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From junior to senior sport: Do athletes differ in their transitional experiences?

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Running Head: TRANSITIONING FROM JUNIOR TO SENIOR SPORT

From Junior to Senior Sport: Do Athletes Differ in their Transitional Experiences?

Glen Ewen

A Report submitted in Partial Fulfilment of the Requirements for the Award of Bachelor of Science (Psychology) Honours, Faculty of Computing, Health and Science.

Edith Cowan University

Submitted (October, 2010)

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From Junior to Senior Sport: Do Athletes Differ on their Transitional Experiences?

Abstract

The purpose of this research was to investigate whether athletes at the beginning (BTG) of their transition from junior to senior sport, had different transitional experiences to those in the middle (MTG). One hundred and forty eight male and female elite athletes aged between 14 and 18 years, from a variety of sports in both city and country locations of Western Australia, were surveyed. Two test instruments were used; the newly developed Swedish, Transitional Monitoring Survey (TMS), and the Athletic Identity Measurement Scales (AIMS). Univariate descriptive statistics, One Way Analysis of Variance (ANOVA), and reliability measures were used to analyse three research aims in this quantitative between groups study. ANOVA of the responses to 96 Likert style questions of the TMS survey revealed 15 significant differences between groups. Differences included that the younger BTG had more trouble combining sport and school, perceived less family support and required more help with improving technical skills than the older MTG. Athletes in the BTG were significantly less adjusted as an athlete, and had a significantly lower Athletic Identity (AI) than the MTG. Results were comparable to those reported by Franck and Tuovila's (2008), although contextual and sampling differences were noted. Results may help Australian coaches, parents and administrators in better understanding the needs of their athletes, recognising their position in the transition (BTG or MTG), and what strategies might best resolve any transitional barriers or demands the athletes were encountering. Future research on gender, a variety of sports types, and age group differences was recommended, as was the continued reliability testing of the emergent TMS test instrument. Limitations reported included the use of a constrained variety of sports, a male dominated sample, and how more similarities than differences were reported.

Keywords: Transition, TMS, AIMS, Elite Athlete, Athletic Identity

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Date 20/12/2010

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"You had to make a choice; either go out that Friday or go to the gym and lift some weights. When I was playing as a junior player I could go out and still play that weekend without any consequences. Nowadays you can't afford to miss a training opportunity."

(Cacija, 2007, p. 10).

The transition from junior to senior sport plays the most critical role in the overall athletic career (Stambulova, 2009). Athletes frequently described the transition from junior to senior sport as the most difficult career transition with many young athletes failing to adjust (Stambulova, in press). The transition out of sport has become a well-defined topic of study among the sport psychology community as reflected in the growing number of publications (Lavallee, Gorely, Lavallee, & Wylleman, 2002). However relatively little attention has been paid to the broad range of transitions that athletes face during their sport career (Wylleman, Theeboom, & Lavallee, 2004). A recent special issue on athletic career transitions in the *Journal of Psychology of Sport and Exercise* (2004) has highlighted a shift in focus from career termination, to a holistic life-span perspective on athletic transition in recent times (Wylleman, Alfermann, & Lavallee, 2004). Coaches have reported that only by understanding the specific demands of particular transitions could necessary resources be made available to athletes to assist them in making each transition successfully (Wylleman, Theeboom, & Lavallee, 2004). By examining the factors that impact upon the athlete's transition from junior to senior sport, coaches can better prepare athletes for the transition by providing preventative programs, and will better understand what support strategies can intervene in a crisis (Brustad, Babkes, & Smith, 2001).

History of Athletic Career Transitions Research.

Research on athletic careers has been evident since the 1960s (Alge, 2008). During the 1970s, sport psychologists refocused their attention to both the transition into and out of sport. Schlossberg (1981) defined a transition as "an event or non-event which resulted in a change in assumptions about oneself and the world, and thus required a corresponding change in one's behaviour and relationships".

In the 1980s only 20 works were published on athletic career transitions, with a recent count around 270 (Wylleman et al., 2004). The 1990s saw a shift towards a developmental perspective in career transitions, where all aspects of an athlete's life were considered (Alge, 2009). Further shifts in research focus, theoretical frameworks, and attention to contextual factors have characterized the evolution of the topic (Alfermann & Stambulova, 2007). As a result of these changes the transition is now portrayed as a phenomenon (Wylleman, Lavallee, & Alfermann, 1999), is currently focused on within career transitions (Durand-Bush & Samela, 2001), includes a whole-person life span perspective, and gives greater consideration to social factors (Stambulova, Stephan, & Järphag, 2007). The current perspective takes a holistic, life span, multilevel approach in understanding the athlete's life, both in, and out of sport (Wylleman et al., 2004).

Theoretical Frameworks and Conceptual Models of Career Development in Sport.

Many of the conceptual frameworks and models used to describe the athletic career have been taken from the mainstream psychological literature (Wylleman et al., 2004). The Ecological Model of Human Development (Bronfenbrenner, 1979) is one framework which gave an overview of how environmental factors affected an individual's development. According to this model during the transition from junior to senior sport, athletes perceive both resources and barriers from the environment around them. Bronfenbrenner (1979) argued that in order to understand athletic development, a researcher must consider the entire ecological system in which athletes live and develop; they are presented at four levels, the macro (society or culture), exo (club or federation), meso (school or sport), and micro (coach or parents) levels (Bronfenbrenner, 1979).

A further framework, the Theory of Psychological Stress and Coping, provided an overview of coping strategies in stressful circumstances (Lazarus & Folkman, 1984). Coping refers to behavioral and cognitive strategies, which are used to manage internal (personal) and external (environmental) demands in stressful situations (Tamres, Janicki, & Helgeson, 2002).

The earliest models explaining athletic careers derived from such theoretical frameworks, were based on talent and expertise. These models regarded gaining certain skills at each stage as the

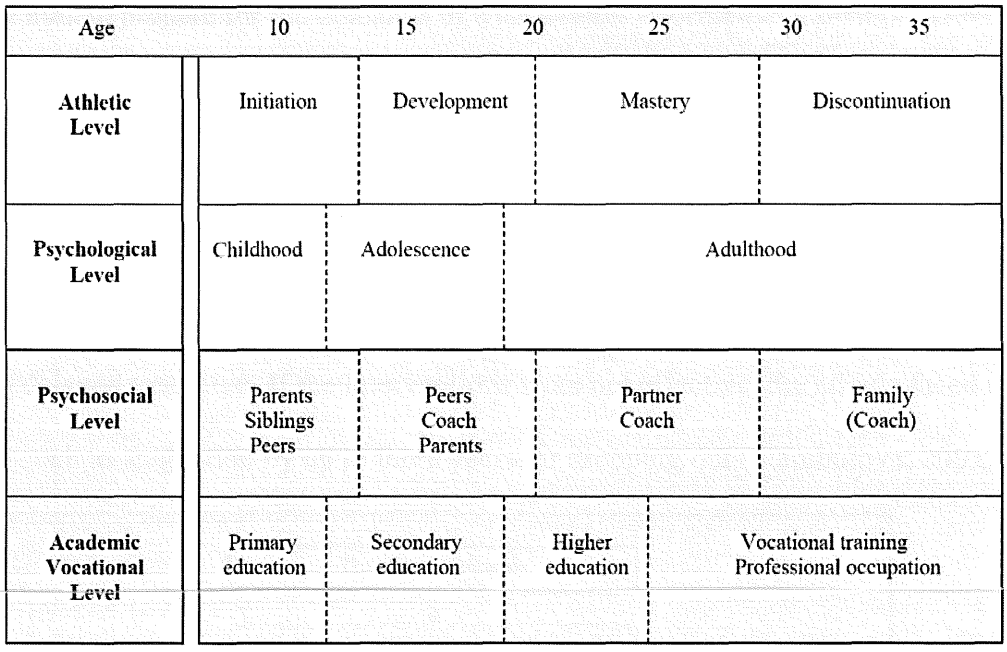
relevant markers, and not the processes that the athlete experienced. The research had predominantly used qualitative methodologies and small groups of elite athletes (Abbott & Collins, 2004; Bailey & Morley, 2006Cotes, 1999; Durand, Bush, & Samela, 2002; Morgan & Giacobbi, 2006). Models were skills based and took no account of the demands of the transitional process. For example the Durand, Bush and Samela (2002) model included only physical, competition, and training levels attained as the developmental markers, not anything else that was occurring in the athlete's life.

The inadequacies in using models based purely on attaining talent and expertise led to the development of career stage descriptive models, which included Stambulova's (1994) Analytical Career Model, and Wylleman, Alfermann, & Lavallee's (2004), Development Model of Athletic Transition. These models described the various stages of development and attempted to predict at what age the athletes experienced the normative transitions. The athletic career was now described as a mini lifespan (Stambulova, 2003). Although these models took a more holistic approach they did not fully explain the transitional process, they merely described and predicted the athlete's normative career transitions (Alfermann & Stambulova, 2007). The broad career stages included sampling, initiation, development/specialisation, perfection / mastery, and discontinuation, however there was still no debate on how and why they progressed through theses stages (Stambulova, in press). An example was Bloom's (1985) athletic career stage model which described three stages: initiation, achievement, and perfection, but had no reference to the normative transitions process that occurred.

Samela (1994) added a fourth stage, discontinuation, to Bloom's three stages. Samela was the first to discuss normative transitions, defined as part of a definite sequence of age-related biological, social, and emotional events, or changes (Baltes, 1987). These expected moments and situations when an athlete goes from one step of the career to another are often predictable, can be anticipated and prepared for in order to facilitate the athletes coping (Stambulova, 1994; Vanden Auweele, De Matelaer, Rzevnicki, De Knop, & Wylleman, 2004). Stambulova (1994; 2000) developed the Analytical Model via a critical expansion of Samela's (1994) research. Stambulova now described six

athletic career stages, and five normative athletic career transitions. The most demanding was the transition from junior to senior sport (Stambulova, 1994).

Bruner, Munroe-Chandler, and Spink (2008) have reported the most widely cited career stage model has been the Developmental Model of Transition Faced by Athletes (see Figure 1), developed by Wylleman and Lavallee (2004). This career stage model described normative transitions that an athlete faced at various athletic career stages. The interaction between athletic, psychological, psychosocial and academic/vocational levels of an athlete's development is emphasised. This model took a holistic approach and transitions were presented in coordination with transitions in other spheres of an athlete's life (Franck & Tuovila, 2008). However, it did not describe any specific transitional processes that are required to proceed successfully to the next stage.



Note: A dotted line indicates the approximate age at which the transition occurs.

Figure 1. The Developmental Model of Transition Faced by Athletes (Wylleman & Lavallee, 2004)

The Wylleman and Lavallee (2004) model illustrated the accord of transitions which occurred at different levels of development. For example, the transition from initiation to development occurred around adolescence. This, and other stage models, has contributed to the holistic nature of a transition, but they still did not fully explain the transition in terms of barriers, demands and coping difficulties athletes needed to overcome as they proceeded through a successful transition.

Stambulova identified the inadequacies in just describing careers (1997, 2003) and developed the Athletic Career Transition Model (ACTM). This model focused on the transition as a process, rather than single events as proposed by the previous career stage models. The athlete must cope with a set of specific demands and challenges if they are to proceed successfully from one transition to the next. This model (See Figure 2) explained different transitions during the athletic career, including those from junior to senior sport. The model demonstrated how an athlete coped with the demands of the transition and how resources and barriers affected the effectiveness of their coping. Resources are personal factors (e.g., motivation), or environmental factors (e.g., social support). Barriers included deficiencies in personal resources (e.g., lack of motivation) or environmental factors (e.g., lack of social support) which facilitated the transition (Stambulova, 2003). Crisis- prevention intervention could help the athlete prepare for the demands of a successful - normative transition. Developing resources before the transition took place, allowed effective coping. The model demonstrated two outcomes depending on how the athlete coped. A successful transition meant the athlete coped with the demands on their own; a crisis transition meant the athlete had difficulties in coping with the demands, and needed external help to progress. If the intervention was effective the athlete merely experienced a delayed transition. If the interventions were not effective, the athlete faced negative consequences such as stagnation by up to three years, or dropping out (Stambulova, 2003).

