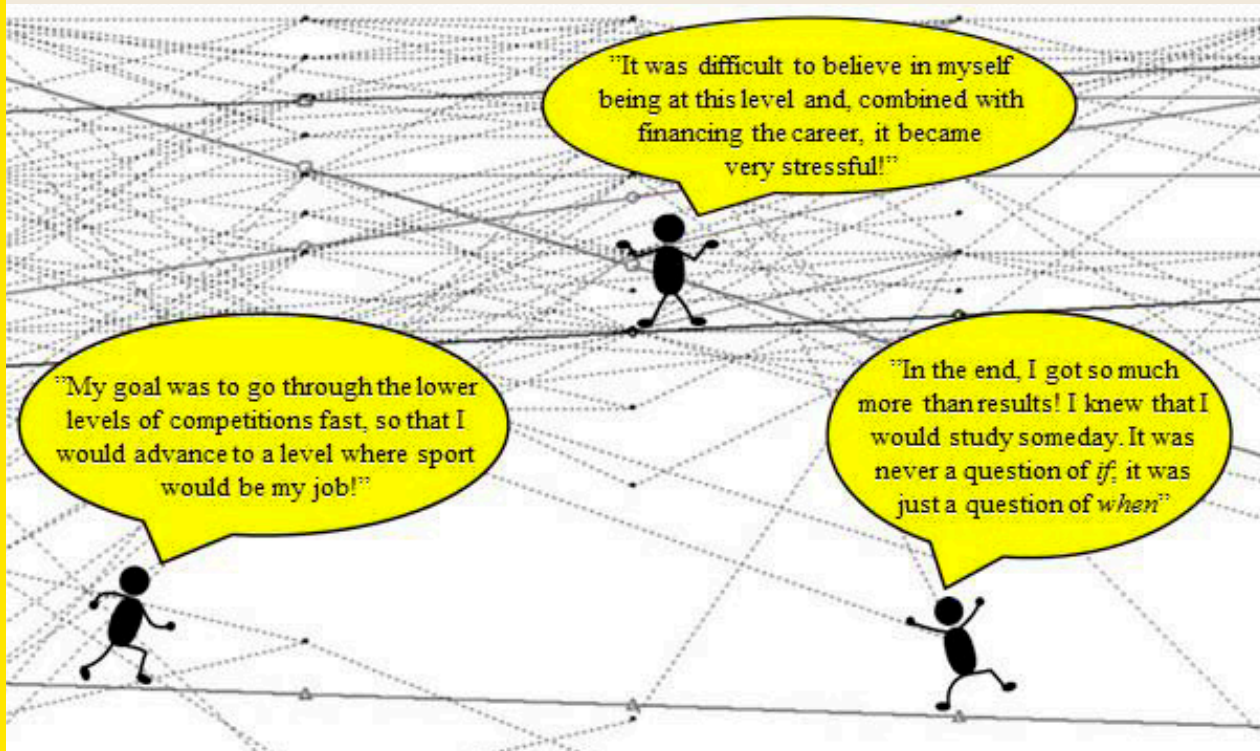


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ALINA FRANCK

THE JUNIOR-TO-SENIOR TRANSITION IN SWEDISH ATHLETES

A longitudinal study



LINNAEUS UNIVERSITY PRESS

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The junior-to-senior transition in Swedish athletes: A longitudinal study
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Abstract

Franck, Alina (2018). *The junior-to-senior transition in Swedish athletes: A longitudinal study*, Linnaeus University Dissertations No 305/2018, ISBN: 978-91-88761-09-5 (print), 978-91-88761-10-1 (pdf). Written in English.

This dissertation project was an exploration of junior-to-senior transition (JST) processes in Swedish sport club athletes based on holistic, developmental, and ecological perspectives. It consists of two multi-level studies covered by four separate articles. The first study is a quantitative longitudinal investigation of athletes' transitional and personal variables during a two-and-a-half-year period including five measurements times ($N = 101$). The second study is a qualitative exploration of the JST pathways of four athletes who were also participants of the first study; the athletes' transition narratives could be related to the previously discovered dynamics of their JSTs.

The first article (1a), presenting study 1, is focused on identifying profiles of athletes in the JST based on some of their personal characteristics (athletic identity, self-esteem, and goal orientation) followed by a description of the JST pathways relevant to their profiles. The latent profile analysis resulted in three athlete profiles. Athletic identity appeared to be a key personal characteristic that influenced the dynamics of the JST adjustment. Different styles of coping strategies were also associated with different JST pathways.

The second article (1b), presenting study 1, is aimed at identifying adjustment patterns in the JST based on athletes' dynamics of adjustment during a two-and-a-half-year period, and describes the athletes' demographics, personal and transitional characteristics at the beginning of the JSTs that were related to the different adjustment patterns. The latent profile analysis on athletes' perceived degree of adjustment provided three profiles with different adjustment patterns (i.e., progressive, regressive, sustainable). Further analyses (descriptive statistics and Cohen's d) showed that keeping a primary focus on sport (without ignoring other spheres of life), having a strong athletic identity, and a high motivation to reach the senior level were (to different degrees) relevant for both progressive and sustainable adjustment patterns.

The first article (2a), presenting study 2, qualitatively explores two individual sport athletes' (a male swimmer and a female tennis player) JST transition pathways, emphasising psychosocial factors that were perceived as facilitating and debilitating for the transition process. Narrative type interviews were used, and the holistic-form structural analysis provided a central storyline – a *performance narrative* – that was common for both athletes and two individual side storylines that were the swimmer's *effort and relationship narrative* and the tennis player's *injury and reorientation narrative*. Both athletes experienced various crossroads and shared perceptions of the factors facilitating coping (e.g., family, some coaches, elite sport club environment), but their reflections on the debilitating psychosocial factors of their JSTs were more individualistic than their views on the facilitating factors.

The second article (2b), presenting study 2, has the same objectives and the same methodology as article 2a, but focuses on two team sport athletes' (a male football player and a female basketball player) JST pathways. The football player's JST path developed into a *performance and family narrative*, and the basketball player's reflections on the transition process formed an *enjoyment and relationship narrative*. The players' JST paths were lined with different crossroads, and throughout the transitions they perceived the key facilitating persons to be their families (e.g., parents, grandparents, siblings) and teammates, but some of the coaches' behaviors were perceived as debilitating factors.

Major contributions to knowledge in this dissertation project include: (a) considering the JST (longitudinally) as a process involving dynamics and interactions of the transition demands, coping strategies, personal and environmental resources, and barriers influencing the JST outcome; (b) supporting the athletic career transition model in combination with the holistic, developmental, and ecological perspectives as adequate frameworks to study the JST; (c) suggesting that the integrated JST framework supported by the empirical findings can be used in the future research; (d) demonstrating significant variations in the JST pathways and adjustment patterns on the sub-group level (study 1) and also on the individual level (study 2); and (e) providing context-specific recommendations for different levels of the Swedish sport system for optimizing Swedish sport club athletes' JSTs and supporting their continued sport participation on either the senior elite or the recreational level.

Sammanfattning

I detta avhandlingsprojekt undersöktes övergången från junior- till senioridrott hos svenska idrottare utifrån ett holistiskt och ekologiskt perspektiv samt ett utvecklingsperspektiv. Projektet bestod av två studier som resulterade i fyra separata artiklar. Den första studien var kvantitativ longitudinell med fokus på idrottarens övergångsvariabler och personliga egenskaper. Studien genomfördes under två och ett halvt år och inkluderade fem mätillfällen (N = 101). Den andra studien var en kvalitativ undersökning av fyra idrottarens berättelser om övergången från junior till senior. Idrottarna hade tidigare deltagit i den kvantitativa longitudinella studien. Därmed kunde deras berättelser relateras till resultatet i den första studien.

I studie ett var syftet med första artikeln (1a) att identifiera profiler av idrottare i junior- till seniorövergången, baserat på idrottarnas personliga egenskaper (idrottsidentitet, självkänsla och målorientering), för att sedan beskriva profilernas olika vägar i övergångsprocessen. Den latenta profilanalysen (eng. latent profile analysis) resulterade i tre profiler, där idrottsidentitet var en viktig egenskap som också hade stor betydelse för övergångsprocessen. Olika typer av copingstrategier kunde även förknippas med de olika vägarna i övergångsprocessen från junior- till senioridrott.

I studie ett var syftet med andra artikeln (1b) att identifiera idrottarnas anpassning från junior- till senioridrott under två och ett halvt år, för att sedan beskriva idrottarnas demografiska och personliga egenskaper samt övergångsvariablerna. Den latenta profilanalysen resulterade i tre profiler av anpassning (progressiv, regressiv och hållbar). Ytterligare analyser (beskrivande statistik och Cohen's *d*) visade att ett primärt fokus på idrott (utan att bortse från andra delar av livet), stark idrottsidentitet och hög motivation att nå seniornivå var relevant för både progressiv och hållbar anpassning.

I studie två var syftet med första artikeln (2a) att kvalitativt undersöka två individuella idrottare (en simmare och en tennisspelare) övergång från junior- till senioridrott och de psykosociala faktorer som underlättade eller försvårade deras övergångsprocess. Narrativa intervjuer genomfördes och analysen (eng. the holistic-form structural analysis) visade på en prestationsberättelse som var liknande för båda idrottarna. Analysen illustrerade även varsin kompletterande berättelse. Simmaren berättade om *ansträngning och relationer*, medan tennisspelarens berättelse skildrade *skada och förändring*. Båda idrottarna behövde bemöta och hantera olika vägschal under övergången. De delade uppfattningen att exempelvis familj, tränare och idrottsföreningens klimat underlättade processen, medan deras uppfattning om de psykosociala faktorerna som försvårade övergångsprocessen var mer särpräglad.

I studie två var syftet med andra artikeln (2b) att kvalitativt undersöka två lagidrottare (en fotbollsspelare och en basketspelare) övergång från junior- till senioridrott, och de psykosociala faktorer som underlättade eller försvårade

deras övergångsprocess. Intervjuerna och analysen genomfördes på samma sätt som i artikel 2a. Fotbollspelarens berättelse karakteriserades av *prestation och familj*, medan basketspelarens berättelse skildrade *glädje och gemenskap*. Båda idrottarna behövde bemöta och hantera olika vägsskäl under övergången. De delade uppfattningen att deras familj till exempel föräldrar, morföräldrar och syskon och lagkamrater underlättade övergångsprocessen, medan vissa beteenden hos tränarna försvårade processen.

Slutsatserna från detta avhandlingsprojekt sammanfattas på följande sätt: (a) övergången från junior- till senioridrott är en process där dynamiken och interaktionen mellan övergångskrav, copingstrategier samt interna- och externa resurser/hinder påverkar utfallet av övergången, (b) resultaten stödjer karriärövergångsmodellen i kombination med ett holistiskt och ekologiskt perspektiv samt ett utvecklingsperspektiv som ett adekvat ramverk, för att undersöka övergången från junior- till senioridrott, (c) det integrerade ramverket för övergången från junior- till senioridrott och som stöds av de empiriska resultaten bör användas i framtida forskning, (d) resultaten visade på en variation av anpassning (alternativa vägar) i den första studien, men också i den andra studien, där de olika berättelserna kan liknas vid olika vägar genom övergången. Avhandlingsarbetet bidrar med (e) kontextspecifika rekommendationer för olika nivåer av det svenska idrottssystemet exempelvis förbund, klubbar och tränare), för att optimera och stödja svenska junioridrottarens fortsatta idrottsdeltagande.

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List of scientific articles

1A. Franck, A., Stambulova, N. B., & Weibull, F. (2016). Profiles of personal characteristics and relevant pathways in the junior-to-senior transition: A longitudinal study of Swedish athletes. *International Journal of Sport Psychology*, 6, 483-507. doi:10.7352/IJSP.2016.47.000

1B. Franck, A., Stambulova, N. B., & Ivarsson, A. (2016). Swedish athletes' adjustment patterns in the junior-to-senior transition. *International Journal of Sport and Exercise Psychology*. doi:10.1080/1612197X.2016.1256339

2A. Franck, A., & Stambulova, N. B. (2017). A swimmer's strokes and a tennis player's breakpoints through the junior-to-senior transition: A narrative analysis of the transition pathways of two Swedish athletes. Manuscript submitted for publication.

2B. Franck, A., & Stambulova, N. B. (2017). Individual pathways through the junior-to-senior transition: Narratives of two Swedish team sport athletes. Manuscript submitted for publication.

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Introduction

I would like to begin this volume with a personal note. As you can see on the title page of this doctoral dissertation, my name is Alina Franck, and I am originally from Stockholm where I grew up and still today have my family; my father is Swedish, and my mother is Finnish. My athletic career started almost even before I was born; my dad and my uncle played table tennis on an elite level. I began playing table tennis from a young age, and I started training in my first training group when I was six years old and continued playing up to the age of 21. The most difficult stage of my athletic career was the transition from a junior to a senior player. I incurred a complicated knee injury at the same time that I was accepted to one of the elite high schools in Stockholm. It was a demanding lifestyle trying to combine sport, school, and rehabilitation. I had the opportunity to compete for the Finnish National team in table tennis because I have dual citizenship. This gave me experience and insights into competing with the national team at both junior and senior levels. After high school I started working as a trainer and applied for the sport science program at Halmstad University in 2005. Based on my own experience as an athlete, and the knowledge that I have gained from my education, I have developed a strong interest in studying the junior-to-senior transition. More knowledge about this complicated transition might lead to recommendations for helping athletes during this decisive period of their careers. This is why I have chosen to further explore the junior-to-senior transition in my PhD project. Below, I have provided a brief overview of the athlete career research in sport psychology with a particular focus on the junior-to-senior transition followed by an introduction to the structure and content of my PhD project.

The number of citizens in Sweden passed ten million during the year 2016 and 3.2 million of these people are members of the Swedish sport system (Riksidrottsförbundet, 2017). The Swedish sport system consists of the Swedish Sport Confederation, 71 sport-specific federations (e.g., football, tennis, swimming) and approximately 20 000 sports clubs. The sport system environment is where children and youth spend the third highest amount of

time, with the first and second environments being their homes and their school systems, respectively. The Swedish sport systems rely on the 650 000 nonprofit leaders/trainers/coaches who are active in the sport clubs around the country. The current government plan is to redevelop the sport system by the year 2025. One of the main goals is to promote lifelong participation in sport clubs, *“we want to create a sport context that’s for everyone – and for the whole lifespan”* (Riksidrottsförbundet, 2017, p. 7). This quote is taken from the new Vision statement of the Swedish Sport Confederation and takes the standpoint that understanding the “language” of movement (e.g., sport, physical activity) is as important as literacy. This is a bold statement! This challenge puts pressure on the confederation, sport-specific federations, and local sport clubs to change and develop ideas on how to work with athletes during all stages of their athletic careers and their post-career lives. This new approach for 2025 will also challenge the sport clubs to not only develop and foster elite athletes but also offer sport as exercise for people of all ages.

The field of career transition research has gained extensive attention and has substantially evolved in the last two decades (Stambulova, 2012). Among the within-career transitions, there is currently a focus on the junior-to-senior transition (JST), which is outlined within the analytic sports career model (Stambulova, 1994). The interest in this transition can be explained by its particular importance for athletes and their lives when trying to achieve elite/professional levels in sport. Unfortunately, it is difficult to pinpoint the exact time when the JST occurs because it depends on different factors such as gender, sport dissimilarities, and varying socio-cultural contexts (Stambulova 2009; Stambulova & Ryba, 2014).

Lindner and Johns (2004) reported that according to international sport science research, one-third of all participants between the ages of 10 and 17 withdraw from sport each year. How can the number of dropouts in adolescence be decreased and more athletes kept in sports? And how can we help athletes in the JST? These questions have become important for sport systems around the world, especially in relatively small countries (e.g., Sweden) where concern about finding reserves for senior national teams is rapidly growing. One of the answers to the questions in focus refers to the athletic career topic and, more specifically, to the need to help athletes with the JST.

