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CORRELATES OF ATHLETIC IDENTITY IN ELITE SWIMMERS

Psychological and Demographic Correlates of Athletic Identity in Elite
South African Swimmers.

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Abstract

This study aimed to investigate if the strength of athletic identity affected the rankings (or salience hierarchy) of 6 every-day life roles among 100 elite South African Swimmers. The link between performance and athletic identity was also investigated along with an investigation of the effects of age and gender. There was found to be no interaction between athletic identity and ranking of life roles; only the athlete role was found to be significantly different between high and medium athletic identity groups. A difference was found between elite and non-elite athletes in the ranking of life roles. There was also no association between athletic identity and performance. As age increased athletic identity decreased, and gender was found to have no influence on athletic identity.

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Psychological and Demographic Correlates of Athletic Identity in Elite
South African Swimmers.

“Who am I ?” This is a question that people ask the world over. Humans are self reflective beings and the fundamental question of who we really are is one we all struggle with and strive to answer daily. Identity is the set of meanings that a person, and those around them, attributes to him or herself in a role, and this identity provides an individual with a frame of reference in which to interpret their actions and social situations (Burke & Reitzes, 1981). Because identities are seen as roles that a person occupies, life roles, roles and identities are terms that are used interchangeably.

The difficulty with answering the question about who we are, is that identity is a complex concept and people cannot be categorized or thought of in a simple way. There is consensus in the literature that self-concept or identity is not one-dimensional but that it is rather multidimensional, fluid and contextual (Fay, 1996; Marsh & Shavelson, 1985). A person may be a mother, daughter, wife, athlete or psychologist – all real identities, but very different to one another (see fig. 1)

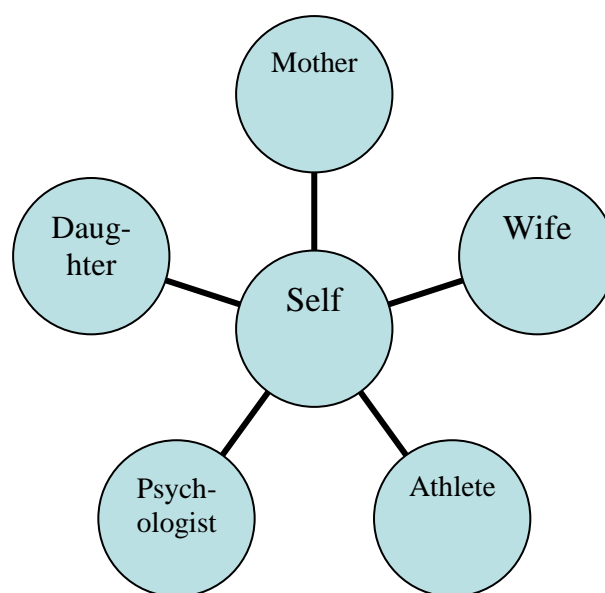


Figure 1. The Self and its Identities

Of all the possible identities that a person can have, of particular interest to sportspeople is athletic identity. People who participate in sports begin to develop an athletic identity from a young age, which develops further if they reach elite level (Cieslak, 2004). Athletes, and those close to them, therefore often build a sense of self-worth and esteem on their identity as an athlete and neglect other aspects of their self (e.g. family, friend, academic, romantic partner or extracurricular). This can lead to an arrest in psychosocial development and difficulties when sports participation is not possible.

This research seeks to examine the relative importance of different identities and what, if any, effect the strength of the athletic identity will have on the ranking of these other identities. Elite athletes will be used as a sample, as little research has been done on this category of athlete with regards to athletic identity and its effect on the importance of other life roles. For the purpose of this study an elite athlete has been defined as an athlete competing at national or international level, and non-elite or non-professional athlete as those athletes competing recreationally or at non-national level.

There are also a number of other variables which might be affected by or affect athletic identity, and this paper will examine three of these, namely: age, gender and performance.

Chapter 1

Literature Review

Identity

Stryker and Burke (2000, p.284) define identity as “the parts of a self composed of the meanings that persons attach to the multiple roles they typically play in highly differentiated contemporary society”. There are many potential identities that a person can have and these symbolise an individual’s ideas about the person they were, are at present and will become (Markus & Nurius, 1986). Potential identities are the cognitive components of hopes, goals and fears and thus provide the self with meaning, structure, organization and direction (Markus & Nurius, 1986; Cieslak, 2004). Identities also influence current and future behaviour in that behaviours have meanings that correspond to, reinforce and display the identities of an individual (Burke & Reitzes, 1981). Different identities call for different behaviours and Burke and Reitzes (1981, p.91) argue that “identity is like a compass helping us steer a course of interaction in a sea of social meaning”.

Relationship between identities

What constitutes identity is a range of subjective positions, which can be thought of as narratives that speak of ‘identities’, and identity is a continuous process of fluidity, oppositions and alliances between these narratives (Haywood & Mac An Ghaill, 1997). The idea of different roles (or identities), where with different situations different selves are present, can lead to a sense that there is no coherent whole or unity to the self. However, Royce, Gebelt and Duff (2002) note that having many identities does not mean that our sense of self needs to be fragmented. They argue that different identities do not stand alone, but rather they stand in relation to

one another, and it is this relationship that provides unity. Fay (1996) suggests, there are two types of unity. Firstly there is *substantial unity*, which is the most common way of thinking about unity. In this instance, various elements are seen as being part of an underlying base entity, and unity is derived from the fact that changes are all alterations of that base entity (Fay, 1996). Often people see the self as having only one 'true' identity, and that there are simply variations of that identity, and these variations are seen as almost false or mere pretence.

There is, however, another type of unity that does not presuppose that something underpins various elements. *Relational unity* is where things are in unity because the range of elements that make up the whole stand in certain relation to each other, and Fay (1996) notes that we can think of the self in these terms. Fay (1996) uses a sporting analogy to make his point. If you had to think of a cricket test match, each innings on its own does not make sense and does not constitute a cricket match. Rather, it is only when one innings is viewed next to the other innings that it can be called a cricket match. Fay (1996, p.37) writes,

Perhaps the self is not a thing which undergoes various state changes, but instead just *is* various states of consciousness related in a certain manner. In this case, the self would be more like a verb (an organized temporal flow of mental states) and less like a noun (a particular thing)...In this case no underlying thing is required for unity; indeed, in this case the self would be certain states of mind properly related.

A properly unified self-identity then would not have to mean that there is one 'true' identity, but rather many 'true' identities.

Social construction of identity

Burke and Reitzes (1981) write that identities are social products, formed and maintained through social processes, such as locating the self in socially recognizable categories, identification and exchange and validation of self concepts by means of self-presentation. Fay (1996) argues that in part, to have an identity is to be related to others in some way and to understand that you are so related. Part of identity formation is a process of self-differentiation, which requires others against which to distinguish ones self. There can be no self without the difference provided by others.

It is through interactions with others that self meanings come to be known and understood by an individual, because in particular situations others respond to a person as a performer in a role relevant to that situation. Through others responses to our own actions we learn about the meanings of ourselves (Burke & Reitzes, 1981). Mead (1934, cited in Horton & Mack, 2000) has also argued that if important people in an individuals life emphasise a certain identity, for example athletic identity, then that individual will internalize this and define themselves thus.

Our culture and society also provide the materials from which a large part of our identity is formed. Though we have some free choice, as Marx (cited in Fay, 1996, p.67) put it,

Men make their own history but they do not do so just as they please; they do not make it under circumstances chosen by themselves, but under circumstances directly encountered, given, and transmitted from the past.

Fay (1996) writes that culture can be conceived of as a process of appropriation and society as a process of *structuration* in which rules and meaning are applied through the wilful activity of conscious agents. In this sense, our culture and society 'make' us who we are – they enable and constrain, and thus form. The formation of a self-identity is one of reflexivity between the culture, society and personal will, and as Giddens (1991, p.75) says: "We are not what we are, but what we make of ourselves." Through interactions with others, and through others' responses to a person, meanings of identities become known and understood by an individual; what a person becomes is largely dependent on their engaging with the world and reorganising their sense of identity accordingly (Giddens, 1991).