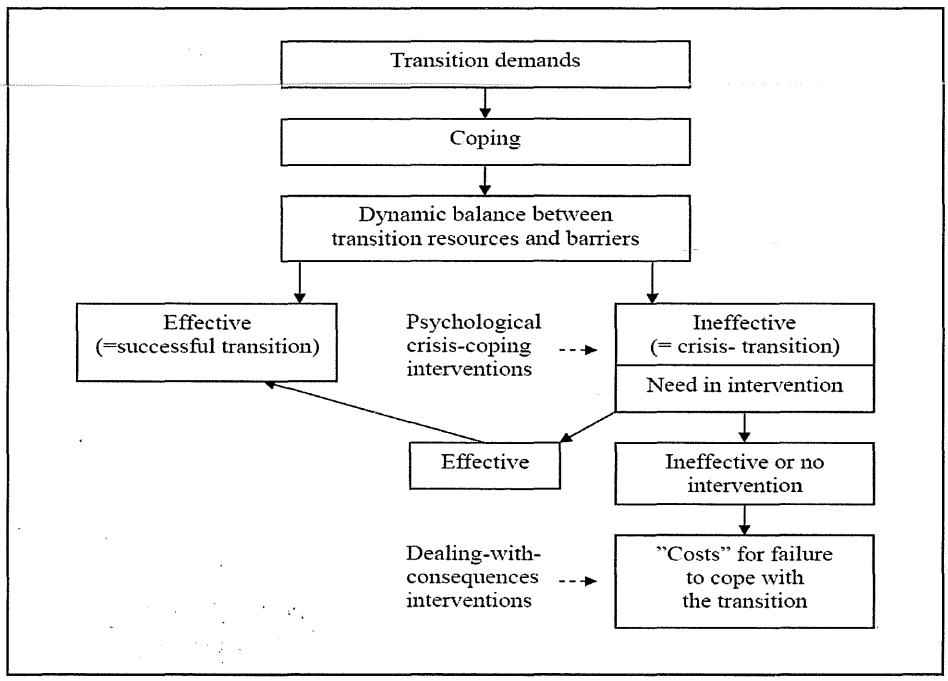


Figure 2; The Athletic Career Transition Model (Stambulova, 1997; 2000)

The ACTM suggested that a number of factors impacted upon and facilitated the transition from junior to senior sport. Previous research had demonstrated that each of these factors can determine a successful or unsuccessful transition. The first impediments are the transitional demands.

Transitional Demands

Coping with a set of specific demands (challenges) created a developmental conflict between what the athlete is, and what the athlete wants to be. Čačija (2007) identified demands that dealt with this conflict as physical demands (e.g., tougher physical competition), mental demands (e.g., higher pressure), changes within the team (e.g., new roles), changes in out of sport life (e.g., need to prioritise), and changes in their view of sport (e.g., perceived actions to take).

Jorlen (2007) reported that when athletes entered the transition from junior to senior sport, they realised that they needed to set long term goals and make corresponding lifestyle changes if they wanted to succeed at a senior level. Successful junior athletes often felt lost in senior competitions, even after they had made efforts and sacrifices, such as spending less time with friends or extra practise times (Cacija, 2007). Also included were the demands to get noticed and selected for the more prestigious competitions, to earn authority among opponents, team-mates and sport professionals. An increased rivalry and competitiveness within the sport groups could lead to relationship problems with coaches and team-mates and complaints about conflicts (Stambulova, 2000). The admiration they were used to as juniors decreased because they are now just one of many talented athletes. The role of social alternatives (family, friends, and coaches) declined and the athletes instead relied heavily on their own competences and skills (Stambulova, 1994). Wylleman and Lavallee (2004) reported that the transition from junior to senior sports may coincide with transitions in other spheres of life (e.g., from school to college or university) making it even more demanding, and required additional resources to cope.

Stambulova's (2000) research identified the specific demands of the junior to senior transition which were juggling the balance of sport and life, improving technical skills, coping with the pressure of selection, winning peer approval, dealing with relationship problems, and finding their own pathway

in sport and life. The conflict from these demands encouraged the athlete to develop or mobilise resources in finding a way to cope. According to the ACTM, the effectiveness of coping is dependent on the balance between transition resources and barriers. Resources are factors that facilitated the coping process, and barriers illustrated factors that interfered with effective coping (Stambulova, 2000).

Personal Resources (internal factors)

The ACTM required the athletes develop resources which were either internal (e.g., motivation), or external (e.g., social support). The transitioning athlete activated or developed new resources to resolve the conflict caused by the increased demands. According to the ACTM, specific resources which helped the junior to senior transition included an interest in biomechanics, psychological strategies, using previous experience, increasing technical skills, motivation, learning from mistakes, family, and federation support. Support from social resources declined and personal resources increased as the athlete matured (Alfermann & Stambulova, 2007)

Coping Strategies

Stambulova's (2003) ACTM described how coping strategies mediated between barriers and demands that faced transitioning athletes. Coping strategies and interventions were approaches to overcome difficulties during career transitions (Wuerth, Lee, & Alfermann, 2004). Čačija (2007) reported that athletes have used different coping resources during the transition from junior to senior sport. To compensate for a lack of self-confidence, athletes often imitated a sport role model, and believed in the competence of their coaches. To feel more in control during the competitions and reduce anxiety, the athletes took an interest in sport psychology. Many athletes chose "sports classes" at their schools, or were admitted to sport boarding schools where studies are adjusted to training and competition schedules. This helped the athlete cope by managing their time between sport and studies (Stambulova, 1994). In the theory of psychological stress and coping (Lazarus & Folkman, 1984), coping referred to behavioral and cognitive strategies which could be used to manage internal and external demands in stressful situations, and athletes coped in one of four ways. Problem focused

coping was explained as "attempts to cope with failure by targeting the athlete's weaknesses and strengths to solve the problem and raise the level of performance" (Poczwardowski & Conroy, 2002, p. 321). Strategies included learning new skills, or from previous mistakes (Yoo, 2001). Emotion focused coping reduced the unwanted physical or emotional arousal that arose in different situations such as seeking support from others (Poczwardowski & Conroy, 2002). Avoidance focused coping involved pushing away the perceived threat, the use of distraction techniques, or to block irrelevant distractions in order to cope with the stressful situation (Holt & Hogg, 2002). Appraisal focused coping consisted of evaluating and re-evaluating situations, such as planning ahead (Anshel & Weinberg, 2001).

Tamres, Janicki, and Helgeson (2002) reported males were more likely to use problem-focused coping behaviors such as planning and active coping. Females were more likely to cope by using emotion-focused strategies, such as seeking social support; no age related differences were reported (Čačija, 2008). Lally (2007) reported that junior athletes used a number of coping strategies which helped to avoid the identity crisis and its emotional impact. This allowed the athletes to decrease their identification with the athletic role and focus on their academic studies and career interests. Coaches need to be vigilant in understanding their athletes' style of coping.

Pummel, Harwood and Lavallee (2008) proposed that athletes had strong intrinsic motivation, a further personal resource. Ninety percent of junior athletes made voluntary sacrifices for their sport; displaying strong intrinsic motivation. Van Raalte and Andersen (2007) reported that the lack of motivation seemed to be the most obvious factor in quitting sports. If successful junior athletes valued success only by being better than others, they easily lost motivation, especially when they met more experienced competitors (Ojala et al., 2006).

Further personal resources of the ACTM included satisfaction, enjoyment, and perceived career success. A study by McCarthy and Jones (2007) reported that achievement related to developing skills during training, competition; and practice was viewed by younger athletes as an important part of sport enjoyment. Older athletes demonstrated that excitement and challenges within the sport environment and the competition provided more enjoyment (Miller & Kerr, 2002).

Environmental Resources (external factors)

Bronfenbrenner's (1979) ecological model classified environmental factors that impacted upon an athlete's transition at a macro, exo, meso, and micro level. The macro level encompassed the settings, culture and ideologies which surrounded the athlete's life, economic situation, political aspect, and major organisations (Stambulova, Alfermann, Stauer, & Cote, 2009). Franck and Tuovila (2008) reported how different sport systems and cultural traditions influenced an athletes' career development, and opportunities to develop in their sports events (Stambulova et al., in press). For example, Sweden has a very modest view on competitiveness, compared to countries which focus more on competitions between people, such as the USA and Australia (Stambulova et al., 2009).

The exo level included settings important to the individual, such as a sporting federation. Athletes had little or no influence on the federation, because at this age athletes rarely had an impact upon their organisation (Franck & Tuovila, 2008). In the USA, where organised sport is firmly embedded in the educational system, an athlete will be confronted with the transition from high school to collegiate athletics (Leonard, 1996). In Europe and Australia, athletes will transit organised sport from the local sports clubs to regional and national teams (De Knop, Wylleman, Van Houcke, & Bollaert, 1999).

The meso level included the local environment, such as the athlete's suburb, sport events, or school. Included were the interaction between these settings and how an individual handled multiple settings at the same time (Franck & Tuovila, 2008). Jorlen (2009) reported that the availability of social support within the meso level had profound influence on the athletes' adjustment during athletic transitions (Wylleman, DeKnop, Ewing, & Cumming, 2000). Close association with a group proved to be a strong component of a positive transition (Giaccobbi et al., 2004). Support from their school facilitated the transition, but many felt it was still difficult to combine schoolwork and sport (Pummel et al., 2008). The micro level, closest to an individual, included family members, coaches, and teachers. Interaction occurred at home, school, playground, or sporting arena. These relationships

influenced the individual's growth and development within the transitional process (Franck & Tuovila, 2008).

Athletes needed their parents' emotional support throughout their career (Wylleman, et al., 2000). However, some parents created a negative influence by being overly involved, had high demands, and focused too much on results. Parents who supported their child in a positive way helped the child to develop (Carlson, 1998; Vanden Auweele et al., 2004). Wuerth, Lee, and Alferman (2004) reported fathers exhibited more directive behaviour and pressure than the mothers who gave more praise and understanding. Würt (2001) reported lack of support from parents and coaches was the second biggest factor for dropping out.

Wuerth et al. (2004) reported the athlete-coach interactions were characterized by leadership behaviour, climate in practice, and were an important determinant in the development of the sport careers of young athletes. Smith and Smoll (1996) reported that dropout rates were lower for young athletes who played for coaches' expert in using praise (Barnett, Smoll, & Smith, 1992). Research by Alfermann and Würth (2001) with 11- to 15 - year-old basketball and hockey players discovered that players made a more successful transition if they perceived their coaches had given them more instruction and feedback. The coach's poor coaching behaviours were negatively related to athletes' responses such as higher anxiety and burnout, contributing to an unsuccessful transition to the next athletic stage (Alfermann & Würth, 2001; Wolfenden & Holt, 2005). As one coach is quoted, "A lot of former junior champions do not stay in sport. We push them too hard too soon and basically burn them out" (Martindale, Collins, & Abraham, 2007, p. 193).

Jorlen (2007) reported that at the early transitional stages the athletes were dependent on their families for financial reasons (coaching, travel, and equipment). Research proposed that the large investment made by their families could create pressure on athletes to succeed or to continue involvement against their will (Wylleman, De Knop, Maeschalck, & Taks, 2002).

Trickett and Buchanan (1997) reported the importance of the social environment and the role relationships played in the quality of athletes' sport involvement throughout the athletic lifespan (Rice,

1998). Rees and Hardy (2000, p. 344) concluded that there was a need to recognise "that important others played a crucial role in the life of the performer; isolation from support was damaging". All research reported that the athlete's social network is strongly determined by the stage of their athletic career. The athlete's social network generally consisted of coaches, parents, and peers (Bussman & Alfermann, 1994). Bussman and Alfermann (1994) reported that team mates played an important supportive emotional role during the transitional stage. Key to an effective transition was good internal resources including believing in oneself, motivation, skills, and self identity (Malett & Hanrahan, 2002). It is therefore very important that young athletes receive support from coaches and friends (Hallstedt, 1997).

Barriers to Transition

Stambulova (2000) reported that although athletes felt resourceful, supported and confident early in their careers, they quickly became consumed by the many emerging barriers when transitioning to higher levels in sport. Barriers were the internal and external factors that interfered with coping. Barriers included the lack of knowledge and technical skills, interpersonal conflicts, poor training, or lack of financial and social support (Franck, 2009). Internal barriers were low self esteem or interpersonal conflicts. External barriers were financial difficulties, injuries, problems in combining studies with sport, or a lack of social support (Stambulova, 2000). Demands can become barriers for athletes in this transition.

Stambulova (1994) reported that many athletes experienced their first serious injuries creating a barrier during this transition. Jorlen (2007) reported that the absence of injuries in junior golfers contributed to golfing success. Barriers reported for junior golfers were that they lacked mental and psychological skills, and experienced their new opponents as stronger when they started to compete on the national junior level. Stambulova (1994) reported further barriers as the increased physical, technical, and tactical expertise of their opponents. The most difficult barriers were at the psychosocial level, where missing social activities and friends were the most difficult situations in the transition from junior to senior sport (Stephan & Brewer, 2007).

Outcomes and Interventions

According to the ACTM, if the athlete managed to cope effectively with the transitional demands, and develop the necessary resources to overcome the barriers, the transition was successful. If not, a crisis-transition occurred where athletes failed to cope effectively by themselves. A crisis transition was associated with low awareness of transition demands, lack of resources, persistence, motivation, and an inability to cope. A crisis-transition can be transformed to successful if an athlete received psychological interventions in helping them cope with the specific barriers (Stambulova, 2003). If the intervention was ineffective, athletes had to deal with the negative consequences leading to premature dropouts, injuries and overtraining (Stambulova, 1997; 2003).

Three styles of interventions assisted athletes to cope with crisis career transitions (Alfermann & Stambulova, 2007). Preventive interventions helped athletes to become better aware of forthcoming transition demands. Crisis-coping interventions helped athletes to analyse the crisis situation and find the best available way to turn ineffective coping into more effective strategies (Stephan & Brewer, 2007). Interventions dealing with negative consequences of not coping with the crisis (e.g., premature dropout, neuroses) are problem-specific and most often clinical interventions. Successful transition equated to effective coping and the athlete felt more adjusted (Stambulova, 2007).