Athletes frequently describe the JST as the most difficult within-career transition, and many of them have acknowledged that they failed to cope well with it (e.g., Stambulova, 1994, 2009; Vanden Auweele, De Martelaer, Rezewnicki, De Knop, & Wylleman, 2004). Paradoxically, the most promising athletes, who demonstrate quicker progress than their peers in the junior age levels and experience social recognition, find this transition especially difficult. In addition, these athletes often focus too much on sport and are vulnerable to limiting development problems (e.g., athletic identity foreclosure; Stambulova, 2009). Issues outside sports during JSTs are also

important, with school studies and social aspects proving to be the most demanding. Athletes' ambitions to succeed in the JST and meet the expectations of significant others, together with uncertainty about success in coping, lead to high stress levels and are often related to injury, rehabilitation, competitions/games, practice, and combining sport with other activities (Stambulova, Franck, & Weibull, 2012). Several studies on dual careers have shown the challenges that athletes face when trying to combine different spheres of life, such as sport, school, and private life (Debois, Ledon, & Wylleman, 2015; Stambulova, Engström, Franck, Linnér, & Lindahl, 2015; Tekavc, Wylleman, & Cecić Erpič, 2015). A dual career can be briefly defined as athletes having two major career foci (e.g., sport and education, sport and work). A combination of sport and education has proven to be beneficial for athletes to prevent athletic identity foreclosure, cope with the JST demands, and prepare for life after sport (e.g., Bruner, Munroe-Chandler, & Spink, 2008; Lally, 2007; Lindner & Johns, 2004; Pummel, Harwood, & Lavallee, 2008; Stambulova et al., 2012).

In Sweden, there are mainly two different dual career options during the JST (Riksidrottsförbundet 2009, 2017). One option is through the national elite sport high schools, where athletes can combine sport and education as part of a dual career program. Unfortunately, according to the Swedish Sport Confederation (2009), only a small number of the athletes who want to reach the senior level can be given this opportunity. The second option, which the majority of athletes have to choose, is to find their own paths (e.g., the optimal balance between sport, studies, and private life) in the sport clubs and schools in their locales that provide the opportunities to be involved in sports. The latter groups of JST athletes (i.e., sports club based) are less privileged, and are probably in need of more support than national elite sport school athletes. This difference was one of the primary motives in aiming this PhD project at exploring the JST process in sport club based Swedish athletes.

Researchers should learn more about, and create a more holistic view of, the JST. This project has both scientific and practical significance for sports, focusing on the JST as a multidimensional and multifactor process, to provide practical guidelines for sport federations, clubs, coaches, parents, and sport psychology consultants when helping athletes prepare for, and cope with, the JST in a healthy and successful manner.

Key terms

Athletic career and career transitions

“Athletic career is a term for a multiyear sport activity, voluntarily chosen by the person and aimed at achieving his or her individual peak in athletic performance in one or several sport events” (Alfermann & Stambulova, 2007, p.713). The word *career* almost exclusively refers to competitive sports, but

includes all its levels. Athletic career is also defined as a sequence of stages and transitions. A transition is caused by one or more events and defined as a process of coping and change (Wylleman & Lavallee, 2004). More specifically, transitions are turning phases in career development that come with a set of specific demands related to practice, competitions, communication, and life changes that athletes have to cope with to continue successfully in sport or to post-career life (Alfermann & Stambulova, 2007).

The junior-to-senior transition

As previously mentioned, it is difficult to pinpoint the exact time when a JST occurs. Most of the previous research has adopted the selection criteria from the analytic sports career model (Stambulova, 1994, 2009) with the following categorizations: individual sport athletes beginning the JST process when they start (or, in the near future, are going to start) participating in senior competitions, and team sports athletes starting the JST process when they begin (or, in the near future, will begin) practicing with a senior team (Stambulova, 1994, 2009; Stambulova, et al., 2015).

Theoretical frameworks

For my PhD project, four theoretical frameworks relevant to the transition process, an athlete's career, and a person's environment were selected. These frameworks include: the athletic career transition model (Stambulova, 2003, 2009), the holistic athletic career model (Wylleman, Reints, & De Knop, 2013), the ecological model of human development (Bronfenbrenner, 1979), and the athletic talent development environment model (ATDE; Henriksen, 2010; Henriksen, Stambulova, & Roessler, 2010a, 2010b, 2011). To guide the project, I developed *the integrated JST framework* based on the four aforementioned frameworks (see more below).

Career transition framework

The athletic career transition model (Stambulova, 2003, 2009) defines a transition as a process of coping with a set of transition demands. In the coping process, athletes use various coping strategies to deal with the demands. The effectiveness of coping is seen as being dependent on a dynamic balance between the transition resources and barriers. Resources can be various internal and external factors that facilitate the transition, and barriers are various internal and external factors that interfere with the coping process. The model entails two primary outcomes: a successful transition and a crisis transition. A successful transition is the result of effective coping, meaning a good fit between demands and athletes' coping resources and strategies. A crisis transition is a result of ineffective coping because the athletes are low in resources, and/or high in barriers. Crises are also

conceptualized as transitions that athletes are not able to cope with independently and may need social support or psychological assistance. According to the model, the crisis transition can have two possible outcomes: a delayed successful transition (in the case of effective intervention) or an unsuccessful transition (in the case of ineffective or no intervention) associated with negative consequences, such as premature dropout, neuroses, overtraining, depression, and so forth. Career transition interventions outlined by the model include: crisis prevention, crisis coping, and negative consequence coping interventions.

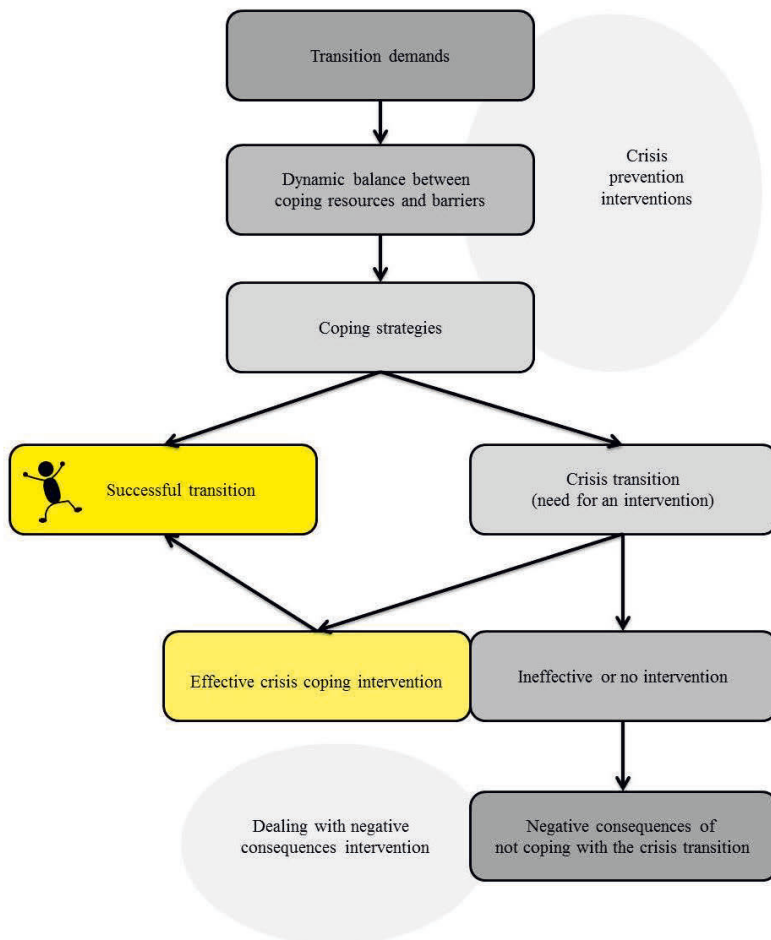
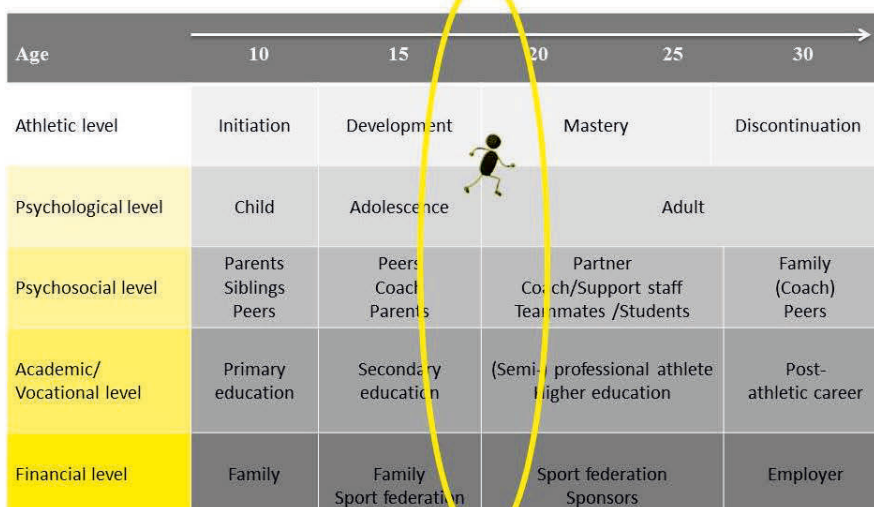


Figure 1. An adapted version of the athletic career transition model (Stambulova, 2003, 2009).

Career development framework

This framework is the holistic athletic career model (Wylleman et al., 2013), and it provides a comprehensive description of athletes' development. The model links five concurrent domains of an athlete's development (i.e., athletic, psychological, psychosocial, academic/vocational, financial) throughout the athletic career. The normative transition from the development to the mastery stage (analogous to the JST, outlined in the analytic sports career model by Stambulova, 1994) corresponds with transitions in athletes' psychological development (from adolescence to adulthood), psychosocial development (from living at home to living independently), academic/vocational development (from upper secondary school to college/university or job), and financial development (from financial support primarily from family to sport governing bodies/sponsors' support).



Age	10	15	20	25	30
Athletic level	Initiation	Development	Mastery	Discontinuation	
Psychological level	Child	Adolescence	Adult		
Psychosocial level	Parents Siblings Peers	Peers Coach Parents	Partner Coach/Support staff Teammates /Students	Family (Coach) Peers	
Academic/ Vocational level	Primary education	Secondary education	(Semi-) professional athlete Higher education	Post- athletic career	
Financial level	Family	Family Sport federation	Sport federation Sponsors	Employer	

Figure 2. An adapted version of the holistic athletic career model (Wylleman et al., 2013).

Ecological frameworks

The ecological model of human development (Bronfenbrenner, 1979) describes a social environment as a multilevel context interacting with, and influencing, a person's development (see Figure 3). The individual is in the center of the model, and circled by several environmental layers or levels. The macrolevel is the outer one and includes culture, ideologies, political aspects, and major organizations. Countries have different traditions affecting the individual's development including traditions in sports and relevant opportunities. The exolevel includes settings that are important but the

individual is not personally involved in them. A sport federation is a good example of the exolevel, and it plays a pivotal role for the sport and for athletes' development. The mesolevel refers to the local environment (e.g., neighborhood, school environment, sport clubs) in which the person has an active role. In this level, the interactions between the different settings (e.g., club, school, family) are important for development. The microlevel is the one closest to the individual, (e.g., parents, siblings, relatives, coaches, teachers), and affects the person the most. In a bigger picture, interactions between different levels of the developmental context influence the person's growth and development.

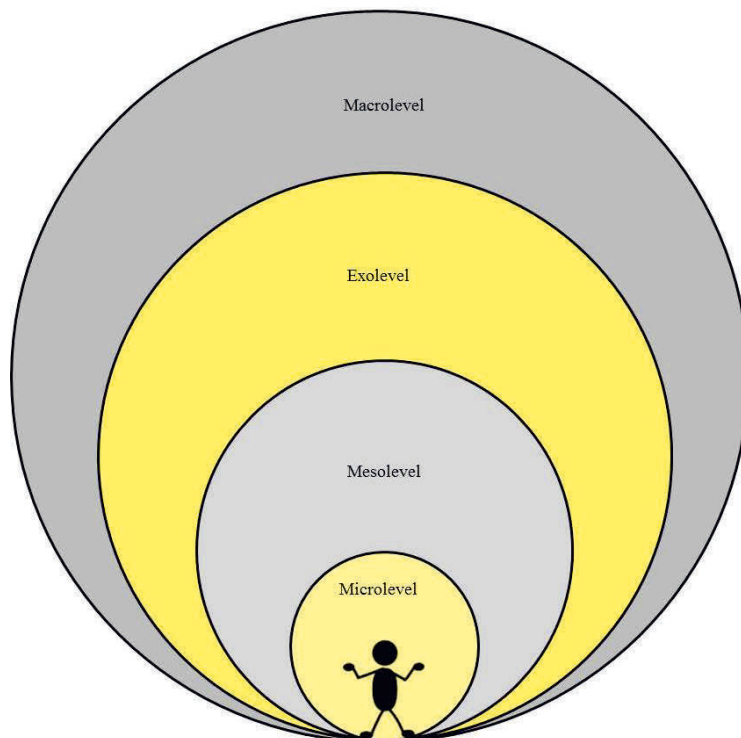


Figure 3. An adapted version of the ecological model of human development (Bronfenbrenner, 1979).

I chose the athletic talent development environment model (ATDE; Henriksen, 2010; Henriksen et al., 2010a, 2010b, 2011, see Figure 4) to narrow the focus and to encapsulate an athlete's environment. This model provides a holistic ecological perspective of the JST. The model describes the athletic environment, putting the athlete in the center with the other components structured into micro and macrolevels, athletic and non-athletic

domains, and also adding a time dimension (i.e., past, present, future). The microlevel is the environment, where athletes spend the majority of their time, and it is where the daily interactions occur (e.g., with coaches, family members, peers). The macrolevel covers the social settings (e.g., sport federations, media, the educational system) that influence the athlete and over which the athlete has little or no control. This level also contains related cultures with values, norms, and traditions. The athletic domain represents the part of the athlete’s environment that relates to sport, whereas the non-athletic domain includes all the other spheres of the athlete’s life. The main purpose of using the ATDE as a model in applied sport settings is to assist organizations, stakeholders, and significant others help aspiring junior athletes make successful JSTs.

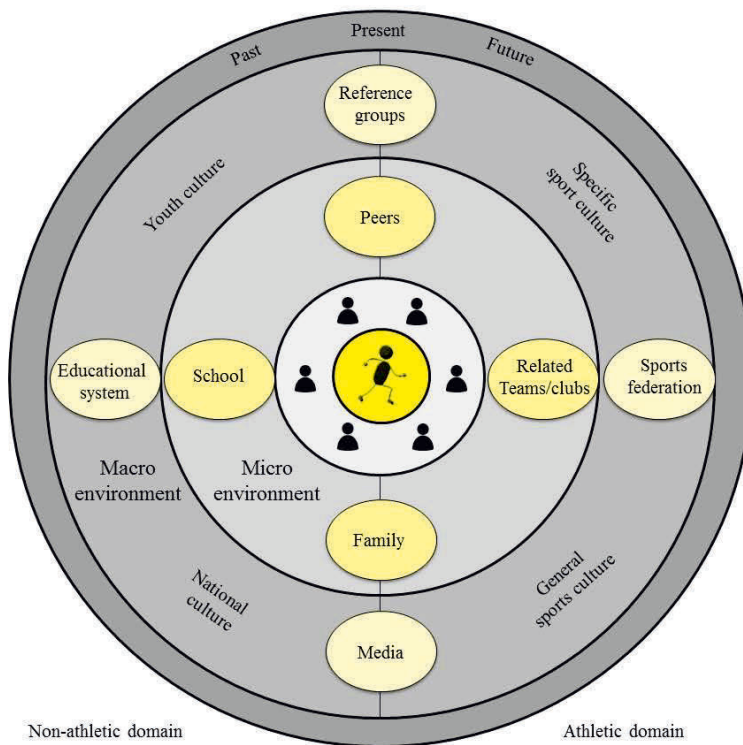


Figure 4. An adapted version of the athletic talent development environment model (Henriksen, 2010; Henriksen et al., 2010a, 2010b, 2011.)

An integrated JST framework

To illustrate how the current theoretical frameworks discussed above complement each other, I developed an integrated JST framework (Figure 5).