Just as the environment can form an identity, it can also activate already formed identities. According to Royce et al. (2002, p.2), "self is a multifaceted social construction, depending in part on one's social environment." Depending on the environment, different aspects of the self can be activated, and behaviour and information processing will differ depending on what dimension of self is active (Markus & Nurius, 1987). For example, when training hard, and an athlete identity is activated, an athlete might interpret loud laughing as distracting and disruptive; however, when out at a night club, when a friend identity is activated, the same laughter could be interpreted as fun and pleasing. Thus identity can be seen as dynamic – guiding behaviour but also being modified by the environment around you (Royce et al., 2002).

Identity Salience, Hierarchy and Commitment

The concept of identity *salience* is important because the salience or importance we attach to our identities influences how much effort we put into each role and how well we perform in each role (Burke & Reitzes, 1981). Stryker (1968, p.563) notes that “the higher an identity in the salience hierarchy, the higher the probability of role performance consistent with the role expectations attached to that identity...identities are themselves motivators for human action”.

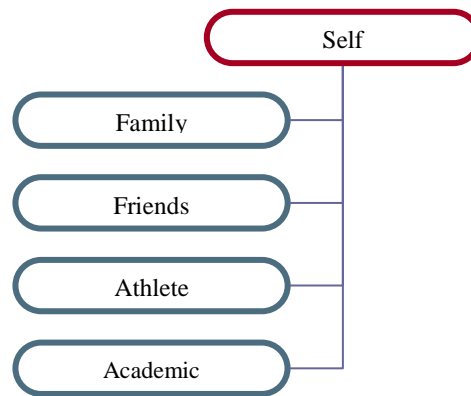


Figure 2. Hierarchical Nature of Identities

According to Stryker (1968) the various identities that comprise the self exist in a hierarchy of salience (see fig. 2), which are reinforced through the importance of the social networks on which a particular identity is based, where the identities that are more salient are most likely to be invoked in situations involving facets of the self. Stryker and Serpe (1982, cited in Curry & Weaner, 1987, p.281) state that implied in the concept of a salience hierarchy is the “general proposition that an identity’s location in a salience hierarchy will affect its threshold for being invoked in situations and thus the likelihood that behaviour called for by the identity will ensue”. In other

words, the more important an identity is to a person, the more likely they are to behave in a manner in accordance with this identity in any given situation. For example, if the athlete identity is more important than a friend identity, in situations where both friend and athlete identity could be activated, say at a competition (which involves competing and friendships with team mates), the athlete identity is likely to be activated, as the person will pick up on the environmental factors relating more to that identity – in this case the competition. If the friend identity was more important, a person might rather pay attention to the cues regarding friendship, such as the other team mates and the camaraderie of the competition, and the friend identity would become activated rather than the athlete. Stryker (1968) also notes that the more salient an identity is, the more likely a person is to perceive a situation as an opportunity to perform in terms of that identity; also, they will actively seek out opportunities to perform in terms of the identity.

Although salience and hierarchy are related terms, they do actually differ. Cieslak (2004, p.9) notes that “salience is the amount of importance ascribed to an identity – a singular evaluation, while hierarchy is the actual ordering of the identities by importance – a group evaluation”. Cieslak (2004) argues that an identity might be very salient, that is very important to an individual, but that identity could rank low in a hierarchy. Curry and Parr (1988) found that a sample of student-athletes at a Christian college identified strongly with the athlete identity (so the athlete identity was salient), yet ranked it lower than family, academic, friend and romantic identities.

In the hierarchy of identities, commitment to these identities differs. Commitment is an important concept in terms of identity as it relates to social construction of identity. Stryker (1968, p.560) writes, “To the degree that one’s

relationships to specific others depend on one's being a particular kind of person, one is committed to being that kind of person." Therefore the 'cost' of changing these social relationships is weighed up and the commitment to an identity changed accordingly; so if a person has many relationships that are built around being an athlete, the commitment to the athlete identity is likely to be high. Not being an athlete would mean giving up these relationships, or at least changing the relationships, and this 'cost' would determine the commitment to the identity.

Brewer, van Raalte and Linder (1993, p.238) note that, "people do not generally make only global or overall assessments of themselves. Rather, people make domain-specific judgements of personal worth and competence". For example a person might perceive that he or she has good academic ability but low social ability. Harter (1990), James (1892) and Rosenberg (1979) (cited in Brewer et al., 1993) have all proposed that the importance attributed to a specific self-concept domain (or identity) will determine the extent to which perceived competence or incompetence will influence self-esteem, affect and motivation. Anderson (2004) has also noted that the more salient an identity is, the more time and effort will be invested to ensure its enactment and the more self-esteem will depend on it.

Athletic Identity

In sports psychology there is an interest in self-concepts related to being a sports person, and more recently, how this relates to other identities, because as Lantz and Schroeder (1999) note, this relationship will influence both the sportsperson's life and sporting performance. Brewer, Selby, Linder and Petipas (1999) argue that for many sportspeople, sports participation is the central source of self-definition and self-worth. Brewer et al. (1993) have identified an aspect of self called athletic

identity (AI) which is the extent to which a person identifies with the athletic role. They note that in its narrowest sense, AI is “a cognitive structure, or self-schema that guides and organises processing of self-related information” (1993, p.238), therefore a person with a high AI is likely to interpret life events in terms of how it impacts on their athletic functioning. Brewer et al. (1993) also note that AI can also be considered a social role, in that identity is socially constructed and that a person makes a social statement about themselves by participating in a certain sport.

For two reasons AI has been suggested to be different to other identities (Webb & Nasco, 1998). Firstly, athletic talent is normally recognized when a person is quite young and development of that talent becomes a central part of their and their family’s life. Therefore AI is formed early in a person’s development and much time and psychological commitment is given to this role. This means that by the time the person reaches adulthood, AI has become internalised, “frequently at the expense of other possible social roles. As a result an internalised AI is likely to dominate the individual’s overall self-concept” (Webb & Nasco, 1998, p.340). Secondly, AI is a uniquely public identity. The athletic role is played out in a much more public arena than other roles and thus there is a greater emphasis placed on success and failure in the athletic role. Webb and Nasco (1998) maintain that other social roles do not encounter such performance pressure. Lantz and Schroeder (1999) note that Brewer’s research into AI has shown that the higher AI is (i.e. seeing the athletic identity as the central dimension of self), the greater its influence on social relationships, types of activities sought and perceptions of life experiences.

Role Engulfment, Identity Foreclosure

Role engulfment is when a person's time and energy is poured into one role and Weichman and Williams (1997) have shown such role engulfment in an intercollegiate basketball team in the USA. They found that throughout their four years at university, all players became engulfed in the athletic role, withdrawing from student and social roles. A similar concept is one of identity foreclosure. Danish (1995, cited in Anderson, 2004, p.405) writes,

In psychological foreclosure people rigidly adhere to their identities to maintain security or to cope with intra-psychic anxiety... They may be resistant to change and more vulnerable to threats of identity loss because their method of coping with their life situation is to seek approval through their athletic success. The loss of their athletic role would compromise their entire defensive structure.

Marcia (1966) has extended work on Erickson's psychosocial theory of identity formation in adolescents. He states that identity formation is based on crisis and commitments. A crisis is a period of time where conscious decisions are made with regard to an identity and where searching and questioning of identity is done. Commitment is the personal investment in the system of beliefs sustaining an identity. Marcia (1966) argues that there are four identity states, one of them being identity foreclosure. When there is a commitment without a crisis, in other words, when a person is committed to an identity without questioning the set of beliefs underpinning the identity or exploring other options, identity is foreclosed. The three other states are identity moratorium – when there is crisis with no commitment, identity diffusion – where there is no crisis and no commitment, and identity achievement – where there

is a crisis leading to commitment. These states are not stages however, and a person does not move through one to the next, but can revisit each at some point in their lives.