The development of identity was integral to understanding the preceding needs of this specific group. The current study was concerned with the experiences of adolescents (14 to 18 years). Adolescence is a period during which individuals are confronted with a number of developmental tasks (Rice, 1998). Developing a self-identity was therefore a crucial developmental task for adolescents. This was especially relevant for an athlete as participation and continued involvement in competitive sport can have a significant influence on the way self-identity develops (Brewer,Van Raalte, & Petitpas, 2000). Understanding the general developmental tasks of self identity enhanced the understanding of the athletes sporting development. During puberty individuals increase their personal decision-making and move from dependency on adults to a state of autonomy (Zimmer-Gembeck & Collins, 2006).

The athletic domain of this self-identity is referred to as athletic identity (AI). Brewer, Van Raalte, and Linder (1993) defined AI as the degree to which individuals identify with the athletic role. Cieslak (2005, p. 39) further defined AI as "the degree of importance, strength, and exclusivity attached to the athletic role that is maintained by the athletes and influenced by environment". AI has three factors, social identity (recognition from others), exclusivity (importance of sport), and negative affectivity (impact of injury) (Lamont-Mills & Christenson, 2006).

The AI is based on athletic performance and impacts on sporting behaviour in both positive and negative ways (Wylleman & Lavallee, 2004). There is a negative correlation between high athletic identity and coping with career termination (Alfermann & Stambulova, 2007). The retired athletes experienced more negative emotions and traumatic incidents if their athletic identities are high. Erpic, Wylleman, and Zupancic (2004) concluded that athletes with high athletic identity had more trouble adjusting to their post-sports career. However Stephan and Brewer (2007) reported the transition from junior to senior sport uncovers the opposite of termination, finding high athletic identity facilitated junior athlete's successful transition into higher levels of sport. AI had been linked to psychological distress when faced with injury (Brewer et al., 1993), sport disengagement (Erpic et al., 2004), delayed career development (Murphy, Petitpas, & Brewer, 1996), burnout (Raedeke, 1997), and more recently to anxiety (Masten, Tusak, & Faganel, 2006).

Brewer et al. (1993) argued that a strong sense of self as an athlete is a necessary requirement for success at higher levels of sport. Brewer et al. (1993) reported that a high AI was related to enhanced health, self-esteem, social relationships, and confidence, but also related to over-commitment to the athletic role (Brewer, Van Raalte, & Petitpas, 2000). Athletes with strong AIs were found to have a higher commitment to sport participation, and higher levels in openness to experience (Horton & Mack, 2000). Lavallee and Robinson (2006) reported that international athletes had significantly stronger AIs than those who were national or regional athletes (Brewer & Cornelius, 2001). All findings supported the notion that as athletes move into the more senior levels their AI increased (Horton & Mack, 2000).

The transition from junior to senior sport has been described as the most difficult transition (Hanin & Stambulova, 2004). It required higher order demands such as balancing sport and other life goals, and coping with a variety of new and changing relationships (Stambulova, in press). According to Stambulova (2003) many failed to handle this junior to senior transition, as coping with school, additional pressure, and lack of support can be problematic. The most successful athletes managed to cope with the transition in approximately one to two years, but commonly took three to four years (Stambulova, in press). A crisis can add up to three years extra spent in this transition (Stambulova et al., 2008). In a 2004 study of Belgian track and field athletes by Vanden-Auweele et al. (2004) reported that only 17% of junior athletes made the transition to compete successfully at the senior level, 31% stagnated in their development, 28% performed irregularly, and 24% dropped out.

Further research will greatly enhance the athletes', coaches' and administrators' ability to identify their athlete's transitional position and to further understand the athlete's specific needs, and difficulties (Stambulova, Johnson, Hinic, & Weibull, 2008). Although today the holistic, lifespan, multi level approach is apparent, much focus is still directed at providing support at the termination phase of a career. The Australian Institute of Sport (AIS) Athletic Career and Education (ACE) program still quoted their key aim as "preparing for life after sport"(AIS, 2010).

Only by understanding the needs of an athlete can specific interventions be made available (Wylleman et al., 2004). Previous research had used qualitative methodologies to gather this understanding albeit, in a European context with small samples (Wylleman et al., 2004). Quantitative studies on this topic are few, and this method would allow for large scale samples to be used.

The shift towards quantitative research methods needed addressing (Stambulova, 2007), and the Transition Monitoring Survey (TMS) has been specifically developed for these studies (Franck & Tuovila, 2008). The TMS examines both environmental and personal factors, takes a holistic approach and investigates the level of transitional, demands, barriers and coping resources of the athlete progressing from junior to senior sport (Franck & Tuovila, 2008).

There have been only three recent studies employing quantitative methodology using the TMS (Franck & Tuovila, 2008; Franck, 2009; Kreuze, 2009). Only one study (Franck & Tuovila, 2008) incorporated the TMS methodology in examining the differences of transitional experiences between beginning and middle transition athletes. Beginning and middle transitional groups were classified by their current subjective experiences in how they were thinking and feeling about their sporting life experiences which placed them in group at either the beginning transition group - BTG (less than 12 months thinking and acting like an athlete), and middle transition group - MTG (more than 12 months of believing and thinking like an athlete).

The current study aimed to answer three research questions. Firstly (using the TMS), to investigate the differences in the transitional experiences of BTG and MTG athletes as they move from junior to senior sport. Franck and Tuovila (2008) researched the BTG and MTG transitional differences of a 135 Swedish high school athletes in their transition from junior to senior sport. They reported 13 significant differences in how the BTG and MTG viewed recovery, the demands of technical skills, building relationships, recovery processes and how they combined school with sport. They reported further differences in how athletes coped with the transition, and with their perceived level of stress. The current study would expect to discover similar differences, however due to contextual, cultural and sampling differences; the exact nature of those differences cannot be predicted. A second question was to investigate if an athlete's transitional position had any effect on their adjustment as an athlete. Franck and Tuovila (2008) reported that the MTG group were significantly further adjusted to senior sport than the younger BTG. The current study would expect to report a similar significant difference. Lastly, the third research question aimed to investigate if differences existed between the BTG and MTG transitional position and their levels of athletic identity. Franck and Tuovila (2008) did not address this question and the current study predicted that the MTG would have a higher AI than the BTG.

Previous studies have investigated gender differences (Kreuze, 2009), and individual and team sports differences (Franck, 2009), but only Franck and Tuovila (2008) have examined differences

between BTG and MTG. No Australian study has been conducted analysing BTG and MTG divergence, the motivation for the current study. Research in an Australian context would help coaches and athletes identify where their athletes are placed in the transitional process and the strategies that best help them transition. The current study will build upon the small, but growing body of knowledge by part replication of Franck and Tuovila's (2008) study in an Australian context.

Method

Research Design

Due to the quantitative nature of this study, a between groups design method was selected to test for differences in the transitional experiences of athletes in the beginning (BTG) or middle (MTG) transition of their transition from junior to senior sport.

Participants

Of the 148 participants, 103 were male (69%) and 45 were female (31%) athletes from both metropolitan and regional areas of Western Australia. All participants were identified by their coaches as elite junior athletes, and were all currently members of either a specialised training or coaching group (academy), representative regional squad, state squad, or team. Their ages ranged from 14 to 18 years ($M = 15.37$, $SD = 1.37$) at the time of testing.

Of the 148 participants, 147 were full time students at WA high schools or Universities. One participant was in full time work. The participants had no known English language difficulty. All participants were volunteers, received no payment for their participation, and were free to withdraw their consent at any time.

A number of sporting organisations were approached that were likely to provide athletes aged between 14 and 18 years, spoke English, had been identified as a talented prospect, and could be sampled within the time constraints of this study. Eight sports were approached, with six accepting the offer to participate in the study (see Table 3). A convenience sample was employed. Measures to stratify the sample of participants ensured that there were athletes from a variety of sports, there were

males and females, there were both country and city based athletes, and athletes ranged in age from 14 to 18 years. Two hundred potential participants were identified through this process.

Sample size and power

When conducting the Analysis of Variance (ANOVA) using two groups, a power of 0.85 (that is an 85% chance of detecting an effect if there is one) was selected. An alpha of .05, with medium effect size of 0.25 required 146 participants to satisfy these parameters. All analyses used an alpha level set at 0.05 and confidence intervals of 95%.

Materials

Transition Monitoring Survey (TMS)

This study was the first Australian study to use the newly developed Transition Monitoring Survey (TMS Appendix A) (Stambulova, Weibull, Franck, & Tuovila, 2008). A version of the TMS translated from Swedish to English, was sourced from Professor Natalia Stambulova of Halmstaad University in Sweden, the co creator of this quantitative instrument. The TMS was back translated and edited to ensure comprehension by Australian English speaking athletes.

There are currently two versions of the TMS. The shorter, newer version was selected. This version of the TMS has only three double sided questions (Q12, 13, and 20) as opposed to six in the full version (Q12, 13, 16, 17, 18, and 20). Double sided questions gather two opinions on the one factor for example question 13 asked for an athlete's current satisfaction with, and the current importance of sports practise to them. The Swedish researchers have stated the shorter version will be preferred in the future. The TMS consists of 96 questions where participants are asked to respond on a 10 point Likert scale. Section one (questions 1 to 11) included general questions about the athlete's age, gender, sport event, level of competition, time involved in the transition from junior to senior sport, hours of training and hours of school/work. Section two (titled current situation in sport and life) asked the athletes to evaluate how important and satisfied they were with different aspects of their current situation in life and sport, including satisfaction with studies, family, friends, and sport

practice. This part consists of two double sided questions (question 12 and 13), where the athletes could answer on a scale range from 1 (very low) to 10 (very high).

Section three (titled the transition process), is divided into several areas including transition demands, coping strategies, environmental support, environmental pressure, personal resources, current stress level, and the need for support. The transitional demands (question 14) section used markers ranging from 1 (no need) to 10 (very strong need). Examples included items on technical skills, and performance in competitions. Coping strategies are examined in question 15 with the markers ranging from 1 (not much at all) to 10 (very much), with statements such as "I have clear goals for sport", and "I plan my development in sport" included. The environmental support, and environmental pressure scales (question 16/17), used markers ranging from 1 (very little/very poor) to 10 (very much/very good). Question 18, the personal resources and previous experiences, used markers which ranged from 1 (very low/poor/minor) to 10 (very high/good/major). Examples include the athlete's sport motivation, and current physical condition.

In question 19, the athlete estimated to what extent they currently felt adjusted as a senior athlete on a scale from 0-100 %, (0 = not adjusted, to 100 = completely adjusted). Items about perceived support and pressure (question 20) from, for example, coach, family, and teammates are included. Question 20 contained two scales, the current stress level, and perceived need for support, and the markers ranged from 1 (very low/no need) to 10 (very high/strong need). Examples of items are sport practice, sport recovery and injury rehabilitation. The TMS has recorded previous good internal consistency, Cronbach's alpha ranges from 0.502 to 0.930, with most alpha values in the survey reported over 0.70 (Franck & Tuovila, 2008).

Athletic Identity Measurement Scale (AIMS)

The Athletic Identity Measurement Scale (AIMS) (Brewer, Van Raalte, & Linder, 1993) was used to measure the degree to which an individual identified with the athletic role (Appendix B). Ten items are concerned with the social, cognitive, and affective elements of the athlete's identity. The questionnaire scale ranged from 1 (strongly disagree) to 7 (strongly agree). A total score of the

athlete's identity was calculated. Previous research by Li (2006) has demonstrated adequate internal consistency (Cronbach's alpha = .93) and test-retest reliability (r = .89) (Li, 2006). Total scores on the AIMS range from 10 to 70. Higher scores reflect higher athletic identity.

Procedure

A research proposal was submitted and approved by the Edith Cowan University Human Research Ethics Committee before research commenced. Informed consent (Appendix C and D), and explanation letters (Appendix E and F) were distributed to both parents and participants whom were under 18 at the time of the data collection. The parent consent letter was not provided to the ten adult participants. A standardised cover letter and instructions page (Appendix G), was attached to the two surveys in a well presented clearly printed package by a sporting contact person.

Two hundred surveys were distributed via the key sporting contact, issuing them at formal training sessions. Data was collected in the participant's own home. Surveys could be returned via email, post, or in person. All participants had the facility to contact the researcher via email, text, or phone if any problems occurred, which several participants did. One hundred and fifty completed survey packages were returned. Of the 150 returned, 148 were completed accurately, and two were discarded because the responses were illegible. It was anticipated (to complete both test instruments) that testing would take approximately 30 minutes according to the previous experience reported by Franck (2009).

Results

Data Analysis

The data were analysed with the Statistical Package for Social Sciences (SPSS) version 17.0 program. Univariate descriptive statistics (means and standard deviations), One Way Analysis of Variance (ANOVA), and Cronbach's Alpha were reported. Cronbach's alpha values were calculated for all questions of the TMS and the AIMS scales. The differences were significant if the p-value was reported at less than 0.05.

Data Preparation

Data were screened for data file accuracy, missing values and outliers. Visual inspection identified seven items of missing data, with four pieces missing from the questions 16 and 17 of the TMS scale regarding the media; the items were not replaced as there were reliability issues with this factor which are discussed further. Three pieces of data were missing from question 18, and were replaced using the variable mean responses of the applicable, age, gender, sport type, and transition group means. The effect of replacing missing data was tested and no effects were observed.