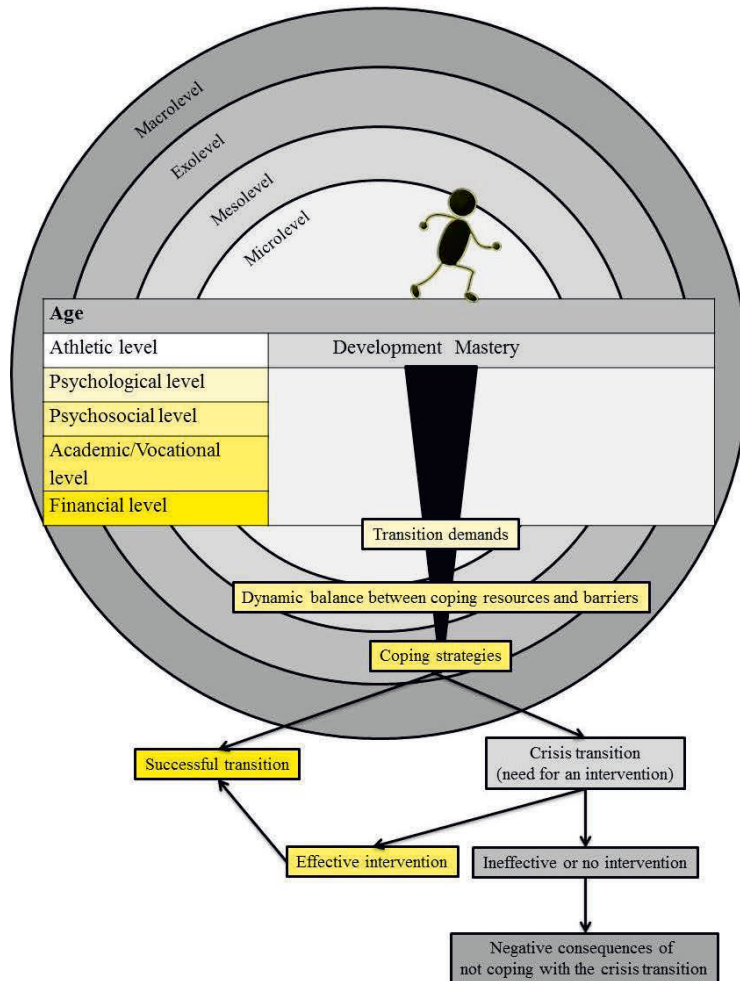


Figure 5. An integrated JST framework (Franck, 2018).

As shown in Figure 5, a young athlete is in the center of the integrated framework and positioned within environmental layers (e.g., micro, meso) emphasizing their influences on the athlete's development. The athlete is also positioned within the holistic athletic career model between the development and mastery athletic career stages (that are relevant to the JST). The dark triangle that goes down from the athlete (see Figure 4) the dark triangle

represents in interconnectedness of the athlete's intrapersonal, interpersonal, and social-environmental worlds during the JST. It links the career development framework with the career transition model that describes the transition process and relevant pathways through interactions between transition demands, resources, barriers, coping strategies, and outcomes.

Current trends in athletes' career transition research

During the last two decades, the field of career development and transitions has evolved through four major shifts: (a) from understanding a transition as a singular event to viewing it as a process, (b) from primarily focusing on athletic retirement to studying a range of within-career transitions (e.g., the JST), (c) from changing the focus on athletes' transitions exclusively in sport to a holistic development approach, and (d) from not considering careers in context to emphasising the role of contextual factors in career development and transitions (Stambulova, Alfermann, Statler, & Côté, 2009; Stambulova & Wylleman, 2014). The most recent career research is focused on athletes' dual careers or combinations of sport and study/work (e.g., Baron-Thiene & Alfermann, 2015; Debois, Ledon, Argiolas, & Rosnert, 2012; Debois et al., 2015; Stambulova et al., 2015; Tekavc et al., 2015). A combination of sport and education has proven to be beneficial for athletes in the JST by preventing athletic identity foreclosure and helping to prepare them for life after sport (e.g., Lindner & Johns, 2004; Lally, 2007; Bruner et al., 2008; Pummel et al., 2008; Stambulova et al., 2012).

Previous research on the JST

Even though there are many sport careers with various pathways (Stambulova, 2016a), some experiences are common among athletes in the JST. For example, the length of the JST is usually estimated to be between one and four years (e.g., Stambulova, 1994, 2009; Stambulova, Pehrson, & Olsson, 2017). Recent narrative career research has suggested that athletes' transitions, careers, and identity developments are influenced by narratives (e.g., performance, relational, discovery) existing within relevant contexts and settings (Carless & Douglas, 2012; Douglas & Carless, 2009). Douglas and Carless (2009) described the performance narrative as "a story of single-minded dedication to sport performance to the exclusion of other areas of life and self" (p. 215). The performance narrative is, perhaps, one of the most common narratives, within which athletes reflect upon or share their athletic career experiences and meanings. In the performance narrative, being competitive and aiming to win are considered positive qualities and losing is seen as often being associated with shame. An effort narrative (Carless &

Douglas, 2012) differs slightly from the performance narrative by drawing attention to the process rather than the outcome. For example, an athlete could say, “I did the best I could” (Carless & Douglas, 2012, p. 391) instead of focusing primarily on winning or losing. Narratives other than performance include the discovery and the relational narratives (Carless & Douglas, 2009, 2013b). In the discovery narrative, emphasis is placed on athletes’ explorations of sports and the world, discovery of new things, and development of new skills and relationships. In the relational narrative, athletes’ stories are formed around meaningful relationships with key people in their careers. Narrative studies researchers present career or transition processes as stories that are based on the individuals’ experiences but also on the narrative resources (i.e., dominant narratives) available in their cultures. Another type of JST research is post-positivist and is represented by a small amount of survey (mainly quantitative) studies. Below I will summarize the major findings of existing JST research that uses the athletic career transition model (Stambulova, 2003, 2009) as a structure or theoretical foundation for the research (e.g., transition demands, resources and barriers, coping strategies, transition outcomes).

Transition demands

Similar for many transitions the JST begins with increased demands for junior athletes (e.g., Bruner et al., 2008; Debois et al., 2012; Lorenzo et al., 2009; Rosier, Wylleman, De Bosscher, & Van Hoecke, 2015; Stambulova et al., 2017; Van Yperen, 2009; Wylleman & Reints, 2010). These demands are physical (e.g., higher standards of both practice and performance than previously experienced), psychological (e.g., high expectations, identity (re)formation, striving for independence, psychological stress, low awareness of the demands on the senior level), social (e.g., having friends and/or love interests), educational (e.g., transition to the university level), and financial (e.g., lack of sponsors). Another challenge for junior athletes is to find an optimal balance between sport, education, social, and private life (Debois et al., 2015; Stambulova et al., 2015; Tekavc, 2017; Tekavc et al., 2015).

Personal (internal) resources and barriers

Athletes’ personal characteristics play important roles in their athletic career development. For example, motivation and volitional skills influence athletes’ continuation or dropout from sport during adolescence (Baron-Thiene & Alfermann, 2015). Gould, Dieffenbach, and Moffet (2002) found several personal characteristics that characterise Olympic athletes (e.g., the ability to cope with and control anxiety, high self-confidence, the capacity to focus and block out distractions, competitiveness, the capability to achieve goals, optimism, having a strong work ethic). Similar to the Gould et al. (2002) study, Poczwadowski, Diehl, O’Neil, Cote, and Haberl (2014) found

optimism and athletic identity to be among the internal factors facilitating the transition to the Olympic Training Center in the USA.

Athletic identity is a personal characteristic that has been discussed in relation to athletic careers in several previous studies (e.g., Cecić Erpič, Wylleman, & Zupančič, 2004; Grove, Lavalley, & Gordon, 1997; Lally, 2007; Stambulova, 2009; Stambulova et al., 2015; Stephan & Brewer, 2007). Athletic identity can be seen as a resource in the JST, focusing athletes strongly on their sport goals. Unfortunately, if athletes focus only on sport, they might become more vulnerable to limited or narrow development. Traditionally, athletic identity has been viewed from a positivist perspective (i.e., the degree to which a person identifies with, and internalizes the athletic role - Brewer, Van Raalte, & Linder, 1993). But recently, the view has shifted (Schinke & McGannon 2015; Ronkainen, Kavoura, & Ryba, 2016) to the conceptualization that identity is a complex cultural construct with different layers (e.g., nationality, gender, education, sport type). In this sense, identities can be understood as fluid and multiple, and as being constructed in a social context (Carless & Douglas, 2013b).

During the JST process, athletes have to overcome internal barriers such as the athletes' ambitions to succeed in the JST, in a combination with the uncertainty of being successful, high levels of stress, limited confidence, low motivation, and the psychological effects of dealing with an injury (Stambulova, 2009). Another issue in elite sport is related to the high standards for body shape/weight and the pressure on the athletes from significant others (especially, coaches, managers and parents) to meet these standards (e.g., Tekavc, 2017). McMahon, Zehntner, and McGannon (2017) discussed the body issue using the example of elite swimming culture and its "slim to win" ideology and forced weight-control practices that might lead to negative consequences (e.g., pathogenic weight control behaviours) for athletes who gain weight.

Environmental (external) resources and barriers

To have a successful JST, athletes need a supportive environment (e.g., Henriksen et al., 2010a, 2010b, 2011; Salmela, Young, & Kallio, 2000). Storm, Henriksen, Larsen, and Christensen (2014) described athletes' relationships with key persons as either transitory or existential. Transitory relationships are defined as being influential primarily within an athletic context and, although usually short-lived, as providing important guidance to the athletes in terms of their career directions or changes. Existential relationships, such as with parents or a coach are long-lasting, and influence athletes' sport and non-sport lives, their value systems, and motivations during their athletic career.

Gould (2017, symposium presentation) noted, "It takes a community to develop an athletic career" and key persons (e.g., coaches, family, peers) and settings (e.g., sport federations, sport clubs, schools) can affect athletes'

development. Athletes' career paths are influenced by the interactions between athletes and the socio-cultural contexts (e.g., Busanich, McGannon, & Schinke, 2014; Carless & Douglas, 2009, 2012, 2013a, 2013b; Gledhill & Harwood, 2015; Sandström, Linnér, & Stambulova, 2016b). Significant others (e.g., parents, teachers) may encourage athletes to prioritise school first and sport second, whereas the athletes may want to focus on, and prioritise, sport (Gledhill & Harwood, 2015; Stambulova et al., 2015). The athletes then feel as if they are directed away from sport, and may feel less encouraged to continue pursuing an athletic career. Parents of elite youth academy football players shared their experiences, and demonstrated that depending on where in the process of development the young player is, parents face different stressors and are also in need of different types of support. Studies have also found that when an athlete goes through a transition so do the athlete's coaches and parents (Harwood, Drew, & Knight, 2010).

It is not only coaches and parents who are important social supporters for a junior athlete, but also the athletic environment as a whole that plays a pivotal role in the athlete's developments. Elite youth academy players' perception of the quality of their environments indicated that the overall perception was positive, but there was still room for improvements in establishing well-integrated youth and senior teams and positive relationships with key stakeholders (Mills, Butt, Maynard, & Harwood, 2014a). From coaches' perspectives, several factors were important in creating successful athletic environments (e.g., organizational core values, player welfare, adaptability, effective communication, key stakeholders' relationships, achievement orientation; Mills, Butt, Maynard, & Harwood, 2014b). Similar findings from studies on the talent development environments of different Scandinavian sport teams (e.g., track and field, kayaking, sailing) revealed the importance of having a holistic ecological approach to broaden the scope of the athletic environment to provide a comprehensively supportive setting for junior athletes to make successful JSTs (Henriksen et al., 2010a, 2010b, 2011). Athletes also face external barriers: overly high expectations of others, limited social support, and insecure financial situations (Finn & McKenna, 2010).

Coping strategies

According to coaches, coping strategies such as thoughtful problem solving, acceptance of responsibility, self-control, and positive reappraisal are beneficial for athletes in the JST (Finn & McKenna, 2010). Successfully coping with the JST is associated with athletes' identity modification and personality maturation. Examples of successful coping strategies in the JST are: focusing on the task and blocking out distractions, working towards achieving goals, prioritizing sport goals, having strong work ethics, solving problems, accepting responsibility, having self-control, and making positive reappraisals (e.g., Bruner et al., 2008; Pummel et al., 2008; Stambulova et al., 2012; Stambulova, 2009).

Morris (2013) identified different groups of athletes based on their dominant coping strategies in the JST: (a) athletes who did not rely on support from others even though it was offered to them (the avoidance group), (b) athletes who sought support from others when needed (the reactive coping group), and (c) athletes who actively searched for help prior to, and throughout the transition process (the proactive coping group). Morris suggested that it was difficult to completely distinguish these groups, but the avoidance group appeared to cope less effectively with the JST than the other two (e.g., the reactive and proactive coping groups).

Transition outcomes

Existing career transition models (Schlossberg, 1981; Taylor & Ogilvie, 1994; Stambulova, 2003, 2009) describe the quality of a transition based on the degree of effectiveness in coping with the transition demands. The quality of the transition is considered high when athletes cope effectively (e.g., do well and achieve their goals, feel resourceful and satisfied) and reach subjective feelings of well being with understandings of how to proceed at the new level autonomously. In previous research on the JST, several criteria for a successful transition were found, such as adaptive entry, perceived adjustment in and outside of sport, life satisfaction, and athletic performance (Bruner et al., 2008; Morris, Tod, & Oliver, 2014; Pummell et al., 2008; Rosier et al., 2015; Stambulova et al., 2012). Previous studies (Debois et al., 2015; Tekavc et al., 2015) have shown that it is important to view an athlete from the holistic lifespan perspective and, therefore, assess the outcome of the transition, not only based on athletic performance, but also on the athlete's overall adjustment and well being in several spheres of sport and life. Stambulova et al. (2012) came to the conclusion that JST researchers should learn a lesson from athletic retirement research, and provide a better conceptualization for the definition of the JST outcome criteria. In Stambulova et al. (2012), the suggestion was to combine the three criteria (i.e., the perceived degree of adjustment, sport satisfaction, life satisfaction) in measuring the quality of the JST.

The JST is well known for its high dropout rate. The conclusions of a Russian study athletes were split into two unequally sized groups; the larger group moved on to recreational level sports or dropped-out, and the smaller group continued on to the elite senior level (Stambulova, 2009). In another study, only 17% of elite junior athletes made a successful transition to senior sports during five years of observation (Vanden Auweele et al., 2004). It is important to examine why athletes so often fail to make this transition. Talented juniors and the key persons around them (e.g., coaches, parents) develop high expectations for quick adjustment, but typically the transition is neither quick nor easy. Many athletes find themselves in crisis and cannot cope successfully on their own and need some form of assistance (e.g., psychological, social; Stambulova, 2000). If athletes don't cope with the

transition demands, it may lead to burnout, increased risk of injuries or drop-out (e.g., Ivarsson, Stambulova, & Johnsson, 2016; Gustafsson, Sagar, & Stenling, 2016; Henriksen, Larsen, & Christensen, 2014).

Methodological issues

Several review papers (e.g., Alfermann & Stambulova, 2007; Petitpas, Brewer, & Van Raalte, 2009; Stambulova et al., 2009; Wylleman, Alfermann, & Lavallee, 2004) have previously called for studies on athletes' within-career transitions (such as the JST) and other future challenges. The first challenge was seen in applying the holistic lifespan perspective by considering transitional changes in both athletes' sport and non-sport lives (e.g., Wylleman et al., 2004). The second challenge was to incorporate a cultural perspective and contextualize within-career transition research (e.g., Ryba, Schinke, & Tenenbaum, 2010; Stambulova, & Ryba, 2014). Third, there was a call for studies with longitudinal designs to monitor and study large samples of athletes in transition (e.g., Alfermann & Stambulova, 2007; Stambulova et al., 2012) with a related challenge to create a culturally informed research instrument to use in longitudinal studies (Stambulova & Alfermann, 2009; Stambulova et al., 2009).

A majority of the studies conducted so far on the JST were qualitative (e.g., in-depth interviews, written narratives, focus groups). These studies could investigate only a limited number of participants (e.g., Bruner et al., 2008; Gledhill & Harwood, 2015; Morris, 2013; Pummel et al., 2008). There have been studies with cross-sectional quantitative approaches (e.g., Stambulova et al., 2012). I would suggest that research on the JST will benefit from a combination of quantitative and qualitative methodologies to provide a comprehensive and encompassing view of the transition process. A mixed-methods approach will allow researchers to show the JST as multidimensional and multifactor process.

The aforementioned considerations inspired me to develop and design this dissertation project using a mixed-method approach, meaning a combination of quantitative (study 1) and qualitative (study 2) approaches. Prior to the start of this PhD project, I was involved in the career research group at Halmstad University that developed and tested a new instrument to monitor JST athletes – the Transition Monitoring Survey (TMS; Stambulova et al., 2012).

The development of the Transition Monitoring Survey

Stambulova, N., Franck, A., & Weibull, F. (2012). Assessment of the transition from junior to senior sports in Swedish athletes. *International Journal of Sport & Exercise Psychology*, *10*, 1-17.

Almost ten years ago, the approach of using a quantitative instrument combined with a longitudinal design inspired researchers at Halmstad University to start developing the new instrument. The outcome has been published in the article *Assessment of the transition from junior to senior sports in Swedish athletes* (Stambulova et al., 2012). The new instrument, called the Transition Monitoring Survey (TMS), was designed to study Swedish athletes' JSTs. The development of the TMS is of central importance for this dissertation project, and it was the main instrument used in the longitudinal study.