There are a number of studies examining identity foreclosure among student athletes, but the results are contradictory. Murphy, Petipas and Brewer (1996), in a study of 124 intercollegiate Division I student-athletes, found a high degree of identity foreclosure in these athletes, especially among high revenue and high profile sports such as basketball, football and ice hockey. Good, Brewer, Petipas, van Raalte and Mahar (1993) also found a positive correlation between athletic identity and identity foreclosure. However, Perna, Zaichkowsky and Bocknek (1996, cited in Miller & Kerr, 2003) found that at the time of graduation, male athletes and non-athletes did not differ significantly in identity states, meaning that the athletes did not have foreclosed identities. Miller and Kerr (2003) found two stages in identity formation in student athletes. These students initially over-identified with the athlete role and were in a state of identity foreclosure, however in their later years as a student, the identification with the athlete role declined and there was a rise in identification with the academic role, suggesting that identity foreclosure did not occur. However, the results of this study could be due to the sample, as the participants were drawn from a Canadian university that did not have high profile athletic programs and as mentioned earlier, higher-profile athletes tended to have a greater degree of identity foreclosure.

Although a greater identification with the athlete role can be beneficial in the sporting context, leading to increased commitment and training, it is hypothesised that

role engulfment or foreclosure can lead to emotional distress when the role becomes threatened. One aspect of this that has been researched is retirement from sport, especially forced retirement. Webb and Nasco (1998) argue that retirement from sport is not simply another life transition and is different from other occupational retirements because of the uniqueness of AI and the special circumstances of early forced retirements. They conducted a study of 231 university athletes, asking them to fill in questionnaires about the sport they played, athletic identity, reason for retirement and psychological reactions to retirement. 46.2% of the sample reported that difficulty with retirement was “quite characteristic” or “very characteristic” of their experience, and AI was strongly related to that experience. For those whose retirement was forced (e.g. through injury), the relationship between AI and difficulties with retirement was even stronger. This group was found to have a strong sense of vagueness and feelings of uncontrollability about the future. Similarly, Brewer (1993, cited in Green & Weinberg, 2001) conducted four studies examining the relationship between athletic identity and depressive symptoms following injury. In all four studies, those athletes with a higher AI displayed significantly greater depressive symptoms than those with lower AI.

Webb and Nasco (1998) suggest that one reason for the above findings could be that athletes have a private and a public AI; they note, “a private athletic identity refers to one’s internal thoughts, feelings and assessments of oneself as an athlete, while public athletic identity refers to one’s public reputation in the social role of athlete” (p.350). Athletes may be able to divest themselves of their private AI but when they suffer a loss of self-esteem it is more likely linked to their public AI. Family and friends need to help the athlete divest themselves of their social role of an

athlete. Also, Horton and Mack (2000) point out further problems with having a high AI. They note that high AI may lead to damaging behaviours within the athlete role, such as over training, becoming anxious when not training, and in some extreme cases, the use of performance enhancing drugs.

Positive consequences of high AI

There are some notable positive consequences of a high AI. It has been found that having a dimension of self that is related to physical performance is related to physical fitness, global self esteem, increased social relationships, confidence and health benefits (Horton & Mack, 2000). Adolescents who participate in sports are at a lower risk for depression, are less likely to feel lonely and are more likely to feel accepted by others (Oler et al., 1994). Stryker and Serpe (1994) have stated that an increased salience of an identity will increase commitment and behaviours consistent with that dimension, and as such, a high AI will increase an athlete's commitment to athletic participation and training. Danish (1983, cited in Brewer et al, 1993) argued that the commitment needed to train and compete often demands that an athlete narrows down other activities, and so a high AI could help an athlete achieve optimal athletic performance. However, there has been little research into the relationship between AI and performance. In one study Horton and Mack (2000) found that in a group of 236 marathon runners, those who had the fastest and slowest marathon times displayed the strongest AI. It is theorised that success in one identity of a person, will lead to an increase in importance of that identity; therefore for those runners that were successful, this success fed into their sense of being an athlete and the importance of this identity for them – and AI was high. Also, high AI could have provided the dedication and commitment to training needed for success, and thus the more

successful runner displayed a high AI. So why did those runners with the slowest times also display high AI's? Horton and Mack (2000) argue that cognitive dissonance can explain this. Research into cognitive dissonance suggests that the evaluation of a task is directly related to the effort that must be given to accomplish the task. Slow runners expend large amounts of effort for little external justification, and thus justification must come from within, and so a strong AI justifies the effort they put into running.

The above studies point to the fact that a multi-component self-concept protects the person in the event of failure of one dimension, and that a high AI is problematic only when it prevents the development of other identities (Horton & Mack, 2000).

AI and other life roles

As can be seen from the above research, there have been a number of studies investigating AI and identity foreclosure, role experimentation and reactions to injury and retirement, but there has been very little research into the relative importance of AI with regard to other identities; in fact, Horton and Mack's (2000) study of marathon runners and Cieslak's (2004) study of the Athletic Identity Measurement Scale (AIMS) are two of the only studies to compare AIMS scores with the salience of other identities.

Horton and Mack (2000) conducted a study on non-elite adult marathon runners to investigate the relative importance of AI as compared to other life roles, which would provide a measure of the extent to which AI dominates the self-concept,

which in turn is an indicator of identity foreclosure. Previous research had suggested that people with high AI should assign high importance to the athletic role and low relative importance to other roles, such as family, friends or romantic roles. Horton and Mack (2000) gave the Athletic Identity Measurement Scale (AIMS) and the Life Roles Inventory to 236 marathon runners ranging in age from 19 to 72 years old. They found that although runners with high AI scores did rate the athlete role as more important than those runners with low AI scores, there was no significant difference between the two groups on the rating of other life roles. The runners with a high AI ranked family first, then romantic partner, athlete, academic/occupational, friendship and lastly extracurricular. Those with low AI ranked family first, followed by romantic partner, academic/occupational, friendship, athlete and lastly extracurricular. Horton and Mack (2000) concluded that this indicated that the runners did not have foreclosed identities. Although the runners with high AI did also see themselves as having other roles and ranked some of those roles as more important than the athlete role, running decreased the amount of time spent on these other roles. For example, the runners indicated that social networks outside of running suffered because running actually took the place of other social activity.

Cieslak (2004) sampled 300 collegiate intramural (non-elite) athletes, asking them to rate and rank different roles, namely: family, friendship, athletic, religious, academic and romantic. No significant difference was found between the rankings of these life roles in the medium and high AI groups, with the exception of the athlete role and romantic roles. High AI participants ranked the athlete role as more important than the medium AI group and the romantic role lower. The research participants in this study were non elite athletes, and Cieslak (2004) warns that their

AI might not be as salient as more “serious” athletes, which may have influenced the results.

Age and AI

Except for Horton and Mack’s (2000) study, most previous research into AI has been conducted on American college students and, according to Horton and Mack, this could have consequences for research into AI. They argue that university age and adult athletes may differ in the complexity of the self-concept. University age athletes may have fewer roles that they regard as important because they have fewer obligations, such as family or career, than do older athletes. However, this hypothesis has not been investigated empirically (Horton & Mack, 2000). In younger athletes, AI might constitute the basis of other identities, and in adult athletes, especially among non-professional athletes, this might not be the case. Brewer et al. (1993) did find that in a sample of college athletes, AI was negatively correlated to age. They argue that it is possible that as athletes mature and become exposed to a wider variety of activities and influences, their identification with the athlete role could diminish. However Horton and Mack (2000) found that high AI among their sample of runners, with an average age of 41, was similar to high AI for previous samples of college age athletes. Therefore, the relationship between AI and age needs further investigation.

Gender and AI

It has been found that gender can have an influence on AI, with males generally having a higher AI than females (Brewer et al., 1993; Wiechman & Williams, 1997; Lantz & Schroeder, 1999). A study by Wicheman and Williams (1997) of 389 high school athletes found that males had a significantly higher athletic

identity than females. It is reasoned that society places greater importance on sport for males than females. Coakley (1990, cited in Wicheman & Williams, 1997, p.199) argues that “girls are less likely to learn that physical activities and achievements in sport can or should be uniquely important sources of rewards in their lives” and so females generally have a lower AI. However, Hale and Waalkes (1994, cited in Ceislak, 2004) in a study of 475 elite athletes, found no difference in the strength of AI in males and females. A possible reason for could be the elite nature of the sample, were female athletes competing at such a level would presumably have a high AI. Also, it has been found that some sports are seen as more acceptable for women (Royce et al., 2002; Allison, 1991; Marsh & Jackson, 1986) thus allowing them to fully express their AI in an acceptable arena.

Measurement Issues

Although identity is an area of much research interest, there are some difficulties relating to its measurement. Three specific problems relate to the current research.