Four tables below represent key participant demographic breakdowns. Table 1 highlights the gender breakdown reporting the irregular male - female sample. Table 2 describes the age breakdown of the sample. Table 3 reports the sports breakdown of the sample which highlights the uneven distribution of the sports included. Table 4 reports the breakdown of sports level attained for each group, BTG and MTG.

Table 1

Gender Type Breakdown

Group	Male	Female	Total
BTG	42(41%)	11(24%)	53(36%)
MTG	61(59%)	34(76%)	95(64%)
Total	103(69%)	45(31%)	148(100%)

Table 2

Age Breakdown Between of BTG and MTG

	Total	13	14	15	16	17	18	Mean	*SD*
BTG	53	7(13%)	13(24%)	19(36%)	12(23%)	2(4%)	0(0%)	14.79	1.06
MTG	95	4(4%)	22(23%)	14(15%)	24(25%)	21(22%)	10(11%)	15.69	1.42
Total	148	11(7%)	35(24%)	33(22%)	36(24%)	23(16%)	10(7%)	15.37	1.37

Table 3

Sport Participation Breakdown by BTG and MTG

	Total	B-ball	Cricket	Hockey	Football	Netball	Rugby	Soccer	Surfing
BTG	53	2	13	22	0	1	14	1	0
MTG	95	5	11	36	1	9	24	2	7
Total	148	7	24	58	1	10	38	3	7

Table 4

Breakdown of the Highest Competition Level Attained

Question 6	BTG	MTG	Total
Local Level	37(70%)	30(32%)	67(45%)
National Level	14 (26%)	56(59%)	70(47%)
International level	2(4%)	9(10%)	11(8%)
Total	53 (36%)	95(64%)	148(100%)

Reliability Tests

Reliability testing the Transition Monitoring Survey (TMS) and Athletic Identity Measurement Scales (AIMS) employed Cronbach's Alpha. The results supported previous studies (Franck & Tuovila, 2008) where it was concluded that the instrument had good internal reliability. The TMS reported a mean alpha of .661, and as reported in Table 5, ranged from .239 for the importance of different spheres of life factors; to .901 for questions about the athletes current needs section. If question 12 A and B were removed, the mean alpha level was 0.745, above the 0.7 generally accepted levels for alpha (Field, 2009).

Table 5

Cronbach's Alpha reliability tests for the TMS and AIMS scales

		Current study			Franck and Tuovila (2008)		
Q	TMS Factor	Cronbach's alpha	Mean	*SD*	Cronbach's alpha	Mean	*SD*
12A	Life importance	.239	37.41	6.71	.547	46.84	7.17
12B	Life satisfaction	.339	34.93	7.31	.580	41.38	8.71
13A	Sport importance	.637	33.85	4.73	.502	34.55	4.63
13B	Sport satisfaction	.716	29.52	5.48	.656	32.06	5.85
14	Demands - Help	.901	84.4	25.84	.930	98.87	31.13
15	Coping strategies	.837	144.25	21.14	.874	142.66	27.02
16	External support	.663	49.82	8.06	.826	52.03	11.05
17	External pressure	.646	31.11	9.26	.783	37.58	11.36
18	Personal resources	.735	90.15	10.11	.773	88.00	13.58
20A	Stress level	.765	28.7	10.26	.740	28.03	10.05
20B	Support needed	.803	30.74	10.55	.834	26.15	11.72
AIMS	Athletic Identity Measure Scale	.765	51.03	8.304	n/a	n/a	n/a

$p = .05$

These results were consistent with Franck and Tuovila's (2008) study where the alpha was found to be .768. Cronbach's alpha for the AIMS as .765, consistent with Franck's (2009) study which was .742, and above the acceptable levels (Field, 2009). However, it should be noted what Franck and Tuovila (2008) term "scales" are not true scales but a grouping of like items.

Differences Between BTG and MTG on the TMS

One way analysis of variance (ANOVAS) were performed on the 96 questions of the TMS, which tested for differences between athletes in the beginning and middle of their transitions from junior to senior sport.

No significant differences were reported between the BTG and the MTG on questions about the athlete's current situation in sport and life, in this study, or Franck and Tuovila's (2008) study. As reported in Table 6, sport was the most important factor for both BTG and MTG. The lowest importance was with the work aspect for both BTG and MTG. Franck and Tuovila (2008) reported similar results with sport the highest for both groups and work the lowest.

Table 6

Comparison of BTG and MTG Current Situation in Sport and Life

	Current study				Franck & Tuovila (2008)			
Question 12 A	Beginning	Middle	*F(p)*	sig	Beginning	Middle	*F*	sig
Factor	*M (SD)*	*M (SD)*			*M (SD)*	*M (SD)*		
Sport	9.02(1.08)	8.89(1.44)	0.35(0.55)	ns	9.11 (1.51)	9.03 (1.31)	0.10	ns
Studies	7.04(2.26)	6.35(2.70)	2.49(0.12)	ns	7.12 (2.11)	7.33 (2.48)	0.28	ns
Work	4.63(3.11)	5.00(2.65)	0.93(0.34)	ns	6.08 (2.13)	6.28 (2.79)	0.11	ns
Family	8.37(2.05)	8.67(1.79)	0.83(0.36)	ns	8.76 (1.81)	9.12 (1.54)	1.35	ns
Friends	7.81(1.88)	7.92(1.84)	0.13(0.72)	ns	8.78 (1.60)	8.80 (1.63)	0.00	ns
Girl/Boyfriend	4.96(2.75)	5.66(2.72)	0.01(0.93)	ns	8.06 (2.67)	7.15 (3.06)	0.68	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

As recorded in Table 7, the MTG was significantly more satisfied with their family than the BTG. Franck and Tuovila (2008) reported no significant differences between the groups on current satisfaction with sport and life in general. Family was also the factor providing the highest satisfaction

for both the BTG and MTG. Franck and Tuovila (2008) reported the highest satisfaction with friends for both groups. The lowest satisfaction for both the BTG and MTG was with work

Table 7

Comparison of BTG and MTG Athlete's Current Satisfaction in Sport and Life

	Current study				Franck & Tuovila (2008)			
Question 12 B	Beginning	Middle	F(p)	sig	Beginning	Middle	F	sig
Factor	*M (SD)*	*M (SD)*			*M (SD)*	*M (SD)*		
Sport	8.13(1.75)	8.24(1.74)	0.13(0.71)	ns	8.28 (2.19)	8.52 (2.15)	0.40	ns
Studies	5.81(2.48)	5.48(2.25)	0.66(0.42)	ns	4.81 (2.61)	4.90 (2.78)	0.03	ns
Work	4.20(2.94)	4.69(2.64)	0.85(0.36)	ns	5.17 (2.60)	4.96 (2.80)	0.10	ns
Family	7.50(2.30)	8.50(1.73)	8.68(0.00)	sig	7.82 (2.32)	8.11 (2.32)	0.52	ns
Friends	7.79(1.87)	7.53(2.05)	0.55(0.46)	ns	8.65 (1.67)	8.60 (1.56)	0.03	ns
Girl/boyfriend	6.00(2.77)	6.07(2.79)	0.02(0.87)	ns	7.86 (2.99)	7.44 (3.22)	0.33	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

As recorded in Table 8, only one significant difference was reported which was that the BTG rated the importance of recovery significantly lower than the MTG. Franck and Tuovila (2008) reported a similar significant difference between groups. The participants in both studies rated competition as the most important aspect of their sports life. The lowest importance for both studies was with their recovery.

Table 8

Comparison of BTG and MTG Athlete's Importance of Current Situation in Sports Life

	Current study				Franck & Tuovila (2008)			
Question 13A	Beginning	Middle	*F(p)*	sig	Beginning	Middle	*F*	sig
Factor	*M (SD)*	*M (SD)*			*M (SD)*	*M (SD)*		
Sport practice	8.33(1.50)	8.77(1.35)	0.05(0.83)	ns	9.25 (1.16)	8.86 (1.60)	2.23	ns
Competition	8.81(1.88)	9.03(1.41)	0.65(0.42)	ns	9.27 (1.21)	8.87 (2.01)	1.54	ns
Recovery	6.73(2.47)	7.70(2.00)	6.69(0.01)	sig	8.38 (1.83)	7.35 (2.48)	6.30	sig
Relationships	8.71(1.54)	8.76(1.44)	0.03(0.87)	ns	8.72 (1.69)	8.53 (1.78)	0.36	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

As highlighted in Table 9, satisfaction with recovery was rated significantly lower by the BTG, than the MTG. The BTG group were most satisfied with their relationships within their sports life. The MTG participants were most satisfied with the competition aspect of their sport life. The least satisfied area of sport was recovery for both BTG and MTG. Groups were similar in their level of satisfaction with sports practise, competition, and relationships. Franck and Tuovila (2008) reported no significant differences between BTG and MTG on their satisfaction with their current sports life.

Table 9

Comparison of BTG and MTG Athlete's Current Satisfaction of Aspects in their Sports Life

	Current study				Franck & Tuovila (2008)			
Question 13B Factor	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Sport practice	7.50(1.68)	7.49(2.09)	0.12(0.73)	ns	8.76 (1.46)	8.20 (2.02)	2.97	ns
Competition	7.49(2.09)	7.96(1.99)	1.89(0.17)	ns	8.64 (1.79)	8.41 (2.15)	0.40	ns
Recovery	5.86(2.21)	6.63(1.88)	4.93(0.03)	sig	7.22 (2.62)	6.65 (2.48)	1.54	ns
Relationship	7.62(1.73)	7.88(1.61)	0.86(0.36)	ns	8.26 (1.88)	8.25 (1.75)	0.00	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

Table 10 shows that there were two significant differences between groups on their demands to improve. The MTG rated help with technical skills significantly less of a demand than the BTG. The BTG required significantly more demands from, and therefore help, combining sport and school than the MTG group. The two most demanding factors for the BTG group were with their need to improve their technical skills and with help in combining sport and school. For the MTG group, the demands of needing to improve technical skills and their physical condition were the highest needs. The factor requiring the least need for help to improve for both groups was with their relationship with peers. Franck and Tuovila (2008) reported technical skills, recovery issues, relationships with coach and team mates, and demands combining school and sport were all significantly greater demands in the transition process for the BTG than the MTG.

Table 10

Comparison of BTG and MTG Athlete's Current Demands (need to improve)

	Current study				Franck & Tuovila (2008)			
Question 14	Beginning	Middle	*F(p)*	sig	Beginning	Middle	*F*	sig
Demands - needs	*M (SD)*	*M (SD)*			*M (SD)*	*M (SD)*		
Technical skills	6.41(1.31)	5.53(2.00)	8.21(0.01)	sig	6.62 (2.31)	5.69 (2.39)	4.96	sig
Physical condition	5.92(2.52)	5.55(2.50)	0.72(0.40)	ns	7.22 (2.59)	6.53 (2.40)	2.39	ns
Tactical skills	5.73(2.35)	5.33(2.25)	1.03(0.31)	ns	5.92 (2.84)	5.71 (2.55)	0.18	ns
Mental skills	5.22(2.62)	5.36(2.36)	0.11(0.74)	ns	6.85 (3.05)	6.18 (2.72)	1.73	ns
Communication	4.75(2.32)	4.36(2.59)	0.87(0.35)	ns	5.34 (2.64)	5.09 (2.63)	0.28	ns
Game preparation	4.71(2.17)	4.69(2.44)	0.00(0.96)	ns	5.97 (2.59)	5.13 (2.44)	3.43	ns
Game self-control	3.86(2.39)	4.05(2.33)	0.21(0.65)	ns	5.68 (3.12)	5.03 (2.83)	1.45	ns
Game performance	5.43(2.17)	5.22(2.35)	0.29(0.59)	ns	6.95 (2.66)	6.06 (2.73)	3.22	ns
Post analysis	5.71(2.38)	5.42(2.11)	0.61(0.44)	ns	6.48 (2.51)	5.57 (2.67)	3.58	ns
Recovery	4.66(2.15)	5.04(2.18)	1.05(0.31)	ns	6.20 (2.85)	4.91 (2.37)	7.68	sig
Game recovery	5.18(2.32)	5.43(2.18)	0.40(0.53)	ns	6.27 (3.00)	5.18 (2.43)	4.93	sig
Injury rehab	4.41(2.95)	5.09(2.93)	1.82(0.18)	ns	6.46 (2.83)	5.74 (2.76)	1.73	ns
Overtraining rehab	5.00(2.86)	5.20(2.71)	0.18(0.68)	ns	6.06 (2.64)	5.18 (2.81)	2.71	ns
Coach relationship	4.32(2.46)	3.63(2.48)	2.63(0.11)	ns	6.58 (2.78)	4.78 (3.47)	9.24	sig
Team relationships	3.79(2.42)	3.14(2.36)	2.47(0.12)	ns	6.70 (3.14)	4.78 (3.46)	9.79	sig
Combsport&school	6.07(2.37)	5.17(2.79)	3.88(0.49)	sig	6.38 (2.61)	4.65 (2.85)	10.31	sig
Combsport&leisure	5.79(2.38)	5.23(2.83)	1.48(0.23)	ns	n/a	n/a	n/a	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

As recorded in Table 11, the BTG and MTG reported two significant differences in coping strategies used. The MTG expressed their negative feelings significantly more than the BTG in helping them cope. The groups also differed significantly with the use of distraction techniques with the MTG using this strategy more than the BTG. The BTG coped most with their transition by trying to give a 100% and by keeping good relationships around them. The MTG coped most by trying to give 100%, and by learning from previous experiences. The least used coping strategy used by the BTG was distraction techniques, whilst the MTG least used planning their time for everyday. Results reported groups were similar on 19 of the 21 coping strategies. Franck and Tuovila (2008) reported three significant differences with the BTG athletes coping more than the MTG by giving 100%, focusing on recovery, and patience shown.