The TMS was based on relevant theoretical frameworks, and previous international and Swedish research on the JST. Three theoretical frameworks were selected as the basis of the TMS. First was the analytic sports career model (Stambulova, 1994) that outlines six normative transitions in an elite athletic career, with the transition from junior to senior sports among them. Second, the developmental model of transitions faced by athletes (Wylleman & Lavallee, 2004) was seen as encompassing the holistic lifespan perspective and stimulated us to include subscales on athletes' perceived importance and satisfaction with sport and other spheres of life. The transition process (e.g., factors involved and outcomes) has been described by explanatory career transitions models (e.g., Schlossberg, 1981; Stambulova, 2003, 2009; Taylor & Ogilvie, 1994, 2001). The athletic career transition model (Stambulova, 2003, 2009) was selected as the third framework suitable for development of the TMS, and served as the structure and content of the subscales (e.g., transition demands, coping strategies, personal resources, environmental support, environmental pressure).

Both the national and the sport culture in Sweden can be described as horizontal (low in hierarchy, high in democracy), individualist, process-oriented with traditions and values related to working hard, cooperating, having modest ambitions in terms of personal success, gender equality, and coaching support for athletes' career decisions (e.g., Triandis, 2004; Stambulova, Johnson, & Stambulov, 2009; Stambulova & Johnson, 2010). The TMS was developed in Swedish and was designed for longitudinal studies on the JST in Sweden. Therefore, past Swedish research on the JST played a significant role in the development of the survey. (Alge, 2008; Båge & Hornbrinck, 2005; Čačija, 2007; Ekengren, 2002; Jorlén, 2007; Josefsson, 2004; Mavroidis, 2005; Vujic, 2004). Items in the TMS were formulated based on qualitative data collected from these previous studies, often using athletes' own wording. The TMS can be seen as a culturally sensitive

instrument. The influence of Swedish culture is visible throughout the content of the TMS items. Examples include the coping strategies subscale and the athletes' dominant strategies identified in Stambulova et al. (2012), such as 'I try to give 100% in each practice/competition', 'I try to maintain good relationships with people around me', and 'I try to learn from others'.

The TMS has a three-part structure. The first part, the Introduction, contains questions about personal and athletic background (e.g., age, gender, type of sport, level of competition, number of training hours). The second part, the Current Situation in Sport and Life, explores the athlete's perception of different spheres of sport and life in regards to their importance and the athlete's satisfaction with them. The third part, the Transition Process, includes eight subscales exploring the transition process (demands, coping strategies, support, pressure, personal resources, stress, need for additional help, and adjustment to the senior level).

The development (Stambulova et al., 2012) of the TMS included a total of 416 participants organized into three samples (i.e., the comprehension test, the main test, the test-retest). The results from the analysis of the TMS reliability can be summarized as follows. The study showed high internal consistency for 8 of the 11 TMS subscales. The moderate internal consistency for three subscales in the Current Situation in Sport and Life part can be seen as the consequence of using double (importance and satisfaction) subscales in this part of the TMS. In terms of test-retest reliability with 2-3 weeks between the two measurements, the results showed satisfactory reliability for all four importance/satisfaction subscales (give the reliability coefficients), as well as for transition demands, coping strategies, environmental support, environmental pressure, and personal resources subscales, and lower reliability for perceived stress and need for additional help/support. The test-retest study confirmed the dynamic nature of the transition process, but it also pointed out the several TMS items that should be improved or deleted (for more in detail information on the results, see Stambulova et al. 2012).

The psychometric evaluation of the TMS illustrated some obvious strengths as a theoretically based and culturally adapted instrument with satisfactory validity and reliability, but, some deficits of the TMS were found. To further improve the TMS, some adjustments were made, such as: adding a question about athletes' motivation to cope with the transition, considering separating the importance and satisfaction subscales, replacing one item on the perceived degree of adjustment to the senior level by a subscale with 4-5 items representing various aspects of adjustment to facilitate young athletes' assessment of the quality of their transitions. Corresponding changes were done in the TMS before it was used in this dissertation project (see more in study 1).

Motivation for, aims, and structure of the dissertation project

In summary, the field of career development and transitions in sport psychology has evolved in several ways (e.g., viewing a transition as a process, focusing on within-career transitions, adopting a whole-person approach, considering socio-cultural contextual factors), especially during the last two decades. The JST is an important within-career transition to further explore for several reasons. The JST can be metaphorically defined as a “gatekeeper” of future progress for talented and aspiring junior athletes aiming at senior elite and professional levels in their sports (Pehrson et al., 2017). The JST has been typically described by athletes, and acknowledged in relevant research, as the most difficult transition during athletes’ careers with a high dropout rate and many athletes finding themselves in need of psychological assistance to successfully cope with its demands.

In Sweden a majority of junior athletes have to find their own JST paths in their local sport clubs (usually combining sport with education at nearby schools). National elite sport schools’ athletes (i.e., involved in established dual career programs) have received solid research attention (e.g., Stambulova et al., 2015), whereas the less privileged sport club athletes’ JST pathways have not been explored. To facilitate service and assistance to this group of athletes in the future, more research is needed about the sport club athletes’ JST processes, pathways, and factors influencing outcomes, both positive and negative. The limited attention to these athletes is why this group of Swedish sports people was chosen as participants for this PhD project.

This PhD project, “*The junior-to-senior transition in Swedish athletes: A longitudinal study*,” had an overall aim to examine the JST processes (e.g., athletes’ perceived demands, coping strategies, environmental support/pressure, personal resources) in Swedish sport club-based athletes together with their personal and environmental characteristics involved in their transitions and influencing their transition paths. The project was guided by the *integrated JST framework* combining the holistic, developmental, and ecological perspectives with the transition framework. The project consists of two studies covered by two articles each.

The first study was designed as a quantitative longitudinal investigation into the dynamics in athletes’ JST processes. It was made possible after the development and testing of the TMS (Stambulova et al., 2012). One conclusion Stambulova et al. (2012) made was that the longitudinal project might benefit with the TMS being complemented by instruments measuring athletes’ personal characteristics (i.e., athletic identity, goal orientation, physical self-perception, self-esteem) because, according to previous research (e.g., Bruner et al., 2008; Stambulova, 2009), athletes who are going through the JST mature not only as athletes but also as individuals. The first study

investigated athletes' transitional and personal variables during two-and-a-half years including five measurements time periods ($N = 101$). The data collected from this study were extensive. The decision was made to analyze the data in two different ways. This decision resulted in two articles (1a and 1b).

After conducting, analyzing and writing the two articles (1a and 1b), the second study was designed to follow-up the quantitative longitudinal study. In the longitudinal study several adjustment patterns and transition pathways were identified for different subgroups of athletes, but to get a deeper understanding of individual experiences and social contexts, the aim of the second study was to further qualitatively explore JST processes. More specifically, the second study was focused on the JST pathways of athletes representing individual and team sports using a narrative, interview-based approach. This study is presented in two articles (2a and 2b). The participants were four athletes involved in the earlier first study, and thus their transition narratives could be related to the previously discovered dynamics of their JSTs in study 1. More detailed descriptions of the studies (and related articles) are presented below, and then followed by the general discussion.

Ethical considerations for all studies

Before starting the project, ethical issues were carefully considered, and the Lund University Ethical Board granted approval to conduct the research. For all studies, sport clubs' managers and coaches were informed about the aim and the selection criteria of the study. Before the data collection occurred, informed consent forms were signed by coaches responsible for the athletes. This was especially important regarding the athletes in study 1. Prior to participating, the athletes were informed about the aim of the study and related ethical issues (e.g., voluntary participation, confidentiality, the right to drop out at any time). The athletes also signed informed consent forms before filling out the surveys or taking part in the interviews.

Study 1: Quantitative longitudinal exploration of the JST

1A. Franck, A., Stambulova, N. B., & Weibull, F. (2016). Profiles of personal characteristics and relevant pathways in the junior-to-senior transition: A longitudinal study of Swedish athletes. *International Journal of Sport Psychology*, 6, 483-507. doi:10.7352/IJSP.2016.47.000

1B. Franck, A., Stambulova, N. B., & Ivarsson, A. (2016). Swedish athletes' adjustment patterns in the junior-to-senior transition. *International Journal of Sport and Exercise Psychology*. doi:10.1080/1612197X.2016.1256339

Structure and objectives

This study was designed as a quantitative longitudinal examination of the JST process with five measurements conducted approximately every six months, over a period of two and a half years. The data collected were extensive, and I decided to proceed with the analysis in two directions, which resulted in two articles (1a and 1b). The first article (1a) is focused on identifying profiles of athletes in the JST based on some of their key personal characteristics (athletic identity, self-esteem and goal orientation) followed by descriptions of the JST pathways relevant to the profiles. The second article (1b) is aimed at identifying adjustment patterns in the JST based on athletes' dynamics of adjustment during a two-and-a-half-year period, and describing the athletes' demographics, personal and transitional characteristics at the beginning of the JST that were related to the different adjustment patterns.

Participants

Participants in the study were 101 sport club Swedish athletes at measurement time 1 (74 males and 27 females); with the mean age 16.5 ($SD = 1.3$). Of these, 20 were athletes in individual sports (table tennis, tennis, and swimming) with a mean age of 16.8 ($SD = 1.3$), and 81 were team sports

athletes (basketball and soccer) with a mean age of 16.4 ($SD = 0.9$). To select the participants, the following criteria were adopted from the analytic sports career model (Stambulova, 1994, 2009). Individual sport athletes should have begun (or in the near future, would be going to start) participating in senior competitions, and team sports athletes should have begun (or in the near future, would begin) practicing with a senior team.

The dynamics of participants were characterized by an increasing dropout rate with 101, 68, 52, 55, and 37 participants from the first to the fifth measurement times, correspondingly. The dropout refers to participants' discontinuation in the study, but was not necessarily indicative of their discontinuation in sports. Please note that in article 1a, only 100 of the 101 participants were included in the analysis because one participant did not complete the personal characteristics data, which were used in the main analysis.

Instruments

The four instruments used in this study, and described below, were selected based on previous JST research and the relevant validated instruments available in the Swedish language.

The Transition Monitoring Survey (TMS)

The TMS (Stambulova et al., 2012) has a three-part structure. The first part, the Introduction, contains a set of questions about personal and athletic background (e.g., age, gender, type of sport, level of competition, number of training hours per week), and also a question about their motivation to reach the senior level in their sports (a scale 1–10; 1 = low motivation and 10 = high motivation). The second part, the Current Situation in Sport and Life, explored the athlete's perception of different spheres of sport (e.g., practice, competitions or games, recovery, relationships within the sport), and life (sport, studies, work, family, and friends) from two perspectives: regarding the athletes' perceived importance of those spheres and their satisfaction with those areas of their lives and sports. The third part, the Transition Process, included eight subscales exploring the transition process (transition demands, coping strategies, environmental support, environmental pressure, personal resources, perceived sources of stress, need for additional help, and adjustment to the senior level). The subscale on the transition demands included items related to sport practice (e.g., technical skills), competitions (e.g., preparation for competitions/games), recovery (e.g., recovery between practices), and life (e.g., combination of sport and studies). The subscale on coping strategies consisted of different coping approaches, for example, "I have clear goals in sport," "I try to give 100% in practice and competition," and "I try to learn from others." The subscale on environmental support included items

representing potential sources of external support (e.g., coaches, family, teammates, sport organizations, media). In addition, conditions for training and climate in the team or group were included here as they related to the athletes' environments. To evaluate environmental pressure, the subscale included items on potential sources of external pressure from, for example, coaches, family, teammates, opponents, sport organizations, media, and financial obligations. The subscale on personal resources included items on sport motivation, self-confidence, health conditions, and mental skills, among others. Athletes' perceived sources of stress (e.g., practice, competitions and games, recovery, rehabilitation, relationships, combining sport with other activities) were evaluated from two perspectives: the stress levels they generated and the degree of need for additional help or support. For all the above mentioned subscales the Likert-type scale from 1-10 was used. To obtain information on the perceived degree of adjustment to the senior level in their sports, athletes used a scale from 0 to 100%, where 0% is not at all adjusted, and 100% is completely adjusted. This was complemented by a 5-point subscale where the athletes evaluated how adjusted they currently felt as a senior athlete in several areas (e.g., practice, competitions, relationships).

The TMS has been used in previous studies and has shown acceptable psychometric properties (e.g., Stambulova et al., 2012). In this study, Cronbach's alpha values for each TMS subscale were calculated based on the data from the measurements at time 1. In the second part, the Current Situation in Sport and Life, the alpha values ranged from .34 to .74 and in the third part, the Transition Process, the alpha values ranged from .58 to .95.

The Athletic Identity Measurement Scale (AIMS)

The AIMS (Brewer et al., 1993) measures a person's identification with the role of athlete and has 10 items (e.g., "Most of my friends train/exercise") that are evaluated on a 7-point scale. A Swedish version of the AIMS has been used in several studies (e.g., Stambulova et al., 2015) and exhibited acceptable psychometric properties. In this study Cronbach's alpha from measurement at time 1 was .84.

The Task and Ego Orientation in Sport Questionnaire (TEOSQ)

The TEOSQ (Duda, 1989) consists of 13 items. Six of them measure ego orientation, for example, "The others are not as good as I am." Seven items indicate task orientation, for example, "I learn something that is fun to do." Participants rated the items on a 5-point scale. The Swedish version of TEOSQ has been used in several studies (e.g., Gestranus, 2006) and has shown acceptable psychometric properties. In this study, Cronbach's alpha from measurement at time 1 was .70 for ego orientation and .82 for task orientation.

The Physical Self-Perception Profile – Revised (PSPP-R)

The PSPP-R (Lindwall, Hagger, & Asci, 2007) consists of 74 items that measure five factors (sport competence, strength, physical condition, body attractiveness, and self-esteem). For this study, only the self-esteem sub-scale was used. The sub-scale contains six items, which athletes rated from 1 to 4, depending on how true the item was for them (e.g., “Generally I am very satisfied with myself”). The Swedish version of the PSPP-R has been used in previous studies (e.g., Gestranus, 2006) and exhibited acceptable psychometric properties. In this study, Cronbach’s alpha for the self-esteem subscale was .88.

Procedures

The first organizational step was to locate and contact the participants. Based on my (and the article’s co-authors’) knowledge and professional networks, several sport clubs that had both junior and senior elite programs were invited to take part. The managers of the clubs were initially contacted by phone, and then provided with information about the study and participant selection criteria by email. Managers who showed an interest provided contact information for the coaches of teams or groups. The coaches were then contacted, and if their interest was confirmed, they received more detailed information about the content of the study. The next step was to arrange dates and times to meet the athletes (potential participants). The data collection was conducted in small groups before or after the athletes’ training sessions at their clubs and took approximately 20-30 minutes. One of the research group members was always present and available to help. Athletes who were not present during measurements 2, 3, 4, and 5 received, by post, the instrument package and the contact information of the members of the research group (one reminder was sent out at each measurement time).

Data analysis

To meet the objectives of the study, the analyses of the longitudinal study data were conducted in two different, but complementary, directions resulting in two articles (1a and 1b). In both directions of the analysis, the same data analysis framework, latent profile analysis (LPA), was used. The LPA has recently been used effectively in sport and exercise psychology research (e.g., Gustafsson, Hill, Stenling, & Wagnsson, 2015). In LPA, different sub-groups of participants, based on scores on continuous variables, can be identified. The LPA can be performed both on cross-sectional data (i.e., cross-sectional latent profile analysis; Peugh & Fan, 2013) and longitudinal data (i.e., longitudinal latent profile analysis; Grimm, Davoudzadeh, & Ram, 2017). In line with these different application options, in article 1a, I (and co-authors) conducted

the LPA, based on the cross-sectional data from the first measurement, to identify profiles of athletes in the JST through their personal characteristics (athletic identity, self-esteem and goal orientation). In article 1b, we implemented the LPA, based on longitudinal data, to identify profiles of athletes in relation to their adjustment patterns in the JST during the two-and-a-half-year period. Below, both lines in the LPA used in study 1 are described in more detail.