Firstly, as mentioned previously, in Curry and Weaner’s (1987) study of student athletes in a Christian college, although participants strongly identified with the athlete role, they ranked it quite low in a hierarchy of identities. Curry and Weaner (1987) felt that the hierarchy did not accurately reflect the behavioural importance in the daily lives of the students; they argued that the hierarchy reflected a cultural bias that favours some identities above others. They state that a forced ranking of roles introduces a value choice and could weaken the validity of this method as an indicator of actual sports behaviour. As Cieslak (2004) has pointed out, ratings of roles are a singular evaluation which could be different to the group ratings of rankings.

Therefore rankings of life roles might not give a very clear indication of the salience of the roles and the behaviour, cognition and affect associated with these roles.

Anderson (2004) notes that there is no one scale of AI that reflects prominence within an individual's salience hierarchy.

A second difficulty is that together with multiple identities, AI itself is most likely hierarchical and multidimensional. Although recent research has been done on revising the scales used to measure AI, there is a need to expand the construct and design a measurement tool to assess the nature of AI (Anderson, 2004; Cieslak, 2004; Martin, Eklund & Adams-Mushett, 1997; Miller & Kerr, 2003).

Thirdly Horton and Mack (2000) note that if one identity is thought to be the key to other identities, it will most likely be the most salient identity. This leads to the interesting question about the interdependence of identities, which is difficult to measure quantitatively.

Rationale for the current research

Almost no previous research has investigated how AI affects the salience of other identities, and two of the only studies to do so, namely Horton and Mack (2000) and Cieslak (2004) have used non-elite athletes as a sample, and as Cieslak (2004) has pointed out, this may have biased previous results. The current research will extend their research, by using elite swimmers as research participants and it is hypothesized that AI will effect the salience of life roles and that elite athletes will have a higher AI than non elite athletes. Somewhat of a comparison can then also be made between the elite and non elite athletes to investigate if the level of participation and investment in

a sport affects the salience of life roles. In order for this comparison to take place, it was decided to partly base the current study on Horton and Mack's (2000) study, and similar questionnaires will be used. Also, much research done in America on AI has been done on college students who are contemplating a future in professional sports. For many South African swimmers however, high school and university is the very time when their careers take place, in other words they are not contemplating a future career, but are elite athletes already. The effect of this needs to be investigated.

Although the sample of swimmers is an elite sample, swimming is not really a career option in South Africa as it is a non-professional sport, and swimmers cannot earn enough money to make a career out of swimming. Therefore, the swimmers cannot choose swimming as a career and simply do it for the 'love of the sport', and this may have an effect on AI and the importance of other life roles. Also, there has been little research on high school athletes, and many elite South African swimmers are still in high school. The current research will thus also add to the knowledge about age and its effect on AI, as Horton and Mack (2000) argue that age may affect the strength and interactions of AI.

Horton and Mack (2000) also point out that there is little research into how AI affects performance. Their study is in fact one of the only ones that examines the relationship between AI and performance, and the current study will help grow this body of knowledge. It is hypothesised that AI will be positively correlated to AI.

The current study will also add to research regarding gender and AI, which has had contradictory results thus far.

Chapter 2

Design and Methodology

Participants

Swimmers who had obtained provincial or South African colours were asked to participate in the study. The sample was comprised of 53 female and 48 male swimmers, ranging in age from 13-27 years.

Sampling

Most swimmers from all provinces competing in the Senior South African Aquatic Championships, held in Durban during April 2004, were approached to participate in the research.

Instrumentation

Quantitative questionnaires were handed out at the South African Senior Aquatic Championships, and they consisted of:

1. Demographic Questionnaire

Questions were asked regarding age, gender, level of education, number of years involved in swimming, the age at which they started competitive swimming, the number of years swimming at national/provincial level and, highest achievement.

2. Athletic Identity Measurement Scale (AIMS)

This scale was developed by Brewer et al. (1993) to assess the strength and exclusivity of identification with the athlete role. It has been found to have a test-retest reliability of 0.89 and a coefficient alpha (internal consistency) of 0.93 (Brewer et al. 1993). The AIMS also has been found to have construct validity, as it is highly

correlated to other measures conceptually related to athletic identity, such as the Perceived Importance Profile and Sport Competence Scale. Discriminant validity is shown by non-significant correlations to measures conceptually unrelated to athletic identity, for example, self-esteem and sports competence (Brewer et al., 1993). Other studies have confirmed the reliability and validity of the AIMS (Martin 1999, Martin & Adams-Muschett 1995; Hurst, Hale, Smith & Collins, 2000).

Martin, Ekland and Adams-Muschett (1997) found that the AIMS did not just measure athletic identity as one construct, but rather measured four factors that make up athletic identity. Thus four subscales have been developed, namely: Self-Identity, Social Identity, Exclusivity and Negative Affectivity, however more research needs to be done to confirm the validity of these constructs. Originally the AIMS consisted of 10 questions, but question 6 (“ I need to participate in sport to feel good about myself”) did not fit into any of the four factors and thus has been dropped by most researchers (Burke, 2002).

The AIMS therefore consists of 9 statements that people are asked to rate on a Likert scale anchored by ‘strongly agree (7)’ and ‘strongly disagree (1)’, for example “I feel badly about myself when I do poorly in swimming”. The word ‘swimming’ replaced the word ‘sport’ in the original AIMS, to assess the role of swimmer rather than athlete or sport in general (this does not change the validity ore reliability of the aims (Horton & Mack (2000))).

3. Life Roles Inventory

The Life Roles Inventory is an adaptation from the work of Stryker and Serpe (1994) used by Horton and Mack (2000) and evaluates psychological centrality of six

roles, namely academic, athletic, family, friendship, dating and extracurricular, through the use of pair-wise comparisons. Each role is compared to every other role and for each pair the preferred role receives a '1' and the other a '0'. A score of six indicates that the role is rated as more important than other roles and a score of 1 indicates that the role is considered less important than the other roles. Stryker and Serpe (1994) found a satisfactory internal consistency for the assessment of individual life roles, with a Cronbach's alpha range from .81 to .89.

Data Analysis

The total AIMS score of each participant was rated as follows: high AI (43-63), moderate AI (22-42) and low AI (9-21).

In the Life Roles Inventory, the roles were ranked in order, according to which role was chosen most often. A Factorial ANOVA was used to analyse the AIMS scores and the Life Roles Inventory to determine whether there was any interaction between AI and ranking of life roles.

A T-Test was used specifically to analyse if there was an association between AI and the athletic life role, as it was assumed a priori that this identity would be most affected by strength of AI.

To determine whether there was a correlation between AI and performance, a Pearson Chi-Squared test was used. It is difficult, however, to compare performance of swimmers because there are four different strokes and different distances are swum for each stroke; therefore time could not be used as a measure of performance in this

case. There is also the complicating factor of age; for example, a swimmer of 14 years may be the best in his or her age group, but might not be quite as fast as an older swimmer, who is actually not as good.

Therefore, to measure performance, firstly, highest career achievement was used. The categories were ranked as follows:

1. Making a senior South African Team
2. Making a Junior South African team, or breaking a national age group record
3. Winning a medal at a gala other than the Senior SA National Aquatic Championships
4. Qualifying for the SA National Aquatic Championships

Secondly, performance at the Senior South African Championships was analysed. The categories for this were:

1. Winning a medal
2. Swimming in a final
3. Swimming in a semi final
4. Swimming in a heat.

To investigate whether there was a correlation between AI and age, a Pearson Correlation was done. A one-way ANOVA was also conducted to determine if age had an effect on the ranking of life roles. To do this the swimmers were divided into two groups: under 18 years of age, and over 18 years. The cut-off of 18 years was

chosen as this is the age when most people leave school and are considered a young adult and no longer a teenager.

To determine if gender influenced AI in this study a T-Test was performed.

Chapter 3

Results

Athletic Identity

65 swimmers were found to have a high AI (43-63) and 36 a moderate AI (22-42).

There were no swimmers with a low AI (9-21).