Table 11

Comparison of Coping Strategies Used by BTG and MTG Athletes.

	Current study				Franck & Tuovila (2008)			
Question 15	Beginning	Middle	*F(p)*	sig	Beginning	Middle	*F*	sig
Coping Strategy	*M (SD)*	*M (SD)*			*M (SD)*	*M (SD)*		
I have clear sports goal	7.28(2.14)	7.46(2.14)	0.24(0.63)	ns	7.65 (2.18)	7.27 (247)	0.79	ns
I have clear goals in life	5.92(2.45)	6.4(2.31)	1.43(0.23)	ns	6.76 (2.58)	6.51 (2.58)	0.28	ns
I prioritize sport goals	7.20(2.17)	7.27(2.11)	0.03(0.86)	ns	7.21 (2.43)	7.15 (2.60)	0.02	ns
I plan my development in sport	6.67(1.99)	7.24(2.16)	2.42(0.12)	ns	7.17 (2.29)	6.44 (2.93)	2.33	ns
I plan my time for every day	4.83(2.18)	5.11(2.50)	0.48(0.49)	ns	4.92 (2.82)	4.69 (3.07)	0.18	ns
I find a good balance between sport and other areas of my life	5.83(1.93)	6.41(2.23)	2.52(0.12)	ns	7.25 (2.02)	6.97 (2.38)	0.48	ns
I try to keep good relationships with people around me	8.32(1.47)	8.18(1.61)	0.24(0.63)	ns	8.44 (1.66)	8.15 (1.84)	0.80	ns
I try to think positive in any situation	7.43(1.94)	7.64(1.99)	0.37(0.54)	ns	n/a	n/a	n/a	ns
I try to give 100% in each practice and competition	8.64(1.45)	8.51(1.60)	0.22(0.64)	ns	9.15 (1.36)	8.21 (2.26)	7.3	sig
I focus on my recovery/energy restoration	6.45(1.96)	6.38(2.26)	0.03(0.87)	ns	6.35 (2.13)	5.11 (2.44)	8.9	sig
I persist in my tasks in spite of fatigue, pains or failures	7.88(1.79)	7.73(1.88)	0.22(0.64)	ns	8.13 (2.08)	7.79 (2.23)	0.77	ns
I try to be patient and to see my progress as a step-by-step process	6.58(1.90)	6.40(1.88)	0.32(0.57)	ns	7.45 (1.84)	6.56 (2.58)	4.5	sig
I rely mostly on myself in solving my problems	6.58(2.15)	6.95(1.80)	1.12(0.28)	ns	6.81 (2.50)	6.44 (2.31)	0.69	ns
Being in a difficulty, I search for help of other people	6.03(1.81)	6.40(2.29)	0.98(0.32)	ns	6.38 (2.62)	5.50 (2.44)	3.82	ns
I try to anticipate difficulties and be prepared in advance	6.43(2.21)	6.95(1.63)	2.59(0.11)	ns	6.44 (2.36)	6.08 (2.48)	0.66	ns
I try to learn from my previous experiences in sport/life	8.15(1.97)	8.21(1.44)	0.04(0.83)	ns	7.66 (2.20)	7.66 (2.03)	0.00	ns
I learn from others	8.20(1.53)	8.13(1.74)	0.06(0.81)	ns	8.16 (1.71)	8.25 (1.85)	0.08	ns
Being in a stressful situation I express my negative feelings	4.94(2.08)	5.82(2.67)	4.27(0.04)	sig	6.27 (2.37)	5.45 (2.60)	3.35	ns

Table 11 Cot'd

Being in a stressful I am trying to keep my head cool and to analyse the situation	6.98(1.95)	6.73(1.86)	0.61(0.44)	ns	5.89 (2.48)	6.01 (2.71)	0.06	ns
I make myself busy with different activities (e.g., music, internet)	4.52(2.73)	5.61(2.73)	5.32(0.02)	sig	6.43 (2.93)	6.43 (2.82)	0.00	ns
I try to avoid difficulties and stressful situations	6.17(2.54)	6.41(2.25)	0.35(0.55)	ns	7.03 (2.39)	6.18 (2.74)	3.37	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

Table 12

Comparison of BTG and MTG Athlete's Perceived Support from Environmental Factors.

	Current study				Franck & Tuovila (2008)			
Question 16 Support from environment	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Coach	7.77(1.73)	7.63(2.17)	0.17(0.68)	ns	7.90 (2.26)	7.92 (2.34)	0.00	ns
Family	8.79(1.30)	9.08(1.46)	1.46(0.23)	ns	7.91 (2.30)	8.25 (2.36)	0.51	ns
Team-mates	7.56(1.68)	8.10(1.550	3.86(0.04)	sig	7.64 (2.13)	7.75 (2.01)	0.07	ns
Organization	6.88(2.65)	7.40(2.13)	1.67(0.20)	ns	6.90 (2.39)	6.08 (2.59)	2.87	ns
Media	3.97(2.94)	4.66(2.28)	4.79(0.03)	sig	3.88 (2.77)	4.91 (2.69)	2.37	ns
Practice	8.24(1.57)	7.91(1.74)	1.29(0.26)	ns	8.00 (1.84)	8.26 (2.05)	0.54	ns
Team climate	8.11(1.60)	7.80(1.86)	1.06(0.31)	ns	7.95 (2.14)	8.14 (2.34)	0.17	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

As reported in Table 12, the groups differed significantly in their perception of support from their team mates with the BTG perceiving significantly less support than the MTG. The BTG also perceived significantly less support from the media than the MTG. The BTG perceived most support from their family and least support from the media, second lowest was the support from their organisation. The MTG also rated support from family the highest, with the lowest support perceived from the media. Franck and Tuovila (2008) reported no differences in perception of environmental support.

As highlighted in Table 13, the MTG perceived significantly more pressure from the media than the BTG. The highest pressure felt by the BTG was from their coach and the lowest pressure was

perceived was from their financial circumstances. Aside from the Media, the MTG felt most pressure from their opponents, and other than the media, the least pressure from financial circumstances. Franck and Tuovila (2008) reported no significant differences with their participants reporting opponents giving both groups the most pressure.

Table 13

BTG and MTG Athletes Perceived Pressure from Environmental Factors.

	Current study				Franck & Tuovila (2008)			
Question 17 Pressure from environment	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Coach	5.71(2.10)	6.04(2.27)	0.73(0.39)	ns	5.96 (2.36)	5.78 (2.41)	0.16	ns
Family	4.50(2.60)	5.05(2.54)	1.52(0.22)	ns	4.65 (2.83)	4.44 (2.68)	0.17	ns
Team-mates	5.60(2.23)	5.38(2.27)	0.31(0.58)	ns	5.23 (2.52)	5.80 (2.25)	1.48	ns
Organization	3.94(2.44)	4.46(2.17)	1.76(0.19)	ns	4.85 (2.37)	5.20 (2.48)	0.50	ns
Media	2.50(1.95)	3.19(2.38)	6.79(0.01)	sig	2.88 (2.20)	3.97 (2.51)	3.28	ns
Financial	2.86(2.48)	3.61(2.59)	2.87(0.09)	ns	5.84 (2.60)	6.26 (2.80)	0.64	ns
Opponents	5.66(3.44)	6.16(2.29)	1.64(0.20)	ns	6.10 (2.09)	6.50 (2.50)	0.80	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

Table 14

Comparison of BTG and MTG Athlete's Perceived Level of Personal Resources.

	Current study				Franck & Tuovila (2008)			
Question 18 Personal resources	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Sport motivation	9.09(1.11)	8.83(1.44)	1.32(0.26)	ns	8.64 (1.52)	8.20 (2.26)	1.48	ns
Self-expectations	8.79(1.22)	8.64(1.52)	0.15(0.70)	ns	8.47 (1.89)	8.25 (2.21)	0.33	ns
Self-confidence	7.20(1.60)	7.36(1.73)	0.31(0.58)	ns	7.21 (2.11)	6.85 (2.59)	0.70	ns
Current health	8.58(1.18)	8.14(1.68)	2.81(0.10)	ns	8.35 (1.75)	7.79 (1.79)	3.13	ns
Physical fitness	7.79(1.75)	7.61(1.61)	0.35(0.55)	ns	7.52 (1.94)	6.81 (2.26)	3.33	ns
Technical ability	7.15(1.45)	7.33(1.37)	0.60(0.44)	ns	7.20 (1.65)	7.14 (2.13)	0.02	ns
Tactical abilities	7.13(1.38)	7.26(1.36)	0.31(0.58)	ns	7.45 (1.66)	6.86 (2.30)	2.50	ns
Mental abilities	7.37(1.72)	7.57(1.57)	0.52(0.47)	ns	6.82 (2.21)	6.87 (2.31)	0.02	ns
Communication	7.49(1.57)	7.73(1.52)	0.87(0.35)	ns	7.31 (1.78)	7.64 (2.08)	0.85	ns
Sport experience	8.24(1.49	8.14(1.73)	0.12(0.73)	ns	7.32 (1.99)	7.39 (2.13)	0.04	ns
Life experiences	7.39(1.88)	7.50(1.82)	0.12(0.73)	ns	7.10 (1.80)	7.10 (2.11)	0.00	ns
Former injuries	3.39(2.31)	4.27(2.66)	4.03(0.04)	sig	5.06 (2.93)	5.64 (2.91)	1.06	ns

Note. $p = < 0.05$, ns = not significant, sig = significant

The MTG rated the impact of previous injuries significantly higher than the BTG, as highlighted in table 14. The highest rated personal factor reported by the BTG was their level of sport motivation, with the lowest other than former injuries, their rating of their current tactical abilities. The MTG rated their sports motivation as the highest personal factor impacting on their sporting involvement and reported, other than former injuries, the lowest factor being their tactical abilities. Franck and Tuovila (2008) reported no significant differences, with all 12 factors similar, and both groups rating their motivation as their highest personal resource.

Table 15

Comparison of BTG and MTG Athlete's Current Adjustment as an Athlete.

	Current study				Franck & Tuovila (2008)			
Question 19	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Athletic Adjustment	65.11(13.87)	73.63(12.93)	14.00(0.01)	sig	62.94(21.70)	73.57(20.40)	n/a	<.01

Note. $p = < 0.05$, ns = not significant, sig = significant

As reported by table 15, the groups differed significantly on their adjustment as an athlete. The BTG felt significantly less adjusted as an athlete to the senior level than the MTG highlighting a mean difference of 8.52 percent. Franck and Tuovila (2008) similarly reported a significant difference of a 10.63 percent. Although Franck and Tuovila (2008) reported a larger difference between groups adjustment as an athlete, the responses of the participants in the current study were less variable as Franck and Tuovila highlighted a larger standard deviations than the current study. A small to medium effect size was reported $n^2 = 0.09$ and can therefore attribute 9.0% of the variability in athletic adjustment to group membership in the current study.

Table 16 reports three significant differences in how the groups perceived their level of stress. The participants in the BTG group perceived less stress from sports competitions, than the MTG. A significant difference was also reported on the stress from recovery currently felt within their sport, with the BTG, feeling less stress than the MTG. The third significant difference was reported in how the stress of injury rehabilitation was perceived, with the BTG reporting lower levels than the MTG.

The highest stress producing factor for the BTG was combining sport with other factors of their life. The MTG reported sports competitions and games the most stressful. The least stress was elicited by injury rehabilitation for both BTG and for the MTG. Franck and Tuovila (2008) reported only one significant difference reporting the BTG less stressed by injury rehabilitation than the MTG.

Table 16

Comparison of BTG and MTG Athlete's Perceived Level of Stress.

	Current study				Franck & Tuovila (2008)			
Question 20 A Factor	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Sport practice	4.69(2.24)	5.17(2.32)	1.49(0.22)	ns	4.50 (2.12)	4.45 (2.46)	0.02	ns
Sport comp/games	5.37(2.55)	6.33(2.15)	5.91(0.02)	sig	5.06 (2.28)	4.59 (2.66)	1.03	ns
Sport recovery	3.60(2.47)	4.37(2.32)	3.61(0.04)	sig	4.59 (2.14)	4.09 (2.58)	1.27	ns
Injury rehabilitation	3.13(2.98)	4.21(2.88)	4.64(0.03)	sig	4.14 (2.49)	5.65 (2.59)	5.52	sig
Sport relationships	4.09(2.38)	4.25(2.49)	0.14(0.71)	ns	3.86 (2.63)	3.63 (2.57)	0.24	ns
Comb sport/life	5.52(2.48)	5.61(2.71)	0.03(0.86)	ns	3.72 (2.58)	5.24 (2.79)	2.89	ns

Note. p = < 0.05, ns = not significant, sig = significant

Table 17

Differences Between BTG and MTG Athlete's Perceived Need for Help.