Data analysis: Article 1A

The LPA was used to identify (latent) profiles within the sample, based on the athletes' personal characteristics (e.g., athletic identity, self-esteem, task orientation, ego orientation) at the first measurement. Within the LPA framework (Nylund, Asparouhov, & Muthén, 2007), posterior class probabilities are estimated to determine each participant's class. Sequential nested models, starting with one class, are compared to determine if more complex models (i.e., containing more than one class) fit the data better than more parsimonious models. In the present study, models with one to five classes were tested to identify the optimal model based on statistical criteria and substantive meaning. Several criteria were used to determine the best model. First, the Bayesian information criterion (BIC; Henson, Reise, & Kim, 2007) and the sample-size adjusted BIC (SSA-BIC; Yang, 2006) were inspected, with lower values indicating better model fit. Second, the bootstrap likelihood ratio test (BLRT; Nylund et al., 2007) was used to compare the competing models. Statistically significant tests ($p < .05$) indicated that the three-profile model solution fit the data best. Third, the entropy criterion, which indicates how well people fit into their respective profiles (Aldridge & Roesch, 2008) was examined. Values closer to 1 indicate greater fit or accuracy (Berlin, Williams, & Parra, 2014). All these analyses were implemented in the statistical modeling program Mplus 7.3 (Muthén & Muthén, 1998-2012). When the three profiles were identified, descriptive statistics were calculated for transition variables for all five measurements for each profile.

Data analysis: Article 1B

In this article, the LPA was used to identify profiles (i.e., sub-groups of athletes) with similar patterns of change or dynamics of adjustment in JSTs throughout the longitudinal data collection. After discussion with my co-authors, I decided to set a cut-off point at the third measurement, to establish a pattern of adjustment instead of merely a direction. The third measurement was chosen because it was the middle measurement, and one could assume that the athletes should have come a halfway through their JSTs (nevertheless all five measurements were included into the statistical model). A sequence of nested models, starting with one profile, was compared to examine if more complex models (i.e., containing more than one profile) fit the data better than

more parsimonious models. In the present study, models with between one and four profiles were tested to identify the optimal model based on statistical criteria and substantive meaning. Several criteria were used to identify the best model. First, the sample-size adjusted BIC (SSA-BIC; Yang, 2006) was calculated, with lower values indicating a better model fit. Second, the Lo-Mendell- Rubin likelihood ratio test was used to compare the fit of two competing models. Statistically significant tests ($p < .05$) indicate that the model solution being examined fits the data better than a model solution with one less profile. Third, the entropy criterion was examined, which indicated how accurately people were classified into their respective profiles (Aldridge & Roesch, 2008). Values closer to 1 indicate higher accuracy (Berlin et al., 2014). Fourth, my co-authors and I worked on selecting the solution that was most meaningful from a theoretical (transition theory) perspective.

When the best model was determined, descriptive statistics on demographic, personal, and transitional characteristics for the identified profiles were calculated based on the first measurement data. Descriptive statistics for athletes' adjustments in specific areas were also calculated. These calculations could only be performed for the third, fourth, and fifth measurements because this specific part of the TMS was added after the second measurement (see Stambulova et al., 2012). Finally, Cohen's d effect sizes were calculated to estimate the magnitude of difference between the profiles in regards to their relationships with different transition process variables.

Results

Based on the descriptive statistics calculated from the first measurement, I provide a brief overview of the athletes at the beginning of the study. The athletes were competing at different levels: local ($n = 7$), national ($n = 16$), and international ($n = 76$). Although the athletes were highly motivated ($M = 9.20$, $SD = 1.46$) to reach the senior levels in their sports, the amount of training hours per week (e.g., sport specific training, physical training) varied highly among the athletes. Ten athletes trained for fewer than 10 hours per week; 46 athletes trained for between 10-14 hours; 30 athletes trained for 15-18 hours, and 15 athletes spent more than 18 hours per week on training. A majority of the participants were student-athletes. Eight of the 101 athletes had part-time work commitments in addition to school and sport, and five athletes were not students.

Results article 1A

To select the most appropriate model, several LPA analyses were conducted with varying numbers of profiles. Based on the BIC, entropy, and parametric bootstrapped likelihood ratio test (BIC = 771.11; entropy = 0.87; parametric

bootstrapped likelihood ratio test, $p < 0.001$), three latent profiles of athletes were identified based on their personal characteristics (e.g., athletic identity, self-esteem, task and ego orientation). There are 45 athletes in Profile-1, 37 athletes in Profile-2, and 18 athletes in Profile-3. Means for the personal characteristics of each latent profile are presented in (Figure 6).

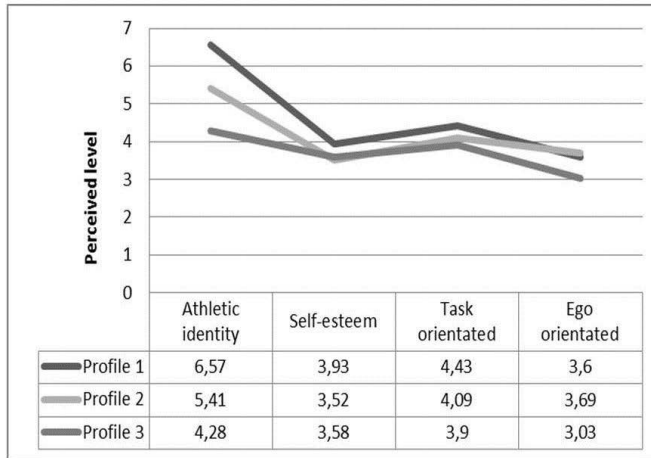


Figure 6. An overview of personal characteristics (means) constituted the profiles.

After the profiles were identified, descriptive statistics were calculated for the transition variables of all five measurements for each profile. The athletes within Profile-1 experienced moderate transition demands, and scored relatively high on coping efforts and personal resources, high on perceived support, moderate on pressure, and low on perceived stress and the need for additional help across all five measurements. In their current life situations, athletes reported both non-sport and sport to be important and satisfying. The sport spheres (e.g., practice, competitions or games, recovery, relationships within the sport), however, were evaluated higher (i.e., more important and satisfying than non-sport spheres).

Profile-2 athletes experienced moderate transition demands, and scored relatively high on coping efforts, personal resources, and support, and moderate on pressure through all the measurements. The athletes scored relatively low on stress and on the need for support in the beginning; their stress levels and need for additional help did increase from the first to the fifth measurements. The athletes also evaluated non-sport and sport to be equally important and satisfying.

Profile-3 athletes experienced moderate transition demands and personal resources, and scored relatively high on coping efforts and perceived support, relatively low on pressure and stress, and very low on the need for additional

help. The athletes reported both non-sport and sport to be important and satisfying, but the athletes evaluated the importance of non-sport spheres (e.g., school, friends, family) higher than the importance of sport.

The results indicated that the athletes in the three profiles had different JST adjustment dynamics during the study (see Figure 7). The athletes in Profile-1, on average, rated themselves to be 72% adjusted to the senior level of sport at the first measurement and had a positive progression throughout the transition process. At the fifth measurement their average rating was 83% adjusted to the senior level. There were two peaks in adjustment at the third and at the fifth measurement for the athletes in Profile-1. The athletes in Profile-2, on average, rated themselves to be 66% adjusted to the senior level of sport at the first measurement, peaked at the third measurement (74%), then fell by the fifth measurement to an average of 73% adjusted. Athletes in Profile-3, on average, rated themselves to be 62% adjusted to the senior level of sport at the first measurement and had a dramatic decrease in their perceived adjustment at the fourth measurement (45%). Their average perceived adjustment increased again in the fifth measurement to 64%.

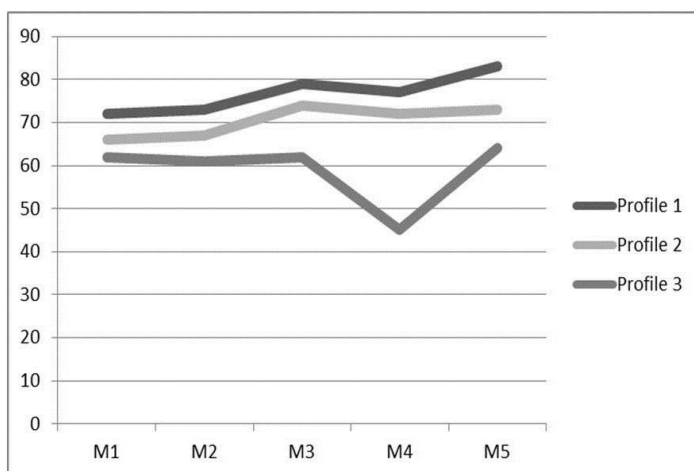


Figure 7. Dynamics of athletes' perceived adjustment to the senior level in sport during the five measurements based on the profiles of personal characteristics.

Results article 1B

As mentioned earlier, for this article the LPA was conducted based on longitudinal data to identify profiles of athletes' adjustment patterns in the JST during a two-and-a-half-year period. The results from the LPA indicated that the model with a three-profile solution was the one that showed the best fit for the data. The three profiles contained 11 (Profile-1), 10 (Profile-2), and 80 (Profile-3) athletes, respectively. All three profiles had different trajectories in

the JST (see figure 8). Profile-1, labeled *progressive adjustment pattern* had a steep positive growth, especially between the first and the third measurement times. In Profile-2, labeled *regressive adjustment pattern*, the slope was steep and decreasing. In Profile-3, labeled *sustainable adjustment pattern* the slope was stable throughout the measurements. Variances for all the variables in all profiles were statistically significant ($ps < .05$).

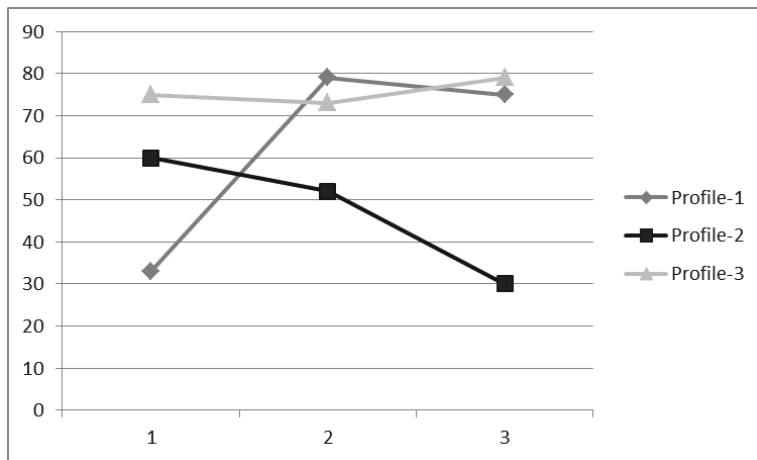


Figure 8. Three profiles of athletes with different JST adjustment patterns.

Athletes in Profile-1 demonstrated *progressive adjustment pattern*, and they had an average score of 33% adjusted to the senior level when entering the study. Their adjustment scores increased to 79% at the third measurement and then had a slight decrease at the fifth measurement, where they scored 75% adjusted to the senior level. The athletes' motivation scores to reach the senior level in their sport were high ($M = 9.46$, $SD = 0.93$), and they also had high athletic identities ($M = 5.73$, $SD = 0.92$). The athletes were more task- than ego-oriented and had relatively high self-esteem. They rated different spheres of life to be important, but they perceived different spheres of sport to be more important, and were similar to their perceived satisfaction with both sport and life.

Athletes in Profile-2 demonstrated *regressive adjustment pattern*, and they had an average score of 60% adjusted when entering the study. These athletes had a negative progression, averaging 52% adjusted to the senior level at the third measurement and only 30% at the fifth. Their motivation to reach the senior level was moderately high ($M = 8.40$, $SD = 1.43$), and they had athletic identity scores ($M = 5.19$, $SD = 0.81$) lower than Profile-1 athletes' scores. Similar to the athletes in Profile-1, these athletes had higher task than ego orientation and relatively high self-esteem, but in contrast they perceived

different spheres of life and sport to be almost equally important and satisfying.

Athletes in Profile-3 demonstrated *sustainable adjustment pattern*, and they had an average score of 75% adjusted to senior level at the first measurement. We then see essentially no change at the third measurement (73%) followed by a positive progression to the fifth measurement, where they averaged 79% adjusted to the senior level of sport. The athletes' motivation scores to reach senior level were high ($M = 9.26$, $SD = 1.50$), and they also had high athletic identities ($M = 9.79$, $SD = 0.92$). These athletes were more task- than ego-oriented and had high self-esteem. They perceived different spheres of life to be important but they perceived different spheres of sport to be more important, and was similar to their perceived satisfaction for the two spheres (e.g., life, sport).

The results from the calculated Cohen's d (effect size) showed that there were large differences between the three profiles for some of the variables of interest (see Table 1). A high magnitude of the effect was shown between Profile-1 and Profile-2 regarding their experiences of demands, pressure, support, stress levels, and coping strategies. A smaller magnitude can be seen for the differences between Profiles 1 and 2 in terms of personal resources and perceived need for additional help/support. Comparing Profile-1 and Profile-3, a higher magnitude of effect size was shown in terms of demands, coping strategies, stress, and pressure. A smaller magnitude was found between Profiles 1 and 3 regarding the extent of the athletes' supports and need for additional help/support. If we compare Profiles 2 and 3, there were examples of high magnitude, for the demands, coping strategies, support, and pressure scores.

Table 1
Calculated effect size (Cohen's d) to compare the three profiles transition variables

	1 vs. 2		1 vs. 3		2 vs. 3	
	d	95% CI	d	95% CI	d	95% CI
Demands	1.99	[0.88, 2.95]	2.76	[1.99, 3.48]	-1.35	[-2.02, -0.65]
Coping strategies	1.68	[0.63, 2.60]	1.15	[0.49, 1.79]	-2.13	[-2.83, -1.38]
Social support	-0.83	[-1.69, 0.09]	0.12	[-0.51, 0.75]	1.65	[0.94, 2.34]
Social pressure	2.81	[1.51, 3.88]	1.03	[0.37, 1.66]	-4.48	[-5.36, -3.51]
Personal resources	0.00	[-0.86, 0.86]	-2.91	[-3.64, -2.12]	-3.38	[-4.17, -2.53]
Stress level	2.45	[1.24, 3.47]	3.84	[2.97, 4.64]	-0.83	[-1.49, -0.16]
Perceived need for help/support	0.54	[-0.35, 1.39]	0.10	[-0.53, 0.73]	-1.03	[-1.69, -0.34]

Note: 1 = Profile-1; 2 = Profile-2; 3 = Profile-3.

Summary of study 1

In this longitudinal study, a comprehensive view of the JST process in Swedish sport club-based athletes was created. The data from the two-and-a-half-year longitudinal study were analysed using the LPA in two different, but complementary, directions. In article 1a, the LPA provided three profiles of athletes based on their personal characteristics such as athletic identity, self-esteem and task and ego orientation. The three profiles proved to be different for the athletes' personal characteristics, and several similarities and differences were found in the athletes' respective JST processes (e.g., adjustment, demands, coping strategies, internal and external resources, perceived stress, need for additional help). Of the three profiles, athletes belonging to Profile-1 and Profile-2 appeared to have more adaptive JST pathways than Profile-3 athletes. Athletic identity is the key personal characteristic that sets the three profiles apart. Athletes in Profile-1 proved to have the highest athletic identity scores; athletes in Profile-2 had relatively high athletic identity scores, but not as high as the athletes in Profile-1, and athletes in Profile-3 had only moderate athletic identity scores. The other characteristics show differences but the differences are small and probably not really interpretable or meaningful.

In article 1b, the LPA on athletes' perceived adjustments to the senior level in their sports identified three profiles with different adjustment patterns. The descriptive statistics revealed different characteristics for the athletes in the three profiles, and Cohen's *ds* indicated differences (with variations in magnitude) between the profiles at the first measurement regarding athletes' perceptions of various transitional characteristics. The progressive and sustainable adjustment patterns were interpreted as being associated with positive transition outcomes, and the regressive pattern was seen as indicating problematic transitions.

Study 2: Athletes' narratives about the JST pathways

2A. Franck, A., & Stambulova, N. B. (2017). A swimmer's strokes and a tennis player's breakpoints through the junior-to-senior transition: A narrative analysis of the transition pathways of two Swedish athletes. Manuscript submitted for publication.

2B. Franck, A., & Stambulova, N. B. (2017). Individual pathways through the junior-to-senior transition: Narratives of two Swedish team sport athletes. Manuscript submitted for publication.

Structure and objectives

This study served as a follow-up to the quantitative longitudinal (study 1) to gain a deeper understanding of individual JST paths through a qualitative narrative approach. The objective was to explore JST pathways of athletes from individual sports and team sports with an emphasis on the psychosocial factors that they perceived as facilitating and debilitating the transition processes. The two individual sport athletes' stories are presented in article 2a, and the two team sport athletes' stories are presented in article 2b.