Athletic Identity and ranking of other life roles

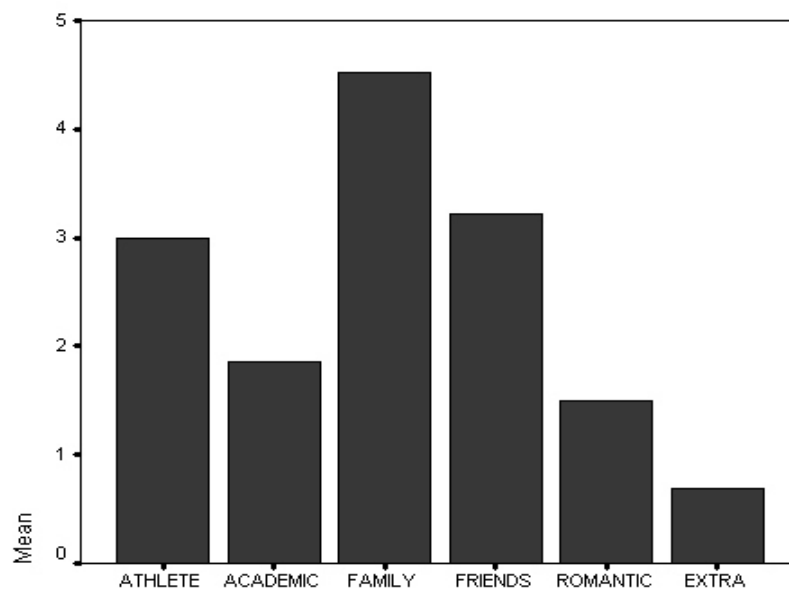


Figure 3. Bar-graph showing mean overall rankings of each Life Role for all swimmers

For the group of participants as a whole (see fig. 3), the family life role was ranked first, followed by friends, athlete, academic, romantic partner and lastly extracurricular.

Using a Factorial ANOVA (see table 1.) a significant difference was found between the rankings of each role ($df = 5, f = 161.667, p < 0.005$) (see fig. 8-24).

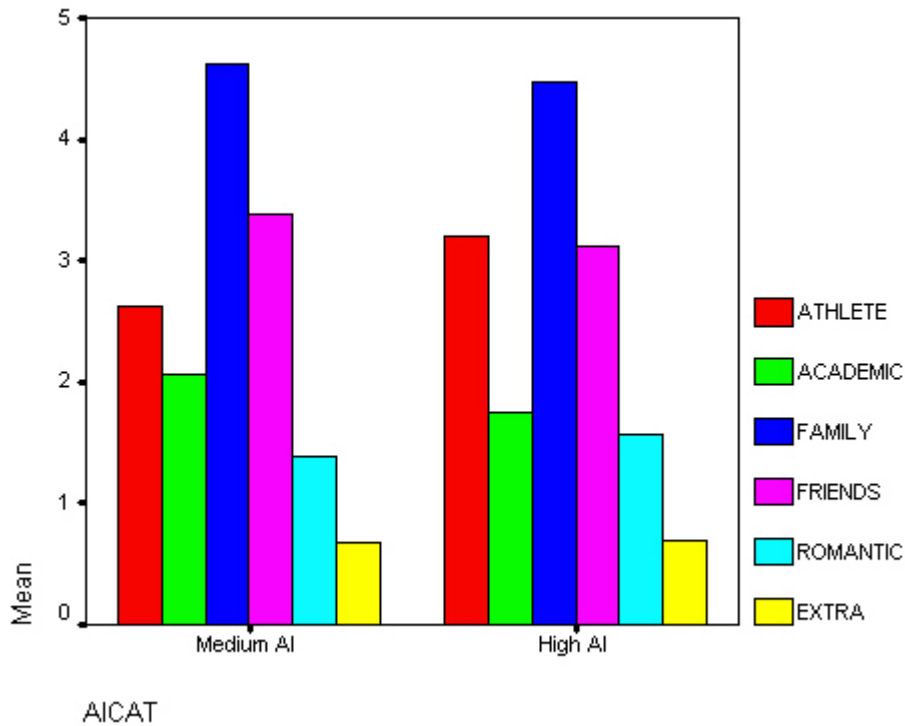


Figure 4. Comparison of Ranking of Life Roles for groups with High and Moderate AI

When the ranking of life roles was compared to AI (see fig. 4), most of the roles were ranked in the same order for both groups, except the friend and athlete role. The moderate AI group ranked family highest, followed by friends, athlete, academic, romantic partner and extracurricular. The high AI group switched the order of the friend and athlete role compared to the moderate AI group. The high AI ranked family first, followed by athlete, friend, academic, romantic partner and lastly extracurricular.

Table 1. Results of a Factorial ANOVA of Life Roles and AI

Tests of Between-Subjects Effects					
Dependent Variable: PREF					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	910.754(a)	11	82.796	80.114	.000
Intercept	3165.896	1	3165.896	3063.359	.000
AICAT	1.137E-02	1	1.137E-02	.011	.916
ROLE	835.390	5	167.078	161.667	.000
AICAT * ROLE	11.100	5	2.220	2.148	.058
Error	574.611	556	1.033		
Total	4941.000	568			
Corrected Total	1485.364	567			

a R Squared = .613 (Adjusted R Squared = .605)

The results from table 1 show that even though the ranking of life roles in the moderate and high AI group was slightly different, there was no significant interaction between AI and the ranking of life roles ($df = 5$, $F = 2.148$, $p > 0.05$). Therefore AI did not influence to a significant level the ranking of life roles.

It was hypothesised that the strength of AI would affect the athlete role the most and when the athlete role was analysed (see Table 2), it was found that there was a significant difference ($df = 93$, $T = -2.618$, $p < 0.05$) between the moderate and high AI group, with the high AI group ranking the athlete role as more important than the moderate AI group.

Table 2. The difference in the importance of the Athlete role between moderate and High AI Swimmers (T-Test)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PREF	Equal variances assumed	.581	.448	-2.618	93	.010	-.5463	.20865	-.96062	-.13195
	Equal variances not assumed			-2.570	64.701	.012	-.5463	.21256	-.97084	-.12174

Athletic Identity and Performance

Table 3. Association between Performance at Senior South African Championships and AI

ACH.NAT * AICAT Crosstabulation
Count

		AICAT		Total
		Moderate AI	High AI	
ACH.NAT	medal	10	18	28
	final	8	20	28
	semis	6	10	16
	heats	12	17	29
Total		36	65	101

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.051(a)	3	.789
Likelihood Ratio	1.063	3	.786
Linear-by-Linear Association	.403	1	.525
N of Valid Cases	101		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.70.

For this test, the swimmers' performance at the Senior South African Swimming Championships was used as a measure of performance. The results (see table 3) show

that, although there are a greater number of swimmers with a high AI in the highest performance category and also within each performance category, there is no association between AI and performance ($df = 3$, Chi-Squared = 1.051, $p > 0.05$).

Table 4. Association between highest career achievement and AI

ACH.CARE * AICAT Crosstabulation				
Count				
		AICAT		Total
		Moderate AI	High AI	
ACH.CARE	SA snr team	8	16	24
	Sa jnr/age grp rec	10	24	34
	medal other gala	5	11	16
	making nat	13	14	27
Total		36	65	101

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.607(a)	3	.456
Likelihood Ratio	2.556	3	.465
Linear-by-Linear Association	1.482	1	.224
N of Valid Cases	101		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.70.

These results (see table 4) analysed the association between AI and level of achievement reached in the swimmer's career, and no association was found ($df = 3$, Chi-Squared = 2.607, $p > 0.05$), which suggests that there is no association between performance and AI. The above results were surprising and so a post-hoc investigation was warranted. The mean AI was found for each performance category and then an ANOVA was conducted.

Table 5. Mean AI scores for swimmers in each performance category for career achievement .

<i>Performance Category</i>	<i>N</i>	<i>Mean AI</i>
SA Senior Team	24	44.67
SA Junior Team/Age group record	34	46.18
Medal at gala other than Nationals	16	44.94
Making Nationals	27	44.41

There was no significant difference (see table 5, table 10 and figure 23) between the means in the categories for career achievement ($df = 3 \text{ \& } 97$; $f = 0.282$; $p > 0.05$).

However it can be seen that those swimmers whose highest achievement was either making a junior South African Team or breaking an age group record, had the highest AI.

