelve

Dyad 12 consisted of a mother and her son, age 13, who started 10u tennis at age four and transitioned to yellow ball at age ten and dropped out of tennis at age 13. He is currently playing basketball and soccer. His mother is a housewife and his father a doctor and they are married. His mother has a bachelor's degree and his father has a graduate level degree. Their combined income is between \$100,000-\$149,000 and both have recreationally experience in tennis.

Child Experience. The son progressed through all levels of the 10u program and did both group classes and private lessons. He had multiple coaches through his tennis participation and felt that, overall, his tennis skills improved as he got more consistent and had more control over the ball. When he transitioned up to traditional tennis he noticed differences in the court size and an increase focus of his coaches on gameplay and strategy rather than learning skills and technique. He began playing Junior Team Tennis and tournaments with the yellow ball but found that his parents were less involved as they no longer stayed and watched him play.

Parent Experiences. Some challenges that he faced when he transitioned to traditional tennis include the higher bounce of the yellow ball. He felt that with the yellow ball, he had to run more and had to get back to the center of the court fast in order to hit the ball. The other kids who he was playing with were also older and tougher to play as they hit harder and ran down more shots. He attributes his decision to drop out of tennis to the start of the basketball season at his middle school. With his participation in soccer and now basketball along with school, he decided that trying to fit tennis into his schedule would be a bit much. He chose to play basketball over tennis as his friends from school were playing and he enjoys the team atmosphere of the sport. However, he did note that he may return to tennis one day. His goals for soccer are to reach the professional level and to improve his skills with his left foot.

His mother signed him up for tennis classes because she liked the lifetime participation opportunities of tennis, being able to play as a family, and thought it was a very classy sport. Overall, she liked the 10u tennis program as she thought it fit with his development and motivated him to be competitive. She believes her son decided to stop tennis participation because he does not have enough time to play three sports and spend time on school work. As a parent, the factors she considered for his participation in tennis included his competency in the sport and his enjoyment in participating. However, some barriers that she reported was a disappointment in his coach as he was not positive and did not give much skills instruction. She also noted that USTA line judges are not good and are unfair to her children in matches by correcting their calls on court. She also thought the time commitment was too high and was just too much to have to balance as she liked her son to try new sports. Her involvement as a parent in her son's tennis participation decreased as she no longer stays and watches him play because of her busy schedule. However, she does try to encourage and cheer him on when she does watch. Her goals for her son are to support his goals and possibly earn a college scholarship for soccer.

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