Participants

The participants for this study were chosen based on the LPA of the longitudinal data that identified three subgroups of athletes' with different adjustment patterns (article 1b). The minimum selection criteria were that the athlete had participated in the first and last of the five measurements. Of the 101 athletes who participated in the longitudinal study, 20 were individual sport athletes and 81 were team sport athletes. After contacting several athletes from each profile who met the criteria, four athletes agreed to

participate in this study. The four athletes will be described further, and a summary of their data from the longitudinal study will be presented.

Participants article 2A

Two individual sport athletes participated: Erik, a swimmer; and Jessika, a tennis player (both pseudonyms). Erik, a 26-year-old former elite swimmer, said that he has been swimming for as long as he could remember and that his formal training started at the age of six. When Erik was younger, he also played football and handball, but when he reached the stage of more intensive training, he made the choice to focus on swimming. Erik was 19 years old when the quantitative longitudinal study started; he took part in four of the five measurements (see Table 2). Based on the LPA in article 1a, Erik belongs to Profile-2 in terms of personal characteristics (i.e., relatively high athletic identity, high self-esteem, relatively high task orientation, moderate ego orientation). In article 1b, Erik belongs to Profile-1, which has the regressive adjustment pattern.

Table 2

Descriptive statistics for Erik's transition variables for each measurement (means)

	M1	M2	M3	M4	M5
Transition demands	3.75	6.00	3.81	-	-
Coping strategies	6.10	1.00	6.43	-	4.80
Social support	8.17	8.50	7.76	-	9.00
Social pressure	3.00	4.50	2.83	-	9.00
Personal resources	7.42	7.25	7.67	-	6.75
Stress level	3.40	3.80	3.80	-	1.00
Adjustment to the senior level	75%	90%	90%	-	50%

Note: M1-M5 – measurements 1-5 correspondingly.

Jessika is a 26 years old former elite tennis player who started practicing at the age of six. Currently, she occasionally substitutes for the national series when the team needs her, but she no longer pursues an elite career. Jessika was 19 years old when the quantitative longitudinal study started; she took part in three of the five measurements (see Table 3). Based on the LPA in article 1a, Jessika belongs to Profile-1 in terms of personal characteristics (i.e., high athletic identity, high self-esteem, high task orientation and moderate ego orientation). In article 1b, Jessika belongs to Profile-3, which has the sustainable adjustment pattern.

Table 3

Descriptive statistics for Jessika's transition variables for each measurement (means)

	M1	M2	M3	M4	M5
Transition demands	7.76	4.73	-	-	1.82
Coping strategies	7.29	7.90	-	-	7.57
Social support	9.20	7.50	-	-	8.20
Social pressure	2.20	2.83	-	-	4.20
Personal resources	7.67	6.67	-	-	8.08
Stress level	3.67	2.33	-	-	5.67
Adjustment to the senior level	70%	60%	-	-	100%

Note: M1-M5 – measurements 1-5 correspondingly.

Participants article 2B

Two team sport athletes participated: John, the football player; and Anna, the basketball player (both pseudonyms). John is now 23 years old and a former elite football player. He started playing football at a young age and continues to play, but not at the elite level. John was 16 years old when the quantitative longitudinal study started; he took part in all five measurements (see Table 4). Based on the LPA in article 1a, John belongs to Profile-1 in terms of personal characteristics (i.e., high athletic identity, high self-esteem, high task orientation and moderate ego orientation). In article 1b, John belongs to Profile-1, which has the progressive adjustment pattern.

Table 4

Descriptive statistics for John's transition variables for each measurement (means)

	M1	M2	M3	M4	M5
Transition demands	5.59	6.24	6.67	8.00	7.82
Coping strategies	7.95	7.67	7.62	8.81	8.33
Social support	7.86	8.71	7.43	8.86	7.29
Social pressure	7.57	8.14	7.14	7.29	6.43
Personal resources	7.65	8.33	7.58	7.18	7.83
Stress level	7.50	7.50	7.83	6.00	7.33
Adjustment to the senior level	20%	50%	80%	50%	60%

Note: M1-M5 – measurements 1-5 correspondingly.

Anna is 23 years old and a former basketball player. She grew up playing with the same team almost to the end of her JST. Now she sporadically plays basketball when she feels inspired. Anna was 16 years old when the quantitative longitudinal study started and she took part in all five

measurements (see Table 5). Based on the LPA in article 1a, Anna belongs to Profile-3 in terms of personal characteristics (i.e., moderate athletic identity, high self-esteem, relatively high task orientation and moderate ego orientation). In article 1b, Anna belongs to Profile-1, which has the progressive adjustment pattern.

Table 5
Descriptive statistics for Anna's transition variables for each measurement (means)

	M1	M2	M3	M4	M5
Transition demands	6.12	6.06	5.47	5.73	5.27
Coping strategies	5.76	5.19	5.38	5.71	5.29
Social support	5.67	6.50	7.80	8.17	6.33
Social pressure	6.50	6.17	6.50	6.00	4.67
Personal resources	6.75	6.42	6.50	6.00	5.25
Stress level	5.83	5.60	5.00	4.60	4.60
Adjustment to the senior level	40%	50%	70%	80%	50%

Note: M1-M5 – measurements 1-5 correspondingly.

Interviews

Narrative type interviews were conducted in which the athletes were encouraged to talk and reflect retrospectively on their JST processes. An interview guide was used to help the athletes recount their memories of the JST. In the beginning of the interviews, the athletes were asked about what they remembered about the previous longitudinal study. This proved to be an important part of the interviews. The athletes seemed to have very few memories about the content of the previous study, but they did remember meeting the author who was present for the measurements. This created a social connection that may have helped the athletes feel comfortable opening up when talking about their JST processes. The athletes were asked to tell their stories from the time when the longitudinal study started, and then year-by-year, continue their storytelling to the present day. During the interviews, the athletes were also asked additional questions about the psychosocial factors that facilitated or debilitated the transition process. In the last part of the interviews, they were asked to tell about their current life situations.

Procedure

I (the author of the dissertation and the interviewer) contacted the athletes by phone to ask if they were interested in participating in an interview regarding their JST processes. During the phone conversations, they were informed

about the study's aim and of related ethical issues (e.g., voluntary participation, confidentiality, the right to drop out at any time). The athletes chose the time and place for the interviews, which meant that the interviews took place in different cities and locations around Sweden. When we met, I provided the athletes with written information about the study's aim, ethical issues and that the interview was going to be recorded. The athletes signed informed consent forms before the interviews started. After the interviews I listened to the recorded stories and transcribed them verbatim. The transcribed materials, together with follow-up questions, were sent back to the athletes. The athletes were given a chance to comment on the interviews and add information if they wanted. Each interview was approximately 100 minutes long.

Data analysis

This study was designed to explore the JST process and the psychosocial factors involved using a narrative approach. For this study, we chose to use the holistic-form structural analysis (Smith, 2016). This analysis focuses not so much on *what is in the narratives* but on *how* the narratives are told, meaning the structure and form of the narratives. In this analysis we assumed the role of story analysts not storytellers.

The analysis process followed Smith's (2016) five step guidelines. First, I transcribed the interviews verbatim, organized the data, and did narrative indwelling, which involved listening and reading each interview several times to gain comprehension of the stories the two athletes told. The second step was to identify the narrative, using different cues (e.g., find directions, crossroads, and participant's reflections on specific phases; use of evaluative comments, the objectives of the athlete). In this step, we (the co-author and I) tried to identify crossroads (i.e., shifts in the transition process). The crossroads divided the stories into phases, and together (crossroads and phases), provided the directions (e.g., regression, progression and/or stagnation) in the athletes' JST processes. This step (i.e., second) helped us to identify the narratives (central and side storylines) of each story. The third step was to write descriptions illustrating the narratives using the notes from steps one and two. In the fourth step, the interpretations of the narratives were discussed between the authors, and in the final step, we worked on a presentation of the results.

Results

Results article 2A

The analysis provided a central storyline (*a performance narrative*) that was shared by Erik and Jessika. Their dedication to reach their sport goals was clear for both athletes. Erik said: “My goal was to reach the elite level [of swimming] in Sweden, and I was going to make it! I had a vision of one day being at an international championship, sometime during my career.” Jessika had an even higher aim: “My goal was that I would go through the lower levels of [competitions] fast, so that I would advance to a level where tennis would be my job, and I would be able to make a living with it.” Both Erik and Jessika exhibited the mindset of a performance narrative although they described different scenarios for their JST processes. Both of them had a strong desire to focus solely on sport, and they made similar decisions to marginalize other areas of their lives. Besides the central storyline, the athletes had their own side storylines reflecting the individuality of their JSTs. Erik’s side storyline presented as an *effort and relationship narrative*, and Jessika’s side storyline as an *injury and reorientation narrative*. Even though Erik and Jessika’s backgrounds were from individual sports, tennis and swimming are two different contexts. The narratives contained both shared and individually specific psychosocial factors that facilitated and debilitated the athletes’ transition processes.

Erik’s *effort and relationship narrative* is slightly different from the performance narrative. Although the performance narrative focuses almost exclusively on winning or losing, the effort and relationship narrative emphasizes the processes and relationships with the key people involved (e.g., family, coaches, team/group members). When Erik shared his story, he talked about his ability to push through the pain (performance) while not feeling stressed to perform (effort). A contribution to his positive feeling of overall satisfaction seemed to originate from his home environment and the close relationship he had with his parents. A quote from Erik illustrates the blend of the two narratives:

My breakthrough came pretty late. I would say it happened when I was 19. It was about my willingness to do the hard training sessions (that was my strength!) and my ability to push through the pain, even if I could sometimes be lazy as well. I was never stressed out to perform or by my lifestyle; I was satisfied.

Jessika had a *performance narrative* as the central storyline, but during her JST, she had to battle the challenges of a severe injury. This situation seemed to stimulate Jessika to rethink and restructure her life, and her side storyline appeared to be a kind of *injury and reorientation narrative*. The term *injury*

and reorientation narrative has not been used in previous studies; this narrative can illustrate an injured athlete's story of being pushed by circumstances to reorient her view of herself, and her life. At the beginning of the senior tour, Jessika faced what appeared to be her first major crossroad (a severe injury and a major surgery). She said: "What was I supposed to do now with my time? I sat in the hall watching when the others practiced. I did my rehab, but I was stressed over not having anything to do." Jessika had stopped going to school in the eighth grade and, instead, completed the eighth and ninth grades from home. After the injury, she faced several crossroads before she finally came to the decision to end her athletic career.

The narrative analysis provided a deeper understanding of the JST process and insights into the dynamics between the athlete and the socio-cultural sport context. The stories revealed the special features of each individual sport context and how different psychosocial factors (e.g., sport club, family members, coaches, sponsors) may have affected the transition processes and the final outcomes. Some psychosocial factors were similar between the two stories, especially the facilitating factors. These factors were the athletes' families who provided practical, emotional, and social support, and their coach/coaches, who provided new training strategies, motivation, and commitment. Both athletes also described the benefits of being within an elite sport club environment. The debilitating psychosocial factors were slightly different for the two athletes. For Erik, the debilitating factors seemed to be the change of coaches in the new club, a poor relationship with the coach, and the change of training group members that affected the group dynamics and cohesion. Jessika, on the other hand, said that she experienced sponsors as the main debilitating psychosocial factor, affecting her possibilities of travelling to the "right" competitions, and the ability to bring her coach along on tours. She also faced challenges with having to play against new and younger opponents whom she felt she should be able to beat.

After the JST, both Erik and Jessika changed their tracks in life, and decided to focus on getting a higher education. In summary, throughout their JSTs, Erik's and Jessika's sport single-mindedness seemed to develop along a *performance narrative*, but possibly due to the influences from the socio-cultural contexts and changes throughout the JST, more life issues and identities came into play (e.g., *the effort and relationship narrative*, *the injury and reorientation narrative*). These changes appeared to have led to shifts from athletic identities to student identities, and seemingly decreased the power of the performance narratives.

Results article 2B

Through their narratives, John and Anna (team sport athletes) reconstructed their JST paths, attaching meanings to certain events, recounting the people involved, and making personal reflections. The stories were analyzed, focusing on the crossroads that the athletes went through, and then their tales

consolidated into the *performance and family narrative* for John, and the *enjoyment and relationship narrative* for Anna.

John described himself at the age of 16 in this way: “You are quite far from the senior level, the muscles are not fully developed; the technique is not perfect, and you’re not fully mature in your mind either.” He added that he was quite realistic in terms of his goals and didn’t fully believe that he would end up in the Champions League, but he said that his goal was to someday reach the highest football division in Sweden. John’s story about his JST path appeared to develop as a performance and family narrative. The actions of John’s family seemed to encourage and enhance the performance narrative throughout the JST, but they also supported him when his athletic career ended and the performance narrative appeared to dissipate. Because of the high extent that John’s family may have influenced his performance narrative, we have chosen to call it a *performance and family narrative*. The two parts were intertwined, and they coexisted throughout the JST.

Anna began her story about the JST in this way:

I was 16 years old, and I didn’t have any long-term goals because I didn’t know what I really wanted. I never had a dream to play for a women’s team. I just liked playing basketball with the team I was in, but I did like winning too.

Anna’s JST path appeared to develop as an *enjoyment and relationship narrative*. Although some possible influences of the performance narrative are visible in Anna’s story (e.g., the assumptions from coaches, parents, and teammates that she would try to advance to a higher team if given the chance), she did not seem to fully embrace this narrative. Instead, she emphasized the fun and enjoyment related to both basketball as a game, and her team/teammates as a social circle. Anna’s motivations throughout the JST process appeared to be related to having fun, good relationships, good coaches, and a good team. When she was forced to try out, and then became disappointed by the situation in the “merged team,” especially by the harsh coach, her sport motivation seemed to vanish, and she moved on to planning her career termination. Another possible reason for Anna’s termination of her sport career was her preoccupation with “how she looked and how to be cool.” These preoccupations, also, could have influenced why Anna vacillated between sport and social life, and didn’t see the performance narrative as dominant in her JST path.

At the time of this study, John and Anna had already terminated their athletic careers and had refocused on getting an education. Their career terminations did not seem to be traumatic, and they shared that they had both ended their athletic careers without reaching the highest levels or winning the finest medals, but both felt thankful to sport for helping them to develop

useful skills (e.g., being active, planning, having goals) for their lives after sport.

Summary of study 2

In article 2a, which focused on two individual sport athletes' JST pathways, the analyses provided a similar central storyline (*performance narrative*) for both athletes, but with different side storylines: Erik's *effort and relationship narrative* and Jessica's *injury and reorientation narrative*. They appeared to share psychosocial factors that were perceived as facilitating the transition process, including family, coaches, and sport club environments. For Erik, the debilitating factors that influenced his JST seemed to be the negative changes in the group and a poor relationship with the new coach. The debilitating factors that influenced Jessica's JST were likely the decrease/loss of financial support and the challenge of facing younger opponents against whom she shouldn't lose after making a comeback from her injury. After the JST, both Erik and Jessica changed their tracks in life, terminated their athletic careers, and focused on getting higher education.

In article 2b, which focused on the two team sport athletes' JST pathways, the analysis provided two different core narratives. John had a *performance and family narrative* and Anna an *enjoyment and relationship narrative*. Their JST paths were lined with different crossroads, and during the transitions, they perceived the key facilitating persons to be their family members (e.g., parents, grandparents, siblings) and teammates. The debilitating factors seemed to be some coaches' behaviors. John felt that the coaches did not believe in him or give him a fair chance. Anna got a new coach when her team was merged with another team, and she had negative relationship experiences with the new coach. At the time of this study, John and Anna have already terminated their athletic careers and refocused on higher education. More comparisons between the individual and team sport athletes' JST pathways (based on articles 2a and 2b) will follow in the general discussion.

General discussion

This dissertation project was aimed at exploring the junior-to-senior transition (JST) process in Swedish sport club athletes based on holistic, developmental, and ecological perspectives. It consists of two studies covered by two articles each. The findings from the two studies will be discussed individually and then collectively followed by methodological considerations, theoretical and practical applications, conclusions, and recommendations for future research.