	Current study				Franck & Tuovila (2008)			
Question 20 B Factor	Beginning *M (SD)*	Middle *M (SD)*	*F(p)*	sig	Beginning *M (SD)*	Middle *M (SD)*	*F*	sig
Sport practice	4.94(2.45)	5.57(2.17)	2.65(0.11)	ns	4.72 (2.54)	4.08 (2.75)	1.71	ns
Sport comp/games	5.24(2.09)	5.55(2.27)	0.68(0.41)	ns	4.24 (2.39)	4.18 (2.98)	0.01	ns
Sport recovery	5.67(2.58)	5.45(2.52)	0.27(0.60)	ns	4.40 (2.74)	3.86 (2.61)	1.27	ns
Injury rehabilitation	4.15(2.89)	4.77(2.76)	1.69(0.20)	ns	4.97 (2.75)	5.86 (2.90)	2.22	ns
Sport relationships	4.47(2.62)	4.14(2.43	0.57(0.45)	ns	3.72 (2.34)	3.48 (2.79)	0.25	ns
Comb sport/life	5.50(2.24)	5.63(2.57	0.08(0.77)	ns	4.37 (2.82)	3.85 (2.80)	1.02	ns

Note. p = < 0.05, ns = not significant, sig = significant

There was no reported significant difference in the group's need for additional help (Table 17. The highest need for extra support for the BTG was with their recovery and combining sport with other activities. The MTG required the most help with combining sport with other activities, followed by help with their sports practise. The lowest need for help for the BTG was with injury rehabilitation

and for the MTG relationships in their sport. Franck and Tuovila (2008) reported no significant differences.

Athletic Identity versus Transitional Position

The mean AIMS score for the entire sample was 51.02 (SD = 8.40). An ANOVA indicated that the BTG (M = 48.64, SD = 7.07) had significantly lower athletic identity than MTG (M = 52.02, SD = 8.81), $F(1, 146) = 6.88, p = .010$. A small to medium effect size was reported $n^2 = 0.05$ and can therefore attribute 5.0% of the variability in AI to group membership. Although the oldest participants scored higher on the AIMS than did the younger participants, there were no significant differences between age group age scores $F(5,142) = 0.80, p = > .05$, which were reported as 13 years (M = 50.73, SD = 7.06), 14 years (M = 49.11, SD = 8.80), 15 years (M = 51.09, SD = 7.44), 16 years (M = 51.17, SD = 8.46), 17 years (M = 53.61, SD = 9.44), and 18 years (M = 51.30, SD = 8.94). Gender type in AI reported no significant differences $F(1,146) = 2.64, p = > .05$, with males ($M$ = 51.76, SD = 8.44) and females (M = 49.33, SD = 8.14).

Discussion

The current study examined whether there were differences between athletes in the beginning of their transition (BTG), to those in the middle of their transition (MTG), from junior to senior sport. The study reported several significant differences between groups; results which were consistent with the research conducted by Franck and Tuovila (2008), which this study was in part replicating. These differences were explored through three research questions. The first research question used the TMS to investigate differences in transitional experiences of BTG and MTG, reported 15 significant differences between groups. Analysis of research question two indicated that an athlete's transitional position did effect their adjustment as an athlete, with the BTG reporting significantly lower levels of adjustment. The final research question comparing results from the TMS and AIMS indicated that significant differences existed between an athlete's transition position (BTG or MTG) and their level of athletic identity. The BTG AI was significantly lower than the MTG. Many of these results will be of interest to athletes, parents, coaches and administrators. However of the 98 ratings (TMS, AIMS

and one comparison), 16 (16%) were significant, which supposed that 82 (84%) were not significant, or possible similarities. Comparing significant differences recorded in both studies (current study 16, Franck and Tuovila 13), only 5 were similar. Evidence from the current study supported the suggestion that athletes in the middle of the transition had come further in their transition than those in the beginning. With 98 separate analyses, space restrictions limit all results being discussed and the discussion will be separated into firstly those significant differences, followed by discussion on other, equally relevant findings.

Whilst both groups rated family life highly, the MTG was significantly more satisfied with their family life. Franck and Tuovila (2008) reported similar results. Pearson and Petitpas (1990) stressed that a transition can be simplified due to social resources from family involvement but barriers were increased by not having family and close friends around them. Auweele et al. (2004) reported that parents played a significant role in their child's participation in sport. Social support played a major role during transitions (Bussman & Alfermann, 1994). However, while both groups rated family as very satisfying, the older MTG rated family more important than the younger BTG. As older athletes (MTG) report greater independence as they mature, it would have been predicted that the younger BTG would be more dependent on their family structure.

The BTG rated the importance of recovery significantly lower than the MTG. Franck and Tuovila (2008) reported a similar significant difference between groups. However it is debatable whether younger athletes (BTG) would have a working knowledge of recovery processes (or experienced recovery issues yet) and thus this result was not unexpected. With all international athletes within the MTG (11%), recovery was of greater importance to them. The MTG group had a higher AI which has been linked to more demands when faced with recovery aspects of injury (Brewer, 1993). The older MTG had more training, more injuries, and more than likely have a greater understanding of the importance of recovery than the younger BTG (Stambulova, 2003). These results are contrary to Franck and Tuovila (2008) whom reported the BTG rated recovery a greater concern. This is interesting given that the Franck and Tuovila (2008) sample contained even more (31%) international

athletes than the current study (11%) and therefore would have expected Frank and Tuovila's (2008) MTG to rate recovery of a greater concern. Stambulova (1994) reported that many athletes experienced their first serious injuries during the transition and led to higher ratings of recovery by both groups.

The BTG rated the demands for more technical skills significantly higher than MTG. Stambulova (2007) reported that athletes further into the transitional process are more likely to be experiencing a higher-level competition and therefore demands from improved skills increased; contrary research to this study's findings. Although both groups rated their ability in this area as high, there was a significant difference in the group's need to improve. It is possible that the younger group (BTG) required more help as they were exposed to the higher demands for the first time. The need for technical skills decreased at each age level from 14 to 18 years, athletes adjusted to higher level competition as their subjective rating decreased. Previous research has reported older MTG athletes relied more heavily on their own competencies and skills rather than the younger BTG athletes (Stambulova, 1994). The higher AI of the MTG also increased their need for technical skills (Jorlen, 2007). Young golfers rated improved technical skills highly (Jorlen, 2007). It would be prudent to analyse technical sports, such as golf, as they require more technical skills than other sports by investigating if the needs for technical skills are greater in these more technical sports.

The BTG required significantly more help in combining sport and school. Stambulova (1994) reported that athletes' perceived demands during their transition included the difficulty in balancing sport related goals, and goals in other life areas. Wylleman and Lavallee (2004) reported that the transition from junior to senior sports may coincide with transitions in other spheres of life (e.g., from school to university) making it even more difficult, and so requires additional resources to cope. Franck and Tuovila (2008) also reported that their athletes required a need for help in combing school and sport, an interesting result considering all participants in their study attended a specialist sports school (Aspero High, Sweden), specifically aimed at helping combine school with sport. The BTG from the Franck and Tuovila (2008) study exhibited more difficulty in this area than the current study

whose participants attended a non sports school. This is a positive result for the WA schools involved with this study.

To help cope with the transition to senior sport, the MTG expressed their negative feelings significantly more than the BTG. With more demanding competitions, taking sport more seriously, and pressure felt, the MTG released this in negative ways (Weurth et al., 2004). Older athletes have a higher AI and therefore have a greater affinity with the pressures of an athletic role which may cause these negative outbursts (Wylleman & Zupancic, 2004).

The MTG used distraction techniques, such as making themselves busy (internet, reading) to cope with transitional demands significantly more than the BTG. The more experienced transitional group have had more time to develop and be exposed to these distraction techniques and so have less stressed than the younger group (Stambulova, 2003).

The BTG perceived significantly less support from their team-mates than the MTG. When younger athletes first entered senior levels, they had new team-mates and fewer friends around them. Jorlen (2007) reported that successful junior athletes often felt lost in senior competitions and this may lead the BTG group to perceive less support than was previously experienced. Research (Vujic's, 2004; Bruner et al., 2008: Papaioannou et al., 2008) reported the most important external resource to a successful transition from junior to senior was the social/emotional support from team mates. Results from the current study would support claims that athletes evaluated the climate in the team as a resource that gave them much support, but more team bonding is required by the BTG.

The impact of injuries affected the MTG significantly more than the BTG. Older (MTG) athletes spent more time training and playing, had higher AI, and were more subject to injury. International athletes in the MTG have more to lose from being injured (Brewer, 1993). Franck and Tuovila (2008) reported no significant differences between groups. Stambulova (1994) reported many athletes experienced their first serious injuries during this transition and this made successful transitions even harder. A high AI has been linked to psychological distress when faced with injury and therefore careful monitoring of injured high AI athletes is advised (Brewer, 1993).

Sports competitions caused the BTG significantly less stress than MTG. With the competitions rated so high ($M = 9.03$) by the MTG, it makes sense this factor could cause them great stress. A significant difference was also reported on the stress they currently felt with recovery, with the BTG feeling less stress than the MTG. The MTG placed significantly more importance on recovery (Brewer, 1993) and the need to improve their recovery practises supported this result. The final significant TMS difference was reported in the stress of injury rehabilitation with BTG being less stressed than the MTG; a result supported by Franck and Tuovila (2008). As discussed, the MTG have greater pressures to be fit for higher level competitions and thus felt more stress when injured (Brewer, 1993).

The MTG ($M = 73.63$) felt significantly more (8.52%) adjusted as an athlete than BTG ($M = 65.11$) athletes. The MTG contained more international, older, and more experienced athletes than the BTG and therefore this result was not unexpected. As discussed, older athletes have higher demands on them, greater self expectations, and a higher AI. Franck and Tuovila (2008) reported a significant difference recording a 10.63 % difference. Franck and Tuovila's (2008) reported a variance almost double that of the current study, possibly due to their sample containing a wider variety of sports, age ranges and competition levels. It would have been expected that Franck and Tuovila (2008) reported higher mean level of adjustment ($M = 68.25$) than the current study ($M = 69.37$), especially as their sample contained much older athletes, 20% more international level athletes, and attended a specialist sports school than the current study. Australian athletes may have rated their adjustment higher as they did not attend sports schools and needed to fend for themselves in many aspects of their lives, thus feeling more mature and further adjusted.

The BTG had significantly lower athletic identity than MTG. The highest level in AI was reported by the 17 year old group and the lowest by the 14 year old group. Brewer et al. (1993) argued that a strong sense of "self as an athlete" is a necessary requirement for success at higher levels of sport encountered by the higher level athletes, such as the MTG athletes with strong AIs were found to have had better fitness, higher commitment to sport participation, stronger global self-esteem, and

expanded social networks seen in the MTG (Horton & Mack, 2000). Lavallee and Robinson (2006) reported that the participants who were international athletes had significantly stronger AIs than those who were national or regional athletes (Brewer & Cornelius, 2001). Lavalle and Robinson (2006) reported international athletes had higher AIs, but more in the MTG (11%) than the BTG (0%). The current study's results supported the theory that the BTG would have lower AI than the MTG. This analysis was not conducted by Franck and Tuovila (2008)

Further results reported that sport was the most important factor in the lives of both groups. All athletes were in elite squads or specialist academy groups and therefore this finding was not unexpected. Athletes prioritised their sport before other aspects of their lives to help cope with the demands during the transition from junior to senior sport (Stambulova, in press).

The BTG were most satisfied with the relationships within their sports. Coaches would be pleased that their athletes perceived that their relationships are harmonious. The athletes need personal and environmental resources to cope with the transition, including supportive relationships (Ekengren, 2002; Mavroidis, 2005; McCarthy & Jones, 2007). The MTG required higher levels of fitness than the BTG. These higher level athletes competed against better and more adult athletes with higher skill levels and adult bodies. They have more demands from playing against older athletes, which augmented the need for increased fitness, especially when transitioning to national and international competitions (Jorlen, 2007). Stambulova (1994) reported the physical expertise of their opponents became much higher than of the rivals and became a barrier during this transition.

The least used coping strategies by the MTG was their daily planning and could be a reason as to why the need for help in combining activities was rated so highly. A previous study demonstrated that young athletes are unwilling to plan their future career (North & Lavallee, 2004; Stambulova 1994; 2009). All but one of the 148 athletes was at school so much of the planning is done by the school. This result was contrary to the Franck and Tuovila (2008) study which reported the MTG required less help with combining sport and other life activities than the BTG. Possibly as the Swedish

sample was older, and from a specialist sports school they were receiving more help than the current study's sample from non sports schools

Sport motivation was the most important internal resource for both groups. All participants are in elite sports teams or academies, so motivation is high with both groups. Harwood and Lavallee (2008) reported that the transitioning athletes recorded strong intrinsic sport motivation. Van Raalte and Andersen (2007) reported that the lack of motivation seems to be the most obvious factor in a crisis transition which coaches should keep in mind.

The highest stress producing factor for the BTG was combining sport with other factors of their life. This result supports previous discussion in the demands from this factor being significantly higher than MTG. Vujic (2004) reported that athletes could have difficulties with combining sport with other activities. In the Franck and Tuovila (2008) study the BTG group rated stress from this area much lower than the MTG and this is possibly explained by the sample coming from a sports school where more help is given to the students.