Table 6. Means of AI in performance categories for performance at the South African Senior National Aquatic Championships

<i>Performance Category</i>	<i>N</i>	<i>Mean AI</i>
Medal	28	44.68
Finals	28	46.21
Semi-finals	16	45.25
Heats	29	44.52

The mean AI scores for each performance category at the Senior National Swimming Championships were similar (see table 6, table 11 and fig. 24) and there was no significant difference between the mean scores ($df = 3 \text{ \& } 97$; $f = 0.246$; $p > 0.05$). However, those swimmers whose best performance at the South African Nationals was making a final had the highest AI.

Age and Athletic Identity

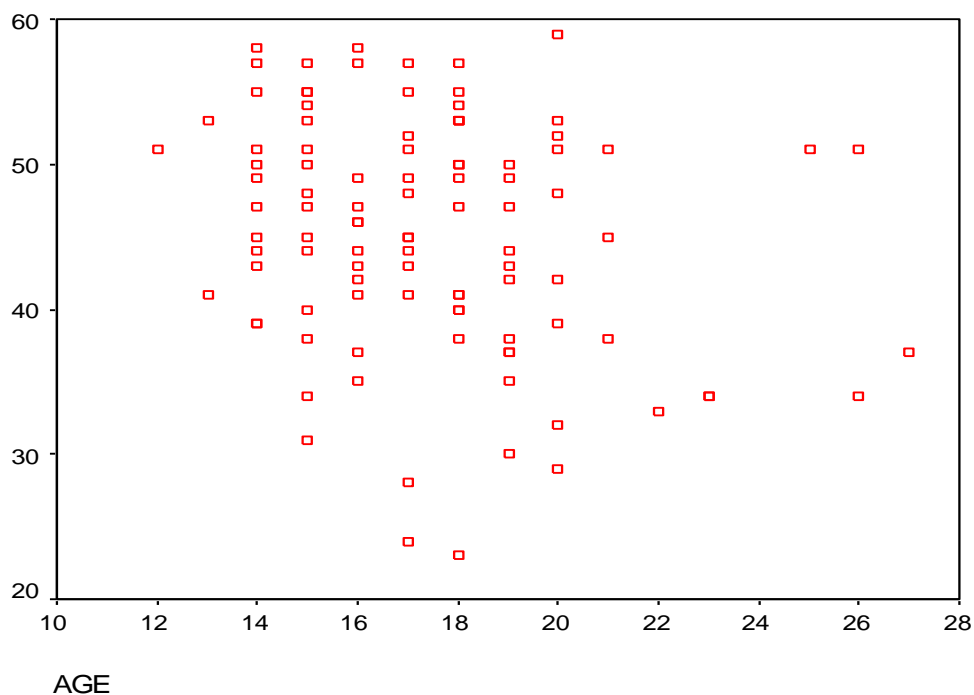


Figure 5. Correlation of AI to Age.

A Pearson's Correlation (see fig. 5 and table 7) showed that there was a significant negative correlation between age and AI ($r = -0.238$, $p < 0.05$), meaning that as age increased AI decreased.

Age and ranking of Life Roles

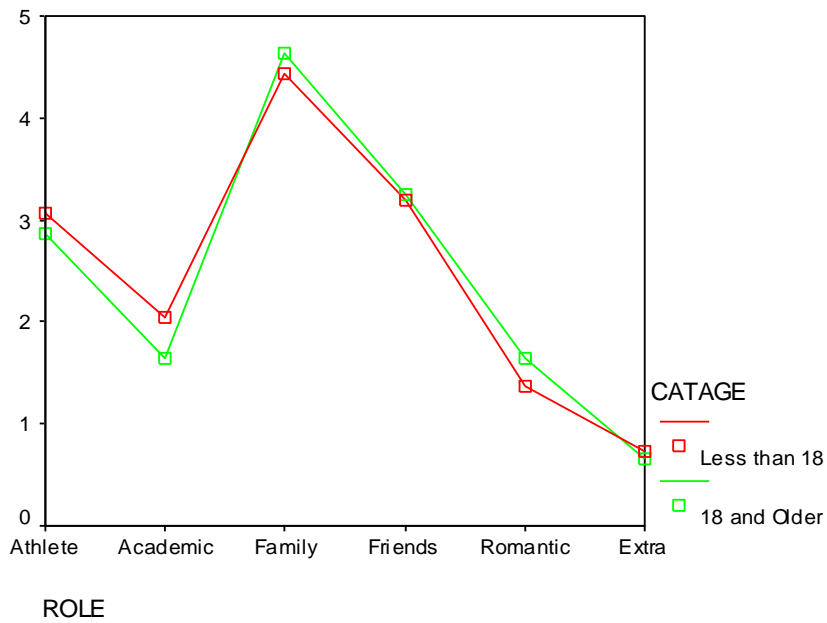


Figure 6. A graph showing the difference in ranking of life roles in those swimmers under and over 18 years old.

There was no interaction (see fig. 6 and table 8) between age and the ranking of life roles ($df = 5$; $f = 1.388$, $p > 0.05$). So both younger and older swimmers ranked the life roles in the same order.

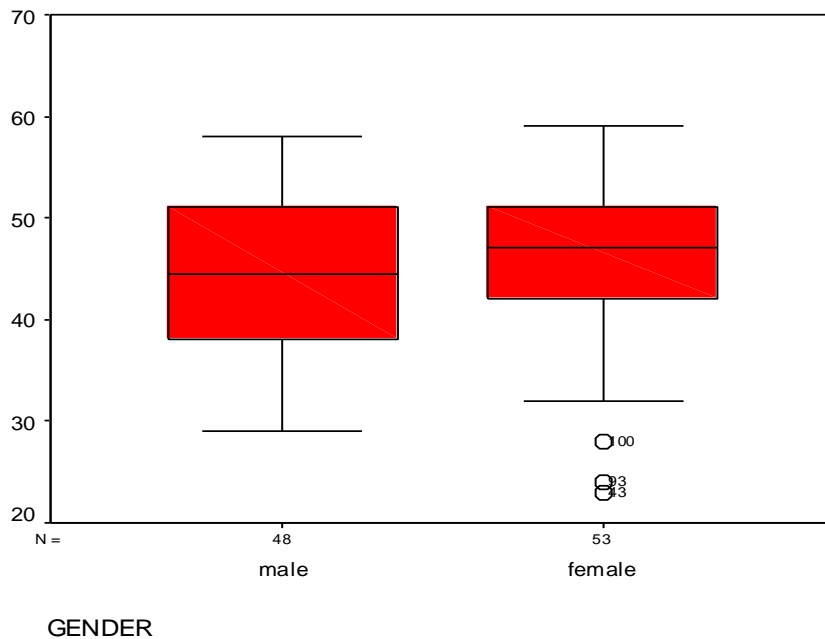
Gender and Athletic Identity

Figure 7. Mean AI scores for male and female swimmers

In this sample, the women swimmers actually displayed a slightly higher AI than the male swimmers (see fig.7 and table 9), however a T-Test showed that this was not significant ($df = 99$; $t = -0.517$; $p > 0.05$). Therefore, gender did not influence AI in this study.

Chapter 4

Discussion

AI Groups

This study did not have any participants who fell into the low AI category. This is not surprising, considering the sample. All swimmers were competing at at least a national level and thus it was hypothesised that the swimmers would not have low AI's. To compete at this level requires much dedication and commitment, and

therefore being an athlete should be relatively important to these swimmers. A high AI also has positive consequences such as greater commitment and dedication to training, which is necessary for performing at an elite level (Danish, 1983, cited in Brewer et al., 1993) and as such, it stands to reason that no swimmer had a low AI.

AI and ranking of Life Roles

One of the aims of this study was to explore the relationship between AI and the importance of other life roles in elite athletes, examining how AI affects the relative importance of life roles. When the moderate AI group of swimmers was compared to the high AI group, no association was found between AI and the ranking of life roles, meaning that both groups ranked all roles similarly. The high AI group ranked family first, followed by athlete, friend, academic, romantic partner and lastly extracurricular. The medium AI group ranked family first followed by friend, athlete, academic, romantic partner and lastly extracurricular.