Study 1

Most of the previous research on the JST has been cross-sectional, and there has been a call for longitudinal studies of athletes' transitions (e.g., Alfermann & Stambulova, 2007). In response, study one was designed as a longitudinal project to provide a better understanding of the JST process than earlier research has provided. This study generated two foci for the data analyses. The first article (1a) is focused on identifying profiles of athletes in the JST based on their personal characteristics (athletic identity, self-esteem, and goal orientation) at the time of the first measurement and then describes the JST pathways relevant to their profiles. The second article (1b) is aimed at identifying adjustment patterns in the JST based on athletes' dynamics of adjustment during the two-and-a-half-year period, and describes the athletes' demographics, personal characteristics, and transitional features at the beginning of their JSTs that were related to the different adjustment patterns. These two foci seem to be complementary to each other and may provide a deeper understanding of the JST as a multidimensional and multifactor process. The longitudinal design provided some interesting insights into the JST. On the one hand, study 1 confirmed existing knowledge about the JST such as: the importance of athletic identity (e.g., Alfermann & Stambulova, 2007; Stephan & Brewer, 2007), non-linear pathways in the transition process (e.g., Debois et al., 2015), and the high dropout rate in the JST (e.g., Lindner & Johns, 2004; Vanden Auweele et al., 2004). On the other hand, study 1 added some new findings related to the different personal characteristics

profiles, pathways, and adjustment patterns throughout the JST of Swedish sport club athletes.

The LPA allowed me to identify two sets of profiles or sub-groups of the JST athletes based on different criteria. In article 1a, the LPA provided three profiles of athletes based on their personal characteristics (athletic identity, self-esteem, and task and ego orientation) at the first measurement time that was considered to correspond to the beginning of the JST. Of the three profiles, athletes belonging to Profile-1 and Profile-2 appeared to have more favorable JST pathways than athletes belonging to Profile-3. Athletic identity has been found to be the key personal characteristic that sets the three profiles apart. Athletes in Profile-1 had the highest average ratings on athletic identity; athletes in Profile-2 rated relatively high on athletic identity, but not as high as the athletes in Profile-1, and athletes in Profile-3 rated only moderately on athletic identity. In article 1b, LPA on athletes' perceived degree of adjustment to the senior level in their sports identified three profiles with different adjustment patterns. The progressive and sustainable patterns (i.e., Profile-1, Profile-3) were interpreted as being associated with successful transitions to the senior elite levels, and the regressive pattern (Profile-2) was seen as indicating an unsuccessful transition.

One question that derives from the comparison of LPAs in articles 1a and 1b is about a link or an overlap between the profiles of the personal characteristics and the profiles relevant to the adjustment patterns. This question was addressed, but appeared difficult to answer because of limitations related to the small number of athletes in some of the profile categories (e.g., only 18 athletes in personal characteristics Profile-3). A preliminary analysis was conducted but the solutions were not robust. Interpretation of statistical solutions was replaced by reflections on the profiles in relation to the existing JST literature. Based on current knowledge (e.g., Baron-Thiene & Alfermann, 2015; Stambulova et al., 2012), athletic identity is positively related to the outcome of the JST, and athletes with stronger athletic identities, who are focused more on sport than on other spheres of their lives, are more likely to have successful JSTs. Keeping this in mind, I can suggest that athletes in progressive and sustainable adjustment patterns found in study 1b might overlap with the personal characteristics' Profiles 1 and 2 in study 1a, in which athletes had high or somewhat high athletic identities, and were strongly motivated to reach the senior levels in their sports. Athletes in the regressive adjustment pattern from study 1b may overlap with personal characteristics' Profile-3 in study 1a, in which athletes reported, on average, moderate athletic identity and evaluated themselves as moderately motivated to reach the senior athletic level. Further, athletes in the study 1a personal characteristics' Profiles 1 and 2 implemented coping styles (i.e., sport-focused and personal development-focused) that seem to be relevant to the progressive and sustainable adjustment patterns, and athletes' social relations-focused coping in the personal characteristics' Profile-3 seems

to be more relevant to the regressive adjustment pattern (e.g., Poczwadowski et al., 2014; Stambulova, 2009). The different coping styles found in the adjustment pattern profiles in this dissertation project have some similarities to the sub-groups of the JST athletes Morris (2013) identified, which were: (a) the avoidance group (athletes did not want support from others even though it was offered to them), (b) the reactive coping group (athletes sought out support from others during and after the JST), and (c) the proactive coping group (athletes actively sought help when they felt they needed it prior to, and throughout, the transition period).

Athletes' internal (personal) resources and coping strategies (styles) were more "visible" in study 1 as influencing the JST pathways and adjustment patterns than athletes' external resources (different forms of support). Although less apparent in study 1, the role of external support should not be underestimated because it has been shown to be influential in both previous research (e.g., Franck, 2009; Morris et al., 2014; Pummel et al., 2008; Stambulova et al., 2012) and in study 2. The quantitative results of study 1, although informative, were more wide than deep. Therefore, it seemed beneficial to complement study 1 through qualitative exploration of the individual JST pathways, highlighting the roles of different social agents in the athletes' environments who contributed to their JST pathways by facilitation or debilitation of athletes' development and progression to the senior levels in their sports (i.e., study 2).

Study 2

The study 2 was a qualitative follow-up to the quantitative longitudinal study of the JST process. According to Stambulova (2016a), "the career topic (although studied a lot quantitatively) has an inherent qualitative nature because there are as many careers with various pathways, contexts, and personal meanings of career experiences as there are athletes" (p. 450). In this study, I used a narrative approach. In narrative research, the participants (e.g., athletes) are storytellers (Smith, 2016), and their stories are the sources of data that help us understand athletes' JST processes and give personal meanings to transition experiences and outcomes. The stories magnified the athletes' voices and added depth to the understanding of individual athletes' paths and contexts. As described before, the interviewed athletes were selected based on the LPA in article 1b, and below, I will reflect on how the athletes' stories were related to their Transition Monitoring Survey (TMS) responses (i.e., descriptive statistical data) in different measurements.

Erik seemed to fit best into the regressive adjustment pattern, which was also supported by Erik's perceived adjustment dynamics (see Table 2, p. 33) and the story he told. Erik's JST process was characterized by different crossroads such as moving to a new sport club, which happened around the

second measurement. Responding to the TMS in the second measurement, Erik reported higher demands and pressures from the environment (e.g., coaches, teammates, his parents) that he needed to deal with to adapt to the new club, meaning new coaching styles and training routines. In his story, Erik described these increased demands and pressures as follows: “the practices focused on technique, and there was a big change in how we trained compared to what I was used to. The sessions were individualized: more speed, shorter repetitions, and, of course, performed with the right technique.” At the fifth measurement, his stress level decreased dramatically, which probably reflected his decision to withdraw from swimming, and instead to focus on getting a higher education.

Jessika seemed to fit best in the sub-group who displayed the sustainable adjustment pattern. Most athletes in this profile already regarded themselves to be highly adjusted at the beginning of the JST, and this adjustment level is apparent from Jessika’s story. As seen in Table 3 (p. 34), she reported 70% and then 60% adjustment in the first and second measurements. In the relevant parts of her story, she emphasized her strong focus on tennis with competition results that were higher than average for her age category. Between the second and the third measurements she faced a major transition crossroad in the form of a severe injury. As a result of this injury and long rehabilitation, she missed the third and fourth measurements and responded in the fifth measurement with very low perceived JST demands, possibly reflecting the re-orientation part of her story. Throughout the whole transition process, Jessika reported much higher support than pressure from her coach and family, which is also clear from her story, for example: “My parents... drove me to practices and competitions. Even my grandparents were involved. Sometimes I was playing in one place and my sister in another, so my mom went one way, and my grandmother went the other.”

John’s story seemed to fit best into the progressive adjustment pattern, which was supported by John’s self-perceived adjustment from the first to the third measurement (see Table 4, p. 34). He felt only 20% adjusted in the beginning of the transition (first measurement), and reported substantially higher adjustment in the second (50%) and third (80%) measurements. Throughout this progressive development, although John reported high support, he also reported pressures, which resulted in increased stress in the third measurement. In his story, John explained that his stress came from high athletic loads with a lot of training sessions and many games (“sometimes too many”). To deal with this stress, it was important for him “to eat and sleep right.” At the time of the fourth measurement, John’s perceived adjustment decreased to 50%, and this was the time when he started to practice and play for the U-20 team. Towards the end of the study, he also started practicing with the A-team. He explained that the climate in the A-team was much tougher, and he didn’t know everyone because he was a new person on the team. The practices were also harder; the pace was higher, and the games were

much more physical than before. Because of all these conditions, John started to feel tired; his motivation decreased, and John faced the final transition crossroad (e.g., the realization that a football career might not work).

Anna also appeared to fit best in the sub-group with the progressive adjustment pattern. From the quantitative data it seemed that she perceived herself to be adjusting progressively from the first to the fourth measurements (see Table 5, p. 35). These adjustment dynamics might relate to Anna's involvement with both the women's team (in her sport club) and the regional youth team. But, even if she had become more adjusted, she felt as if she were being forced to move up the athletic ladder: "I never had a dream to play for a women's team. I just liked playing basketball with the team I was in." Throughout her transition, she perceived only moderate demands, support, and pressures (see Table 5, p. 35). In a way, these moderate levels might be viewed as an indication that sport was more of a hobby for her, and that she did not have any intention to pursue an elite career. This interpretation is also supported by the LPA in article 1a; Anna belonged to Profile-3, having a moderate level of athletic identity, and found both her sport and non-sport lives to be satisfying, but non-sport (e.g., school, friends, family) was more important than sport. In her story, Anna reflected: "It wasn't just basketball; it was starting to think about how you looked and how to be cool." She felt that her friends outside of sport were pulling her in one direction (e.g., going to the movies, dinners, parties), whereas the coaches and teammates expected her to be at every training session and do her best.

The above summaries of the four athletes in studies 2a and 2b illustrate how the quantitative information helped to triangulate the data of their stories and corroborate the interpretations. The real heart of the matter, however, in this section of the dissertation is the stories told, and I now turn to the narrative analysis of each athlete's tale. In article 2a, the narrative analyses provided a central storyline (*performance narrative*) that was similar for both athletes, but they had different side storylines: Erik's *effort and relationship narrative* and Jessika's *injury and reorientation narrative*. In article 2b, the analyses provided two core narratives. John had a *performance and family narrative*, and Anna, an *enjoyment and relationship narrative*.

Three of the four athletes (Erik, Jessika, and John) shared similar performance narratives (cf. Busanich et al., 2014; Carless & Douglas, 2009, 2013a; Douglas, 2009). Their performance narratives appeared to indicate that the athletes seemed to have strong athletic identities and were dedicated to reaching their sport goals. Previous research (Stambulova, 2009; Stambulova et al., 2015; Stephan & Brewer, 2007) has suggested that athletic identity is a resource in the JST, but in the long run (athletic retirement), that identity might turn into a risk factor for adjustment. Carless and Douglas (2012) described how athletes with dominant performance narratives may experience negative emotions if faced with challenges (e.g., injury, ageing, illness, deselection) that put their athletic careers at risk. For three of the athletes, their

performance narratives appeared to be counterbalanced by other narratives, such as relationship, injury and reorientation, and family narratives. These co-existing narratives seemed to make it possible for the athletes to cope with the demands they faced. The fourth athlete (Anna) had an enjoyment and relationship narrative. Although some influences of the performance narrative are visible in her story (e.g., the assumptions from coaches, parents, and teammates that she would try to advance to a higher team if given the chance), she did not seem to fully embrace this narrative. Instead, she emphasized the fun and enjoyment related to both basketball as a game and her team/teammates as a social circle. The enjoyment and relationship narrative is one of the alternatives to the performance narrative that is similar to what has previously been described as a discovery or relational narrative (e.g., Carless & Douglas, 2009, 2013b).

The narrative analyses made it possible to gain another level of understanding of JST processes and provided insights into the dynamics between the athletes and their social contexts. Narrative analyses of all four stories suggested that the athletes' JST pathways were non-linear (e.g., Baron-Thiene & Alfermann, 2015; Morris et al., 2014; Storm et al., 2014). Throughout their JST pathways the athletes encountered different crossroads, challenges, pains, and frustrations. Stambulova (2016b, 2017) suggested that in the career research field, the focus is often on the positive aspects of the athletes' careers (e.g. success stories, facilitating environments). In this study, I have also focused on how the athletes were faced with some of the darker sides of sport (e.g., injury, harassment, disagreements), similar to what has been described in previous research (e.g., Gustafsson et al., 2016; Henriksen et al., 2014; Ivarsson et al., 2016).

The athletes' stories revealed some specific features of each sport context (e.g., more expensive practice and tournaments in tennis than in swimming and basketball) and that JST path narratives are, in a way, a reflection of the different sports. Football is one of the most popular sports in Sweden (Riksidrottsförbundet, 2016), and many young footballers have dreams of becoming "the next Zlatan." The popularity of football also makes athletes more receptive to the dominant performance narrative. Basketball doesn't have the same amount of participation (Svenska Basketbollförbundet, 2016), traditions, or media attention, and I suggest that other forms of social narratives (e.g., relationship, enjoyment) might be better matches for the Swedish basketball context than the performance narrative. The two individual sport athletes represented swimming (among the most popular sports in Sweden) and tennis (with a long tradition of producing elite athletes). In comparison, John's story is the one that shares more features with the two individual-sport athletes' stories, whereas Anna's story is the one that stands out because of the seemingly limited influence of the performance narrative.

One might expect that the team sport athletes, John and Anna, would emphasize the importance of their teammates more than Erik and Jessika, who

represent individual sports. Erik's story also included several aspects regarding the importance of group members (comparable to teammates), but Jessika hardly mentioned her sport-mates at all. It may be that individual sport athletes, who practice in a group, might have similar experiences to team sports athletes in terms of teammates who are involved and influence their JST processes. Another issue that arose from the stories is that the two individual sports athletes experienced more difficulties with financial issues than the team sports athletes. For example, Erik and Jessika had to develop their own strategies to finance their athletic careers (e.g., enrolling at a university as a means to get funding, finding a job besides sport, prioritizing what competitions to attend), but the sport club and/or their families covered John's and Anna's expenses.

In the end, despite their different experiences through their JSTs, all four athletes withdrew from sport and refocused their attentions to higher education. The athletes shared that they didn't regret the years they had spent focusing on sport. All four athletes recognized that they had learned important transferable skills (e.g., leadership, time management, planning, discipline, responsibility) during their athletic careers. These findings illustrate career transitions and outcomes are complex and multi-layered, even though a career doesn't culminate in a gold medal, the athlete may still perceive their experiences in sport as worthwhile, enjoyable, meaningful, and successful (e.g., Carless & Douglas 2012, 2013a).

Findings in relation to theoretical frameworks

To guide the development and content of this PhD project, four theoretical frameworks were selected, including the athletic career transition model (Stambulova, 2003, 2009), the holistic athletic career model (Wylleman, Reints, & De Knop, 2013), the ecological model of human development (Bronfenbrenner, 1979), and the athletic talent development environment model (ATDE; Henriksen, 2010; Henriksen, Stambulova, & Roessler, 2010a, 2010b, 2011). These frameworks contributed to the development of the integrated JST framework (Figure 5, p. 9) presented in the Introduction. Major findings of the two studies in this dissertation project have been incorporated into the integrated framework (Figure 9) to suggest that the various aspects of the JST in Swedish sport club athletes reveal it as having multidimensional and multifactorial processes.

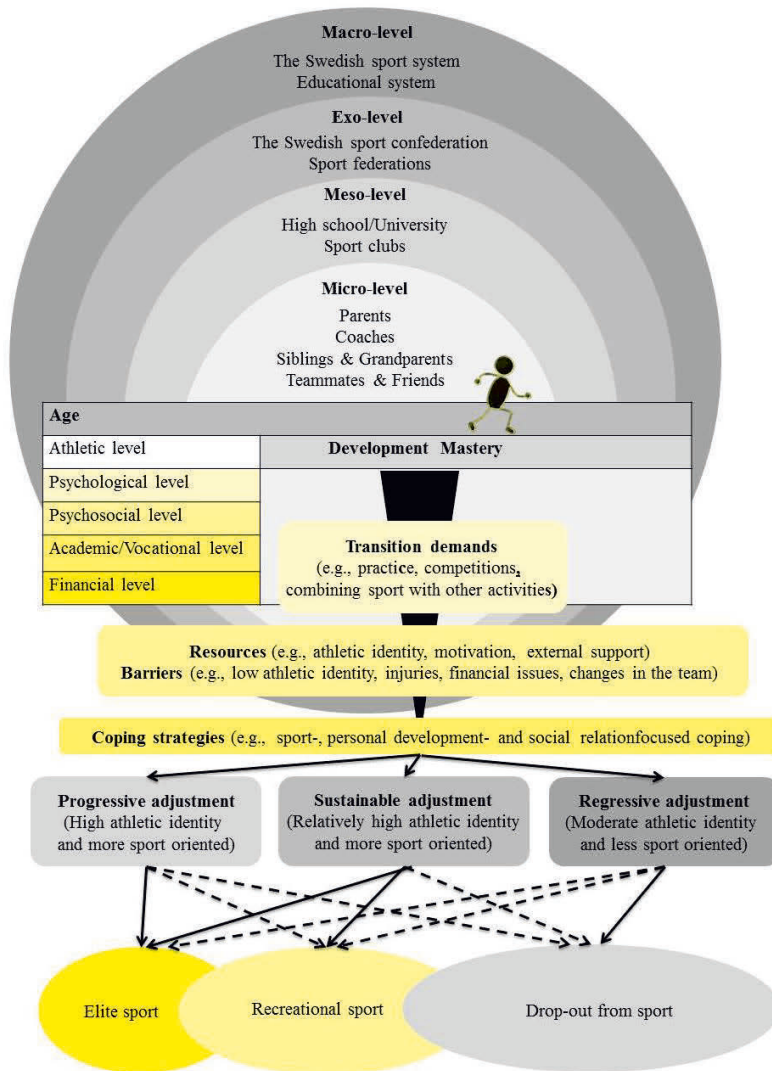


Figure 9: An integrated JST framework enriched by empirical findings of the dissertation project (Franck, 2018).