Although groups differed significantly in the support they perceived from the media, the media question confused many participants. Many used the N/A (15%) option, or did not answer those questions leading the researcher to conclude that results may not be reliable. Most athletes at a lower level of competition had not received pressure or support from the media (Stephen & Brewer, 2007). However both groups rated this pressure very low and the difference may be more through a lack of understanding of the question than a real difference.

Several results supported the theoretical frameworks included in this study. The developmental model of transition faced by athletes (Wylleman & Lavallee, 2004) stressed that there was an interaction between an athlete's life on the athletic, psychological, psychosocial and academic domains. Results indicated that the athlete used many resources and coping strategies from all four domains. The ACTM (Stambulova, 2003) outlined that, to experience a successful career transition, a match should be found between the transitional demands and resources. Results supported this model as athletes combine a variety of resources to cope with the transition from junior to senior sport;

athletes use personal and environmental variables to cope with the transition demands appropriately. Furthermore, the results demonstrated that the demands athletes perceive during their transition from junior to senior sport derive from both inside (physical sport skills) and outside (financial situation) sport. Finally the theory of psychological stress and coping (Lazarus & Folkman, 1984) emphasized that coping strategies used by athletes included both internal and external strategies, which occurred with both groups.

The question that classified the groups (TMS question 7) into BTG or MTG may appear an unreliable measure. However results from this study reported significant differences in "adjustment as an athlete" and "AI" between groups, and thus supported the current classification method. It was predicted athletes may have interpreted poorly the classifying statement "changes in the way I think and feel in a more senior way". More research using this method of categorisation should be conducted and would add to reliability testing. The interpretation of terms such as "demands", "coping strategy", "recovery", and "rehabilitation" could also be difficult for the younger participants.

The TMS was overly long and further editing and factor analysis may produce a shorter but equally reliable and valid measure. The TMS is also a new instrument and further development should be considered, however the TMS has been used in a previous study and has shown good psychometric values (Franck & Tuovila, 2008). Validity and reliability of the TMS was reported as good, however further testing of the TMS is required.

A larger and more equal gender split sample, containing a wider variety of sports in regional and city settings, may have facilitated more valid findings. Generalizability to other groups of athletes or sports outside this study may be difficult as sports are very different in their nature and this facet requires further investigation. International athletes were under represented, as was the female contingent.

An individual setting such as a classroom would probably have been a better data collection venue. However, this was hard to accomplish with 148 participants from a variety of sports and locations around WA. Data was collected individually in their own home without observation from the

researcher. Future studies may look at collecting in a larger, more controllable setting such as classrooms or training halls.

When comparing the current study and Frank and Tuovila (2008) it is prudent to note the following. Both studies had similar sample sizes (current study $n = 148$, Franck &Tuovila, $n = 135$); with a similar gender split (current study, 64% male, 36% female – Franck & Tuovila 62 % male , 38 % female). They differed with respect to age range (current 13-18 years, Franck and Tuovila 15-19 years) and mean ages (current study $M = 15.37$ years, Franck & Tuovila $M = 16.9$ years) They also differed with the allocation of local, national and international level athletes , in particular with the international component (current study 11%, Franck & Tuovila 2008, 31%). Franck and Tuovilas (2008) participants all attended a specialist sports school. The sports types included in the sample also differed; the Swedish study included golf, table tennis, equestrian, tennis, football, floor ball, volley ball and hockey. Several of these sports such as equestrian and golf require considerably more financial resources than others such as football and table tennis so there is an imbalance in this aspect of the sampling. Finally it should be considered although there were many significant differences between groups, close to 85% were either similarities or non differences.

The findings of this study are relevant to the sports groups involved, and may be helpful to sport psychology consultants, coaches, principals, parents and administrators in assisting both individuals and teams in their transition from junior to senior sport. Although confirming many differences between the BTG and MTG, this study also highlighted that there are many similarities between groups which should be considered before initiating any whole group interventions. Coaches need to be aware of when and where the specific differences between groups are likely to occur, and individual, not group programmes (or interventions) are better suited. Although intervention programmes such as helping combine school and sport are best provided on an individual basis, Australian sports are age grouped. However the results of this study, which identified the approximate ages these interventions are required, will at least provide some way of allowing the sports organisations to identify where their groups' position is in the transition process.

Research may provide athletes with a better understanding of their own requirements and needs during the transition. If a crisis occurs, parents' and coaches will have better understanding on what programmes are suited, and when to initiate these interventions or education. Coaches may be able to instigate programmes that help with the known differences reported in this study, and gather information via the ratings the groups gave on various factors in the TMS. For example coordinating school and coaches to develop better programmes which will help athletes combine school and sport which was identified as a problem by both BTG and MTG.

Sports organisations can view this as the beginning of the research process. They can use these results to focus on the athletes needs for transitional help, and assist them determine which resources they can use to make the transition easier and which barriers they might encounter.

Additional research appears required, including further testing and modification of the primary test instrument (TMS). Continued TMS reliability testing would be prudent to assemble further evidence of the TMS consistency as a test instrument. A complete analysis of section 15 (which contained 21 coping strategies) may be reduced to a more manageable number. Another recommendation would be to further investigate differences between genders, various sports, and investigate for correlations between ages; although transitions occur an individual basis, most sports in Australia are age grouped until senior levels. Coaches are faced with the issue of instigating individual help to large groups of age related athletes. Age related norms may be of value in identifying approximate needs of these groups at the approximate age levels they occur.

In a review paper of Alfermann and Stambulova (2007), a need was mentioned for more longitudinal studies on the transition from junior to senior sport. Longitudinal monitoring could examine the impact of any interventions or programme changes initiated by organisations over time. The TMS is an appropriate questionnaire to follow athletes over a longer period and to monitor the transition process over time (Franck & Tuovila, 2008).

The results of this study provided evidence that supported the belief that BTG athletes were different to MTG, have different levels of athletic adjustment, and athletic identities. Although this

study identified several differences between the groups, there were many more similarities. The TMS differences are possible markers for coaches to be familiar with, and be considered when constructing individual development programmes in an age group environment. AI and adjustment levels were higher for the older more experienced MTG group. The younger groups should receive more help in developing the factors which contribute to them. Attention should be given to those athletes with a high AI as this factor facilitates their transition into senior sport, but causes problems when they are terminated. Further research investigating the differences within specific sports, gender type and age groups (14 -18 years) may prove helpful to coaches and organisations whom are hoping to provide a smooth (one to two year) transition for their athletes and thus lower the likelihood of stagnation, burnout or from being completely lost from the sport.

> "*This is my first year playing with team mates 2 or 3 years older. It is pretty hard on my confidence. In junior hockey, I was always the captain of the team. Here, I'm well down the order. It is pretty tough to have the same kind of attitude like you are the best. And also with the older girls, this is my first experience playing with them, so I think I am gaining confidence everyday that I am playing. The extra help from my parents and coaches with the extra demands is a big help. But it was really tough at the start*".
>
> (Bruner, Munroe-Chandler, & Spink, 2008, p. 244).

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Appendices

SURFING WESTERN AUSTRALIA

Appendix A

Transition Monitoring Survey

AUSTRALIA ECU EDITH COWAN UNIVERSITY

Personal code: SUR

I. Introduction

1. Name _____

2. Date of Birth: _____

3. Age: _____

*Please put a **tick** against the appropriate response for each question.*

4. Gender: □ Male □ Female

5. Sport: ☒ Individual □ Team - Please, specify your sport event:_____

6. What is the highest level of competitions you have participated in as a junior athlete?

- □ Local (e.g., district, regional competitions)
- □ National (e.g., national competitions)
- □ International (e.g., international competitions)

7. How long ago do you believe you started to participate, act, or think in a more senior way in your sport? This belief could come from things such as taking part in senior competitions, games (practice or real) in your sport, by training with a senior team or squad, or just spending more time thinking about your sport?

- □ Less than 6 months ago
- □ Between 6 and 12 months ago
- □ Between 1 and 2 years ago
- □ More than 2 years ago

8. How many hours per week do you currently spend in sport (including training and competitions)?

- □ Less than 10 hours
- □ Between 10 and 14 hours
- □ Between 15 and 18 hours
- □ More than 18 hours per week

9. If you currently do not spend the usual amount of time in your sport, due to an injury or off season etc., please, mark here: □
Specify, why: _____
_____
_____

10. Do you go to School, e.g., secondary high school/University/College/TAFE?

□ Yes □ No
If you work, please, tick here: □
Specify, hours/week you work: _____

II. Current situation in sport and life

12. Below is a list of various areas in a young athletes' life. Please go through the list in the central column and evaluate each area ***two*** times. In the left column evaluate the ***importance*** of each area for you right now. Then in the right hand column mark your ***current satisfaction*** with each area now. The scale is 1 = very low importance or satisfaction; 10 = very high importance or satisfaction. Use the option n/a (not applicable) if a listed area does not refer to you.

Importance to me now		**Current satisfaction**
Very high Very low	***Area of your life***	Very low Very high
10 9 8 7 6 5 4 3 2 1 n/a	**Sport**	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	**Studies**	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	**Work**	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	**Family**	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	**Friends**	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	**Girl/boyfriend**	n/a 1 2 3 4 5 6 7 8 9 10

13. Please, make the same evaluations as in the previous question making sure to complete both sides of each area. These areas are in relation to just your ***sporting life***. Mark the option n/a (not applicable) if a listed area does not refer to you.

Importance to me now		**Current satisfaction**
Very high Very low	***Area of your sports life***	Very low Very high
10 9 8 7 6 5 4 3 2 1 n/a	Sport practice	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	Competitions/games	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	Recovery after games	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	Relationships within your sport / team	n/a 1 2 3 4 5 6 7 8 9 10

III. The Transition process

14. To what extent do you currently need to improve in the following areas in order to adjust to the senior level in your sport? Use the 10-point scale, where 1 = **no need** to improve; 10 = **very strong need** to improve. Use the option n/a (not applicable) if a listed area does not refer to you.

Sport Practice / Training improvement	**No need**									**Very strong need**	
o Technical skills	n/a	1	2	3	4	5	6	7	8	9	10
o Physical condition	n/a	1	2	3	4	5	6	7	8	9	10
o Tactical skills	n/a	1	2	3	4	5	6	7	8	9	10
o Mental skills	n/a	1	2	3	4	5	6	7	8	9	10
o Communication skills	n/a	1	2	3	4	5	6	7	8	9	10
Competitions/games improvement	**No Need**									**Very Strong Need**	
o Preparation for a competition/game	n/a	1	2	3	4	5	6	7	8	9	10
o Self-control during competitions	n/a	1	2	3	4	5	6	7	8	9	10
o Performance in competitions	n/a	1	2	3	4	5	6	7	8	9	10
o After competition analysis	n/a	1	2	3	4	5	6	7	8	9	10
Recovery/rehabilitation improvement	**No Need**									**Very Strong Need**	
o Recovery between the practices	n/a	1	2	3	4	5	6	7	8	9	10
o Recovery after games/competitions	n/a	1	2	3	4	5	6	7	8	9	10
o Rehabilitation after injury	n/a	1	2	3	4	5	6	7	8	9	10
o Rehabilitation after overtraining	n/a	1	2	3	4	5	6	7	8	9	10
Relationships/communication improvement	**No Need**									**Very Strong Need**	
o Coach	n/a	1	2	3	4	5	6	7	8	9	10
o Team-mates/partners/sport peers	n/a	1	2	3	4	5	6	7	8	9	10
Lifestyle improvement...	**No Need**									**Very Strong Need**	
o Combining sport with school/work	n/a	1	2	3	4	5	6	7	8	9	10
o Combining school with leisure time	n/a	1	2	3	4	5	6	7	8	9	10

15. To what extent do you currently use coping strategies (listed below), in order to adjust to the senior level in your sport? Coping strategies are things you do, or techniques you use, to help manage your transition to senior sport. Please, use 10-point scale: 1 = I don't use much at all; 10 = I use it very much.

Coping Strategy used...	Not much at all									Very much
○ I have clear goals for my sport	1	2	3	4	5	6	7	8	9	10
○ I have clear goals in non sport life	1	2	3	4	5	6	7	8	9	10
○ I prioritize the sport goals that I have	1	2	3	4	5	6	7	8	9	10
○ I plan my development in sport	1	2	3	4	5	6	7	8	9	10
○ I plan my time for every day	1	2	3	4	5	6	7	8	9	10
○ I try to find a good balance between sport and other areas of my life	1	2	3	4	5	6	7	8	9	10
○ I try to keep good relationships with people around	1	2	3	4	5	6	7	8	9	10
○ I try to think positive in any situation	1	2	3	4	5	6	7	8	9	10
○ I try to give 100% in each practice and competition	1	2	3	4	5	6	7	8	9	10
○ I focus on my recovery/energy restoration	1	2	3	4	5	6	7	8	9	10
○ I persist on my tasks in spite of fatigue, pains or failures	1	2	3	4	5	6	7	8	9	10
○ I try to be patient and to see my progress as step-by-step process	1	2	3	4	5	6	7	8	9	10
○ I rely mostly on myself in solving my problems	1	2	3	4	5	6	7	8	9	10
○ I search for help from other people when I find myself in a difficult situation	1	2	3	4	5	6	7	8	9	10
○ I try to anticipate difficulties and be prepared in advance	1	2	3	4	5	6	7	8	9	10
○ I try to learn from my previous experiences in sport/life	1	2	3	4	5	6	7	8	9	10
○ I try to learn from others	1	2	3	4	5	6	7	8	9	10
○ When I am in a stressful situation I express my negative feelings	1	2	3	4	5	6	7	8	9	10
○ When I am in a stressful situation, I try to keep my head cool and analyze the situation	1	2	3	4	5	6	7	8	9	10
○ I make myself busy with different activities (e.g., music, internet, shopping) so that I think less about my difficulties in sport	1	2	3	4	5	6	7	8	9	10

○ I try to avoid difficulties and stressful situations	1 2 3 4 5 6 7 8 9 10

16. Below is a list of environmental ***support*** factors that impact on a persons participation in sport. Evaluate the factor, e.g., "the support you receive from your coach", on a 10-point scale, where 1 = very little; to 10 = very much. Mark the option n/a (not applicable) if a listed factor does not refer to you. Please note that "support" can mean both support in the form of instructions and/or emotional support from other people or organizations.