This suggests that AI might not significantly influence the salience or importance of life roles. This is a surprising result, as, considering previous literature (Anderson, 2004; Lantz & Schroeder, 1999; Web & Nasco, 1998) it was expected that a high AI would dominate the self-concept and thus that other roles would differ in importance in swimmers with different AI's. One reason for this result could be the fact that there were no swimmers with a low AI in this sample and so the effect of AI might not be as pronounced. The fact that AI did not have an effect on the relative importance of life roles also suggests that a high AI does not necessarily lead to identity foreclosure. In addition to this, as will be discussed later, although the high AI group did rank the athlete role as significantly more important than the medium AI

group, even the high AI group did not rank the athlete role as the most important, adding to the evidence that the swimmers with a high AI were not in a state of identity foreclosure. Cieslak (2004) among others have argued that as athletes progress towards elite status their identities would become more foreclosed, however, even though the swimmers were elite athletes, competing at international and national level, the results indicate that this does not hold true.

Horton and Mack (2000) found that in non-professional runners there was also no significant difference between groups with differing AI's; but in their study there was a low AI group which was then compared to a high AI group. However, the ranking of the different life roles, i.e. the relative importance of each life role, differed in the runners and the swimmers. The marathon runners rated different life roles as more important compared to the swimmers. One reason for this, as Horton and Mack (2000) note, is that age may affect the relationship between AI and life roles and their sample of runners was older than the sample of swimmers; they write,

College and adult athletes may exhibit the same levels of AI; however, the way AI is organized in relation to other dimensions of the self may be different in the two groups. Specifically, college and adult athletes may differ in the complexity of the self-concept: the number and independence of important dimensions of the self (2000, p.9).

Older athletes may organize their identity differently to younger athletes and the relationship to AI could be different because of this organization. Identity is also dynamic, and is attached to positions occupied in society, Cieslak (2004, p.15) writes,

The social interaction of a person with the environment and other people regulates to development, maintenance, and elimination of their role identities, thus, making role identities dynamic. A change in the social interactions... or context...should elicit a change in the degree of strength of a given identity and cause a reordering of existing identities.

The swimmers were scholars and students, whereas the runners were mostly employed and also had families of their own. The different social context of the two samples could therefore account for the difference in their salience hierarchies.

However, interestingly, age alone does not seem to be able to account for the ranking of life roles. The results of the current study show that age did not significantly affect the relative importance of life roles, with the swimmers over 18 and under 18 years of age ranking the roles in the same order. However sample of older runners in Horton and Mack's study ranked them differently. So why did the swimmers age not affect the ranking of life roles, yet it seemed to affect it when the two samples are compared? Could the difference be that the swimmers were elite and the runners not?

Another possible reason that the swimmers ranked different life roles as more important compared to the runners, is the elite status of the swimmers – meaning that although AI might be similar in elite and non-elite athletes, the elite athletes may perceive different life roles as important due to being an elite athlete. Elite athletes could have a different identity concept to non-elite athletes, thus influencing the

importance of other identities or life roles. This hypothesis needs to be investigated further.

Although there was no significant difference between the two groups of swimmers with regard to the importance of life roles, there was a significant difference in the importance of the athlete role between the groups. The high AI group rated the athlete role as more important than the moderate AI group. The definition of AI is how strongly a person associates with the athlete role (Brewer et al. 1993), and so it was expected that swimmers with high AI would rate the athlete role as more important than those with a moderate AI. This confirms Horton and Mack's (2000) and Cieslak's (2004) study, where a significant difference in the importance of the athlete role between low AI and high AI groups was also found, with high AI rating it as more important than the low AI group. This seems to suggest that AI influences the importance of the athlete role, but might not significantly influence the importance of other life roles.

Although there was no significant difference between the groups of swimmers in the rankings of the importance of life roles, there was a significant difference in the ranking of each role for the group of swimmers as a whole. Each role will now be discussed in detail.

Family

There were a number of interesting results from the ranking of life roles in the group of swimmers as a whole. Firstly, family was ranked as the most important life role by the majority of swimmers; so their identity as a member of a family

(daughter/son/brother/sister) was most important to them; it was ranked highest in the salience hierarchy. When comparing the two AI groups, the high AI and moderate AI groups also both ranked the role of family as the most important role.

One possible reason for this could be due to the level of family involvement in the swimmers' lives, as family can often be a prominent source of social support. Family provide much emotional support for swimmers, often being the only people other than the other swimmers who truly understand what the swimmer goes through each day at training. They could also provide *esteem support*, which is information that the swimmer is esteemed and accepted, and that they are valued for their own intrinsic value, not because of what they do or how fast they swim (Cohen & Wills, 1985). Family can also offer *instrumental support*, which is the provision of finances, material resources and needed services (Cohen & Wills, 1985). This is a very important source of support for swimmers in South Africa as they do not get paid to swim and do not receive much financial assistance from the national swimming body; so parents are often the sole 'sponsors' of the swimmer, and without their support they would not be able to go on tours or compete. The *buffering hypothesis* suggests that social support buffers a person against stressful life events (Cohen & Wills, 1985); being part of a family and identifying themselves with a family role could actually benefit a swimmer and help them cope with the stress and strain of competing and training. Salience of an identity, according to Stryker (1968) is related to the importance of social networks that are attached to that identity, and thus the high ranking of the family role could be due to the important part that the family play in a swimmers lives.

Horton and Mack (2000) argue that when an identity is seen as the key to other identities, it is ranked as more important, therefore, a question that needs further investigation then is: is family ranked first because it helps support the athlete identity or is thought of as a key to the athlete role (or other roles), or is family an important part of the swimmers' lives for other reasons?

In Horton and Mack's (2000) study (and in Cieslak's (2004) study) the participants also ranked family first. Curry and Weaner (1987) have pointed out that the family role is deemed very important by society, and thus these societal norms could be influencing the ranking of this role. However, even though the family role is ranked first, the meaning of the role could be different in different samples. The runners in Horton and Mack's (2000) study were older and thus the importance of the family role could be because the runners were concerned with building and raising a family, rather than being important because of esteem, emotional and instrumental support (or indeed for some other reason), although support is still an important part of family. The family role is important in both studies, but could be so for different reasons. This needs to be investigated further.

Friends

The group of swimmers as a whole ranked the friend role as the second most important life role. This could be due to the age of the sample, as adolescence and young adulthood are times where friendship and 'fitting in' is very important.

Swimmers spend up to 6 hours per day training and thus team-mates become important sources of friendship. Even if swimmers don't have much in common outside of swimming, Miller and Kerr (2003) found that swimmers developed strong,

close friendships with teammates and provided meaningful support to each another. The participants in Miller and Kerr's (2003) study recognized that they did not have long histories with their teammates, but nonetheless, nurtured strong, trusting relationships with one another. Team-mates know what a person goes through as a swimmer, are actually in the water training with each other and thus provide much support and social companionship. Miller and Kerr (2003) also found that these friendships actually motivated swimmers to continue swimming. Stryker (1968) has argued that commitment to and salience of an identity is partly based on the importance of social networks surrounding that identity, and the social networks surrounding the swimmers friend identity appear to be very important. Horton and Mack (2000) also note that people with a high AI may actually surround themselves with other athletes who encourage a definition centred on athletics, which teammates seem to do. This could increase commitment to the friend role and also have an influence on the commitment to and importance of the athlete role. Oler et al. (1994) speculate that sports participation and the friendships formed in the sports arena provide the athlete with a sense of acceptance and protection from loneliness because of being a member of a team. These positive effects of the friend role could account for it being ranked so highly in the hierarchy.

Hurst et al. (2000) have found that bodybuilding dependence is highly related to the social networks formed in the sport and that becoming part of this network may lead to identification more as a bodybuilder. Similarly the social networks formed in swimming and the friend role could lead to a greater identification with the athlete role, again pointing towards the interdependence of identities.

A question for further investigation, though, is whether the friendship role refers to friendships within the swimming 'fraternity' or friendships in general and what friendships outside of swimming mean for the swimmers.

Horton and Mack (2000) found that in their sample of non-elite marathon runners, the friend role was ranked fourth in the group as a whole and fifth by the high AI and fourth by the low AI runners. As can be seen the ranking of the friend role is lower than that of the swimmers. Again, this could be a function of the age of the swimmers, where friendships are more important in the 13-27 year age group. As discussed above, one of the reasons for the importance of friendships for the swimmers could be that this role has many positive effects for an athlete and could be seen as one of the keys to the athlete role. Possibly for the runners the friendship role did not have the same meaning as for the swimmers and thus was ranked differently.