The transition process

The athletic career transition model (Stambulova, 2003, 2009) suggests a transition to be a process of the interplay between the transition demands, resources, barriers, and coping strategies that leads to a various transition paths and outcomes. Overall, the findings from both studies confirm the model, viewing the JST transition as a process. The results from the two studies suggested that athletes experienced demands related to training (e.g., new training routines, relationships with group and team members), competition (e.g., competing at a higher level), and combining sport with other activities (e.g., school, friends outside of sport). The internal resources that

primarily facilitated the JST were athletic identity and the athletes' levels of motivation; the external resources were the athletes' families, coaches, and being within an elite environment. The findings also revealed barriers both internal (e.g., low athletic identity, low motivation, injuries) and external (e.g., coaching staff changes, team member changes). The findings regarding coping with the JST indicate that sport-focused coping (e.g., having clear goals in sport, prioritizing their sport goals") and personal development-focused coping (e.g., being patient, to see their progress as a step-by-step process) seem to be associated with the favorable pathways of adjustment in the transition. Social relations-focused coping (e.g., "keeping good relationships," and "finding a good balance between sport and other areas of life") seemed to be associated with less favorable transition pathways.

The athletic career transition model outlines three transition pathways: the most favorable pathway (i.e., in the case of effective coping, a substantial amount and high quality transition resources), the favorable pathway (i.e., in the case of effective intervention in a crisis that turns ineffective coping into effective coping), and the unfavorable pathway (i.e., in the case of no effective assistance in the crisis leading to negative consequences as the secondary transition outcome) (Stambulova, 2016b). In this project, three adjustment patterns – progressive, sustainable, and regressive – can be seen as relevant to the model's three pathways (most favorable, favorable, and unfavorable, respectively). Based on this project, it is also possible to differentiate between the model's pathways based on athletes' coping styles (sport-, personal development-, and social relation-focused coping). The four athletes' stories in the study 2 revealed, however, that individual pathways only have a rough (if any) correspondence with the pathways predicted by the athletic career transition model. The model does provide a framework for the transition process but can't account for the many possible individual pathways. The adjustment patterns and outcomes of the JST, as based on the findings from the two studies, are illustrated in Figure 9.

The athletic career

The holistic athletic career model (Wylleman et al., 2013) provides a comprehensive description of athletes' careers, and includes five concurrent domains of an athlete's development. According to this model, athletes should be considered not only as athletic performers, but also as people who engage in sports and in other activities within different life domains.

The athletic domain with the transition from development to mastery stages is described above (i.e., the JST process). In the psychological domain, this dissertation's main finding relates to the individuals' athletic identities and their importance for the JST. In the psychosocial domain, the key external supporters were the athletes' family members (e.g., parents, siblings, grandparents) and the relationship with the coach(es).

In the academic/vocational domain, the majority of the participants were student-athletes (in the beginning of the JST in the first study). Few of the 101 athletes ($n = 8$) in the first study had part-time work commitments in addition to school and sport, and five athletes were not students. In the second study, three out of the four participants were students at the beginning of the JST, but the fourth (Jessika) became a high school student after she had to reorient her path because of an injury. Some of the most recent career research has focused on athletes' dual careers (e.g., Debois et al., 2012; Stambulova et al., 2015; Tekavc, 2017; Tekavc et al., 2015). Being involved in a combination of sport and education has proven to be beneficial for athletes by preventing athletic identity foreclosure and helping to prepare them for life after sport (e.g., Bruner et al., 2008; Stambulova et al., 2012). In the end, despite the different pathways through the JST, the four athletes (in the second study) shared the same belief that it was either going to be sport or higher education, and none of them found it possible to combine both pursuits. This finding shows that more research is required to better understand athletes' challenges in combining sports with education.

Finally, it is apparent from these studies how challenging financial situations can be. Families, clubs, and different sponsors are the main financial supporters. Athletes have found different solutions for their financial issues, but the economic situations of the transitional athletes might be harder to deal with than elite athletes or those athletes with other financial resources (see Jessika's story).

The environment

As shown in Figure 9, the junior athlete is in the center of the integrated framework and positioned within environmental layers (e.g., micro-, meso-) that influence the athlete's development. The ecological model of human development (Bronfenbrenner, 1979) describes a social environment as a multilevel context interacting with, and influencing, a person's development. The ATDE model (Henriksen, 2010; Henriksen et al., 2010a, 2010b, 2011) describes an athlete's environment.

According to the ATDE model, the micro-level is the environment where athletes spend the majority of their time, and it is where the daily interactions occur (e.g., with coaches, family members, peers). Among their daily interactions, athletes may have different forms of relationships throughout their athletic careers, which Storm et al. (2014) called existential and transitory relationships. Both types of relationships were visible in the stories of the four athletes in the second study (see John's and Anna's stories).

The macro-level covers the social settings (e.g., sport federations, the educational system) that influence the athletes, and over which the athletes have little control. Again, this level and its influences was supported by the findings in this project. This level also contains the environment's values, norms, and cultural influences. The four athletes' stories revealed some

specific features of each sport context. The JST path narratives were, in a way, a reflection of the different sports. Football had a dominant performance narrative, and basketball was characterized by social narratives (e.g., relationship, enjoyment). The different narratives existing within the different environments affect the athletes and their development.

Methodological reflections

The two studies, considered together, provide mixed-methods' comprehensive (quantitative) and in-depth (qualitative) longitudinal descriptions of the JST process in Swedish sport club athletes. Between the first and the second study I shifted from the quantitative methodology to the qualitative narrative approach, in other words, from a positivist to a social constructionist standpoint. The two studies are closely related to each other and can be seen as complementary regarding both the content and the participants.

Study 1

The design made it possible to follow a large number of athletes in the JST over a long period of time. The LPA seemed to be an adequate analysis for identifying different profiles and patterns in the JST. The study has, however, some limitations.

First, the inclusion criteria made it difficult to find athletes who were at the same point in the transition process at the start of the study. The athletes also represented different sports (i.e., table tennis, tennis, swimming, basketball, and soccer) which made the sample quite diverse and, hence, rather complicated to analyze and interpret the study findings.

Second, a major challenge when conducting a longitudinal study is the dropout rate, which is often high. In this current study, 37% of the participants were still in the study and active as athletes at the time of the fifth measurement. This high dropout percentage is considered to be a major limitation of the study; but, the dropout percentage refers to athletes' discontinuation in the study, and we could not follow whether the study dropouts continued in sport or not. Although the dropout rate was high, it is similar to previous research on the JST, which has indicated that only one third of the athletes during this period of their athletic careers remained active in elite sport (e.g., Lindner & Johns, 2004; Vanden Auweele et al., 2004). The high dropout rate is a limitation, and the results are more descriptive than definitive or conclusive. In line with the recommendations from, for example, Newman (2014), a sensitivity analysis was conducted. More specifically, an independent sample *t* test was used to discover if there were any differences in the JST baseline between the two groups (i.e., full set of measurements, non-completed set of measurements). No statistically significant differences

between the groups were discovered (Cohen's d effect size = .23). The missing data were, therefore, treated as missing at random.

Third, the Cronbach's alpha values for the instruments/subscales used in the first part of the TMS were acceptable, but not for the second part (the Current Situation in Sport and Life; Stambulova et al., 2012). Although the Cronbach's alpha is a common method used to assess reliability of scales and subscales (i.e., internal consistency), there have been discussions about how to use and interpret it correctly (Cortina, 1993; Schmitt, 1996). Research has shown that the number of items heavily influences the alpha value: more items are related to higher Cronbach's alpha values (Cortina, 1993). Because the alpha value only indicates to what extent one item correlates with at least one other item in the scale, the alpha level does not indicate meaningfulness (Cortina, 1993). Questionnaires with low alphas can still be useful (Schmitt, 1996).

I suggest that reflection on the aforementioned limitations could be useful for future quantitative longitudinal studies.

Study 2

Unlike the first study, the second study focused on a small number of participants, as recommended by previous research for a within-case, instead of a cross-case, approach. A cross-case approach can provide a snap shot across a number of athletes, whereas a within-case approach (used in this study) provides a kind of motion picture of a person's life or transition story over time (e.g., Carless & Douglas, 2013a). Although previous narrative career research has used different forms of narrative analysis (e.g., Carless, 2008; Carless & Douglas, 2009; Ronkainen, et al., 2016), our choice was to use the holistic-form structural analysis (Smith, 2016) and was seen as the most suitable to meet the aims of the study.

The term *trustworthiness* is commonly used to address the quality of qualitative research. In discussing trustworthiness, Sparkes and Smith (2009) described two types of researchers: the criteriologist and the relativist. In this study, we have taken the relativist position, encompassing the view that trustworthiness criteria are changeable instead of fixed (the perspective of a criteriologist). In a recent review, Smith and McGannon (2017) problematized previous commonly used methods to ensure rigour in qualitative research. Taking into account the problems they highlighted with member checking, inter-rater reliability, and universal criteria, we have tried to use member reflections and a critical friend to ensure trustworthiness in this study. First, we gave the participants an opportunity to read the transcripts, add to, and further elaborate on their stories. Second, I made the initial analysis, and the co-author (for articles 2a and 2b) acted as a critical friend. Throughout the process, the narratives, alternative explanations, and closing thoughts were discussed. My knowledge and experience of the Swedish sport system and the

extensive research experience of the co-author proved to be a good combination throughout the research process.

A potential limitation of the study relates to the reliance on retrospective interviews. A few years had passed for the athletes between going through the JST and reconstructing their pathways in the interviews. Nevertheless, the time period between actual events and the current collection of their stories might have allowed the athletes to develop more mature and nuanced versions of their JST processes than would have happened had the data been gathered earlier.

Practical implications

As shown in this dissertation project, there are several key actors (e.g., Swedish sport confederation, sport federations, sport clubs, coach(es), family members) involved in the JST. It may be helpful to assist these key actors in understanding their complex roles in the transition process.

What can families do? As shown in this project, it seems helpful to have supportive families. It can be parents, siblings, or even grandparents who are involved in the athletes' careers and JSTs, and their support can be emotional, practical, and financial. An important issue may be for family members to help junior athletes find some balance between sport, school, and social life. It can be difficult for an adolescent to fully understand the long-term consequences of their choices, and family members can play important roles in guiding the individual to the right path.

What can coaches do? Swedish sport systems rely on the 650 000 volunteer leaders/trainers/coaches who are active in the sport clubs around the country. National elite sports schools have employed practitioners who, usually, have educational backgrounds related to sport compared to the volunteer club leaders who vary highly in sport-related knowledge. I hope that the findings of this project will encourage coaches who work with junior athletes to individualize their approaches (e.g., training routines, competition plans). It may also be important for coaches to become more familiar with which narratives exist within their sports and their specific sport club environments, and how these may affect athletes' abilities to develop.

What can the sport clubs do? The sport clubs are the third most common environments where adolescents spend most of their time (first and second are the home and school environment). It is, therefore, important that the sport clubs take the responsibility to provide environments where athletes (despite their ambitions) feel welcomed and have the ability to develop. The sport clubs could take initiatives to organize workshops for athletes and coaches on different topics related to the JST (e.g., identity, finding a good life balance, dealing with challenges in the transition process). The sport clubs can also focus on athletes' family members and engage them in different workshops. If

sport club personnel have limited JST knowledge to provide this type of workshop, they can turn to the Swedish sport education organization (i.e., SISU Idrottsutbildarna) or private sport psychology practitioners.

What can the Swedish Sports Confederation and Sport Federations do? The Swedish Sports Confederation and different sport federations should be knowledgeable about the JST process and the factors involved and provide different education programs for sport club coaches. Another future challenge for the Swedish sport system will be to stimulate sport organizations to provide athletes with opportunities to continue in sport at levels that match their motivations and skills after their competitive careers end.

As shown in this dissertation project, the majority of athletes are not able to transition to higher elite levels of sport and have to move to recreational-level sports or drop out. Career exploration and planning services should be available to help athletes before, during, and after their transitions. Special focus on assisting athletes to combine sport with other life areas (e.g., higher education, social life) may help athletes develop well-balanced identities. In Sweden, there are no distinct career assistance programs for sport club athletes, but a number of private sport psychology practitioners are trained to provide career and transition assistance (e.g., Stambulova & Johnson, 2010).

Conclusion and future research

This longitudinal project has revealed the complexity of the JST by revealing it to be a multidimensional and multifactor process. Major contributions to knowledge in this dissertation project include: (a) considering the JST (longitudinally) as a process involving dynamics and interactions of the transition demands, coping strategies, personal and environmental resources, and barriers influencing the JST outcome; (b) supporting the athletic career transition model in combination with the holistic, developmental, and ecological perspectives as adequate frameworks to study the JST; (c) suggesting that the integrated JST framework supported by the empirical findings can be used in the future research; (d) demonstrating significant variations in the JST pathways and adjustment patterns on the sub-group level (study 1) and also on the individual level (study 2); and (e) providing context-specific recommendations for different levels of the Swedish sport system for optimizing Swedish sport club athletes' JSTs and supporting their continued sport participation on either the senior elite or the recreational level.

The athletes in the longitudinal study were followed over a period of two-and-one-half years, which is similar to what previous studies have indicated as being the average duration of the JST. The longitudinal design allowed us to discover some interesting insights into the JST, but also revealed several challenges in conducting this type of study (e.g., high dropout rate). Among the personal characteristics investigated, athletic identity appeared to be a key

element relevant to athletes' dynamics of in their JST adjustment processes. Although athletic identity seemed to be a key resource in the JST, it is still important to be aware that it could be a risk factor for the athletes' future (e.g., well-being upon retirement).

I recommend that future research should continue combining quantitative methods with in-depth interviews in a mixed-methods approach when exploring the JST. This type of approach provides detailed pictures of different pathways and life experiences. In the future, research exploring how social agents in the environment perceive their roles in assisting JST athletes could also be beneficial. Henriksen et al. (2010a, 2010b, 2011) have suggested that gaining understanding into how athletic environments can facilitate the JST could expand the knowledge base. More research using narrative approaches is also needed to increase the knowledge about personal experiences and the different narratives that are found in Swedish sport contexts. Future research should also focus on the different career paths for male and female athletes because sport contexts might not be similar for both genders. Finally, based on the knowledge of JST processes, it could be useful to develop practical JST guidelines for further testing and evaluation in sport club intervention studies including athletes, coaches, and parents.

I would like to end this volume in the same way that I had started it, with a personal note. The most difficult stage of my athletic career was the JST. In 2005, I began studying in the sport science program at Halmstad University, and I finished with a bachelor's degree in public health and a master's degree in sport psychology. I started my PhD in 2013 as a junior-researcher and am now near the end of my transition to becoming a senior-researcher. My current transition has many similarities with the JST in sport. My opponent, Professor Stilian "Ani" Chroni, pointed this out to me at my final seminar. She stated that I have moved from one performance narrative to another (i.e., from sport to the field of academia). The environments at Halmstad University and Linnæus University (i.e., my supervisors, colleagues, the PhD education program, related support systems), together with my family and friends, have contributed to my development as a researcher or provided valuable support. I also think that my main coping strategies with the transition from junior- to senior-researcher stem from my athletic background (e.g., working towards clear goals, prioritizing, trying to maintain calm when things aren't going easy) and from my Finnish sisu. One could say I changed my athletic identity for an academic one. Similar to my experience in the JST, and the findings from this PhD project, the most challenging thing is still finding a good life balance. I might not have ended up with the finest medal in sport, but I look forward, with hope, to earning my PhD title.

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