Area of support	**I receive ... Very Little Very Much**
○ Coach's support	n/a 1 2 3 4 5 6 7 8 9 10
○ Family support	n/a 1 2 3 4 5 6 7 8 9 10
○ Team-mates support	n/a 1 2 3 4 5 6 7 8 9 10
○ Club/Federation support	n/a 1 2 3 4 5 6 7 8 9 10
○ Media support	n/a 1 2 3 4 5 6 7 8 9 10
	Very Poor Very Good
○ Conditions for practice are	n/a 1 2 3 4 5 6 7 8 9 10
○ The climate in the team is	n/a 1 2 3 4 5 6 7 8 9 10

17. Below is a list of environmental ***pressure*** factors that impact on a persons participation in sport. Evaluate the factor, e.g., "the pressure you ***receive*** from your coach", on a 10-point scale. Mark the option n/a (not applicable) if a listed factor does not refer to you. Please note that "pressure" can mean both high expectations and/or critical comments from other people.

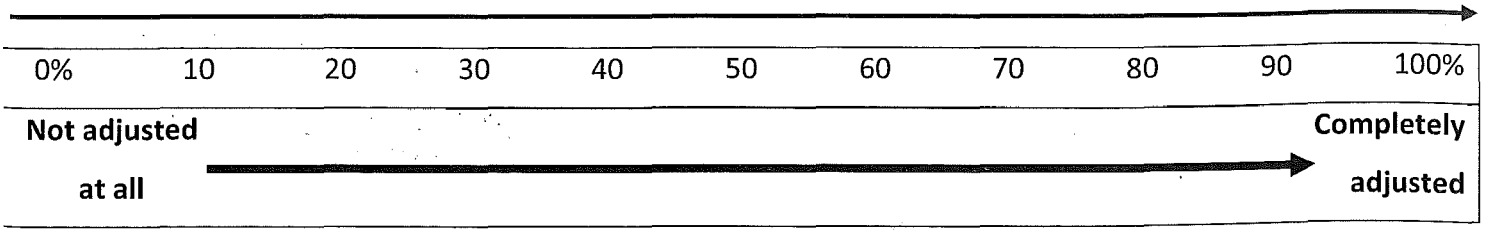
Area of Pressure	**I receive Very Little Very Much**
○ Coach's pressure	n/a 1 2 3 4 5 6 7 8 9 10
○ Family pressure	n/a 1 2 3 4 5 6 7 8 9 10
○ Team-mates pressure	n/a 1 2 3 4 5 6 7 8 9 10
○ Club/Federation pressure	n/a 1 2 3 4 5 6 7 8 9 10
○ Media pressure	n/a 1 2 3 4 5 6 7 8 9 10
○ Opponents pressure	n/a 1 2 3 4 5 6 7 8 9 10

	Very low Very high
○ Financial pressure is	n/a 1 2 3 4 5 6 7 8 9 10

18. Below is a list of various personality factors, and previous experiences that impact on a persons participation in sport. Evaluate the factor on a 10-point scale. Mark the option n/a (not applicable) if a listed factor does not refer to you.

Factor	Very Low Very High
• Your sport motivation is..	n/a 1 2 3 4 5 6 7 8 9 10
• Your self-expectations are...	n/a 1 2 3 4 5 6 7 8 9 10
• Your self-confidence is...	n/a 1 2 3 4 5 6 7 8 9 10
• Your current health is...	**Very Poor Very Good** n/a 1 2 3 4 5 6 7 8 9 10
• Your current physical condition is...	n/a 1 2 3 4 5 6 7 8 9 10
• Your current technical abilities are...	n/a 1 2 3 4 5 6 7 8 9 10
• Your current tactical abilities are...	n/a 1 2 3 4 5 6 7 8 9 10
• Your current mental abilities are...	n/a 1 2 3 4 5 6 7 8 9 10
• Your current communication abilities are.	n/a 1 2 3 4 5 6 7 8 9 10
• Your former experiences in sport are..	n/a 1 2 3 4 5 6 7 8 9 10
• Your former experiences in life are..	n/a 1 2 3 4 5 6 7 8 9 10
• Your former injuries are...	**Very Minor Very Major** n/a 1 2 3 4 5 6 7 8 9 10

19. To what extent do you currently feel adjusted as a senior athlete in your sport? Use the scale from 0% to 100%, where 0% means that you don't feel adjusted much at all to the senior level in your sport, and 100% means that you feel completely adjusted to the senior level. Please note, this is not about how good you are, but how adjusted you feel to the senior level.



20. Please, evaluate the areas of your sport and life, listed in the central column, from ***two*** points of view. In the ***left*** column, please evaluate **the stress level** you currently experience in each area (1 = very low stress; to 10 = very high stress). In the ***right*** column, please, evaluate how much **additional help/support that you feel you need** in the listed areas of your sport and life (1 = little need for help; 10 = a very strong need for help).

← **The stress you currently feel in this area**	**Area of sport**	**Your need for additional help and support in this area** →
Very High 10 9 8 7 6 5 4 3 2 1 **Very Low**		**Little need** 1 2 3 4 5 6 7 8 9 10 **Very strong need**
10 9 8 7 6 5 4 3 2 1	***Sport practice***	1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1	***Sport competitions/games***	1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1	***Sport recovery***	1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1 n/a	***Injury rehabilitation***	n/a 1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1	***Relationships in your sport***	1 2 3 4 5 6 7 8 9 10
10 9 8 7 6 5 4 3 2 1	***Combining sport with other life activities***	1 2 3 4 5 6 7 8 9 10
Very High 10 9 8 7 6 5 4 3 2 1 **Very Low**		**Little need** 1 2 3 4 5 6 7 8 9 10 **Very strong need**

21. Have you received any assistance from a sports psychology consultant during the last 6 months? □ Yes □ No

22. If yes, please, evaluate how helpful was your work with the sport psychologist:

1	2	3	4	5	6	7	8	9	10
Not at all helpful									Very helpful

23. Do you want to meet a sports psychology consultant in the near future?

□ Yes

□ No

SURFING WESTERN AUSTRALIA

Appendix B

AUSTRALIA ECU EDITH COWAN UNIVERSITY

The Athletic Identity Measurement Scale (AIMS)

Listed below are 10 items concerning yourself as an athlete? Please circle the number that best reflects the amount that you agree or disagree with each statement regarding your sport participation.

	Strongly disagree= 1						*Strongly agree=7*
1. I consider myself an athlete	1	2	3	4	5	6	7
2. I have many goals related to sport	1	2	3	4	5	6	7
3. Most of my friends are athletes	1	2	3	4	5	6	7
4. Sport is the most important part of my life	1	2	3	4	5	6	7
5. I spend more time thinking about sport than anything else	1	2	3	4	5	6	7
6. I need to participate in sport to feel good about myself	1	2	3	4	5	6	7
7. Other people see me mainly as an athlete	1	2	3	4	5	6	7
8. I feel bad about myself when I do poorly in sport	1	2	3	4	5	6	7
9. Sport is the only important thing in my life	1	2	3	4	5	6	7
10. I would be very depressed if I were injured and could not compete in sport	1	2	3	4	5	6	7

Please make sure your name is on the survey before you submit it.
Thanks for your participation.

Appendix C

Participant Informed Consent

From Junior to Senior Competitions: Do Athletes Differ on their Transitional Experiences?

This is to certify that:

- I have been provided with a copy of the Information Letter explaining the research study being undertaken as outlined in the title above.
- I have been given the opportunity to ask questions and have had all the questions answered to my satisfaction.
- I understand that if I have any additional questions that I can contact the research team at any time.
- I have been informed that the research project will involve completing two test questionnaires which will take approximately 30 minutes.
- I understand that the information I give will be kept confidential by the researcher and I will not be identified personally in any document that is produced from the results of this study.
- My name will be removed from all questionnaires.
- I am aware that I can withdraw from further participation in the project at any time and that I do not need to give any explanation or justification. There will be no penalty if I choose to withdraw consent for any previous information that I have given to be used in the project. I freely agree to participate in the project.

Your Name: .....

Your Signature:.....Date: ...../ ..... / 2010

Please complete this form and return it, along with your parents permission form and both surveys, in the stamped self addressed envelope Or in person to the Surfing WA office at 360 West Coast Drive, Trigg Beach as soon as possible please.

Appendix D
Parent Consent Letter

From Junior to Senior Competitions: Do Athletes Differ on their Transitional Experiences?

This is to certify that I have been provided with information outlining the details of the research study that my child will be participating in, that I have read and understood the information provided, and herewith give consent for my child's to participate in this study.

I (Your Name): ..... give my permission for (Childs Name/s).....

..... (If more than one)

To participate in the research study

Signature: .....

Date: .....

Please complete this form and return it, along with your Childs informed consent and both surveys in the stamped self addressed envelope Or in person to the Surfing WA office 360 West Coast Drive, Trigg Beach as soon as possible please.

Appendix E

Participant Information Letter

Dear Surfing WA Athlete

My name is Glen Ewen and I am a post graduate student at Edith Cowan University. This project is being undertaken as part of the requirements of a Psychology Honours Degree and with the full support of Surfing WA. The aim of this project is to examine the requirements of youth athletes, such as yourself, in their transition from junior to open level competition. You have been selected for this study as you are an elite prospect identified by your coaches. The information gathered will help you, as it will enable your coaches and administrators at Surfing WA to gain a greater understanding of what you as an athlete need to become a better athlete.

We are asking you to complete two questionnaires: *The Transition Monitoring Survey* and *the Athlete Identity Scale*. Please complete the tests as accurately and honestly as possible so the results we collect can be used with confidence. It should take about 30 minutes to complete these questionnaires. Participation in the research is voluntary and there is no payment for involvement. If you choose not to participate in the project no explanation or justification is necessary, and will not impact on your involvement with Surfing WA. You are also are free to withdraw your consent to be involved in the research project at anytime. If you do withdraw from the research, you have the right to remove information that has already been collected. This project has been approved by the ECU Faculty of Computing, Health and Science Ethics Committee.

The results of the study may be published in conference papers, and journal articles.. Results from this study will be reported back to Surfing WA. However, you will not be personally identified in any document that is produced from the results of this study, and your name will be removed from all questionnaires. The data will be kept for future research follow up studies to monitor their transition. If you would like to take part in this research, please complete the informed consent document attached. If you have any queries about this project or would like further information, please contact myself of [redacted] or my project supervisor Craig Harms on (08) 6304 5715. If you wish to contact someone independent from the study you may contact Dr Justine Dandy on (08) 6304 5105. Thank you for taking the time to consider helping with this research.

Glen Ewen
Researcher
Edith Cowan University

Mark Lane
Chief Executive Officer
Surfing WA

Appendix F

Parent Information Letter

Dear Parent

My name is Glen Ewen and I am a post graduate student at Edith Cowan University. This project is being undertaken as part of the requirements of a Psychology Honours Degree and with the full support of Surfing WA. The aim of this project is to examine the requirements of youth athletes, such as your child, in their transition from junior to senior competitions.

Your child has been selected to participate in this study as they are part of an elite youth group and identified as a future prospect by coaches. The information gathered will help us learn more about your child as an athlete, so you, their coaches, teachers, and administrators will have a greater understanding of what youth athletes require when making the transition from youth to senior competitions.

Your child will be asked to complete two short questionaries: *The Transition Monitoring Survey* and *the Athlete Identity Scale* and will take about 30 minutes for both. Participation in the research is voluntary and the information will be collected at a time convenient to both your child and their coach. There is no payment for their involvement.

The results of the study may be published in conference papers and journal articles, but individual identities will be kept confidential in any such document. All names will be removed from the questionnaires. A summary of the results from this study will be reported back to Surfing WA. The data collected will be kept for follow up studies to monitor the transition process over time. If you have any queries about this project or would like further information please contact myself on [redacted], or my project supervisor Mr Craig Harms on (08) 6304 5715. If you wish to contact someone independent from the study you may contact Dr Justine Dandy of ECU on (08) 6304 5105. If you agree for your child to take part in this research, please complete the informed consent document attached and return it with your child's informed consent form. This research has been approved by the ECU ethics committee.

Glen Ewen
Researcher
Edith Cowan University

Mark Lane
Chief Executive Officer
Surfing WA