Athlete

Overall, the athlete role was ranked third by the swimmers. The high AI group ranked the athlete role second and the moderate AI group ranked it third, and there was a significant difference between these rankings. This confirms the hypothesis that AI would influence the importance of the athlete role. Therefore, a high AI significantly influences the importance of the athlete role in a swimmer's life. However, as can be seen from the results above, for the majority of the swimmers, although the athlete role was important, it was not seen as the most important role, which is surprising. This means that although the swimmers strongly associate themselves with the athlete role, this role is not the most important in their lives. As discussed earlier however, the friend and family roles, which overall were ranked higher could actually be interdependent with the athlete role, and this could be a

reason that they are ranked more highly. This again confirms that more research needs to be conducted into how each identity related to other identities in elite athletes. In addition to this, previous research done by Murphy, Petipas and Brewer (1996) has suggested that identity foreclosure was significantly related to participation in high profile and high revenue producing sports. In South Africa swimming is not a very high a profile or revenue producing sport which could explain why the swimmers, despite being elite athletes, did not rank the athlete role as the most salient or have foreclosed identities.

The swimmers as a group rated the athlete role as more important than did the runners in Horton and Mack's (2000) study. This confirms the hypothesis that elite athletes would consider being an athlete as more important than non-elite athletes. This result is interesting, because it shows that high AI is not necessarily the only indicator of the importance of the athlete role as both the runners and swimmers had a high AI group but the athlete role was more important for the swimmers. There must be some other factor or factors that influence how important being an athlete is to a person. The swimmers in this study were not professional swimmers, as swimming is an amateur sport, and so they are only different to the runners in Horton and Mack's (2000) study by virtue of their level of participation in the sport. Elite athletes train for many hours' more than non-elite athletes and thus seem to invest a lot more of their lives in the athlete role, and it could be that it is this commitment and investment that could make the role more important. The effort and dedication required to become an elite swimmer could make the athlete role very "costly" and as such it could be seen as more important than for the runners.

Salience of an identity is related to the social networks formed (Stryker, 1968). This means that for the swimmers, especially the high AI group which ranked the athlete role second, the athlete role had many important networks attached to it (possibly that is why they salience of the friend and family role is so great as they provide some of the social networks associated with the athlete role).

AI is also a very public identity and carries with it the expectations of family, friends and the general public (Brewer et al., 1993; Web & Nasco, 1998). Being an elite swimmer, with a presumably higher 'public' profile to the non-elite runners and greater expectations of them in the athlete role, could increase the importance of the role as compared to the runners. For example, the swimmers could be highly regarded by family, peers and teachers, feeding into the commitment to, and salience of, the athlete role.

Academic

The academic life role was ranked fourth by the swimmers. The majority of swimmers were still at school and most of those who had finished school were participating in some tertiary education; despite this, the academic role was not seen as more important by the swimmers. It appears that being an athlete is more important than being a student for the swimmers. How much their school or university work suffers because of this needs to be investigated. Miller and Kerr (2003) have found that student-athletes in their first year at university indicated that they were students first and athletes second, but their behaviour did not support this assertion. One student-athlete notes (Miller & Kerr 2000, p.205) "I was like 'I am doing my sport and doing okay. School is okay and it is my focus,' but really it wasn't". A lot of the

athletes in that study also experienced drastic drops in academic performance in their first year in university because of the pressures associated with being a student-athlete. Hale and Waalkes (1994, cited in Cieslak, 2004) have also found that students with high AI were less interested in academics than other students. Many of the swimmers in the current study however, were still at school and so the effect of swimming on academic performance may be different to the university students. Even for the university students in this sample the effect on academic performance may be different to previous studies as they are already elite athletes before entering university.

Brown, Glastetter-Fender and Shelton (2000) report that previous studies have indicated that the demands made of student-athletes, especially those contemplating a professional career in sports, prevents adequate future career preparation. The swimmers ranked the academic role below that of the athlete role, indicating that being a student and studying is not as important to them as being a swimmer. The relatively low ranking of academic role (which is an indicator of preparation for a career outside of sports) considering that swimming is not a viable career option for South African swimmers, despite their elite status, is a concern.

In their study, Horton and Mack (2000) combined academic and occupational roles. Those runners with a high AI similarly to the swimmers, also ranked the academic/occupational role fourth and the low AI ranked it third. Again, the reasons for this ranking could be different to the swimmers. The runners were non-professional and so did not earn a living from running; therefore it would be hypothesised that an academic/occupational life role would be relatively important for them.

Romantic Partner

Both groups of swimmers ranked the romantic partner role as fifth, whereas in Horton and Mack's (2000) study it was ranked second by both groups of runners. Most swimmers were not at the age where marriage (or romantic partners) was a concern, whereas the runners were, which may have influenced the relative importance of the role. The ranking of family and romantic partner roles as first and second in the runners clearly shows where the priorities of the runners lie. For the swimmers, the friend role seems to take the place of the romantic partner role. Possibly exploration of this role may be delayed until retirement from elite competition.

The difference in this result may also be due to the fact that the swimmers, as elite athletes, don't have the time available to them to form romantic relationships because of training and competing, thus diminishing the importance of that dimension of identity.

Extracurricular

Both groups of swimmers and runners ranked the extracurricular role as least important. Running and swimming most probably took the place of most other extracurricular activities, thus explaining its low importance.

Confounding factors of the results

One factor that could have influenced the above results is the fact that when handing out the questionnaires, many of the swimmers commented that it was quite difficult to choose between the pairs of life roles. They found it particularly difficult

to choose between family versus friend life roles, verbally indicating that both were equally important. Therefore a quantitative analysis may not do justice to the complexities of identity. As mentioned earlier, in both Horton and Mack's (2000) study and this one, the interdependence of different identities has not been measured.

Curry and Weaner (1987) and Cieslak (2004) also point out that rankings of life roles and forced choice might not be the most valid and accurate means of measuring the importance of life roles. Therefore the reason that family is ranked first could be due to social pressure and norms rather than actual importance of the role. The actual importance and behavioural consequences of different roles might therefore not be fully represented in the swimmers rankings of the roles.

Age and AI

Horton and Mack (2000) suggested that age could affect AI, but little research had been done to investigate this. In the current study it was found that as age increased, AI decreased, supporting Brewer et al's (1993) finding. Contrary to this however, is the fact that some runners in Horton and Mack's (2000) study also had high AI's despite a mean age of 41 years. Therefore even older athletes can have high AI scores.

Therefore, the effect of age on AI can only be speculated upon.

As mentioned before, Horton and Mack (2000) state that the relationship between AI and other life roles may also differ with age, but what this effect is, is unclear and needs further investigation.

AI and Performance

Horton and Mack (2000) were the first to investigate the link between AI and performance. They found that the fastest and slowest runners displayed the highest AI. In the current study no association was found between performance and AI; higher AI was not an indicator of performance, and better swimmers did not necessarily have a higher AI than poorer swimmers. Of course 'better' and 'poorer' are relative terms considering the elite sample.

It is interesting however that not all swimmers had a high AI, suggesting that AI is not the only indicator of possible achievement or success in sports. Some swimmers were competing internationally, yet had a lower AI compared to other swimmers who were only competing nationally. So despite the positive consequences of high AI on commitment to training and behaviours associated with being an athlete (Brewer, et al., 1993; Stryker & Serpe, 1994) high AI, in the current study, was not a good predictor of performance. High AI could increase commitment to training and such behaviours that are beneficial to competing, but this increased commitment does not seem to necessarily be related to performance outcomes; factors such as natural talent and coping ability, to name just two factors, could also contribute to success. If a swimmer has a high AI and is committed and trains hard, yet when it comes to competition they cannot perform under pressure, the positive effects of a high AI could be negated.

Another interesting finding with regard to performance and AI was that the mean AI scores across all performance categories were similar, again indicating that there is some other factor that influences success and performance. There was,

however, a slight elevation in the mean AI scores of the swimmers who reported making a junior South African Team, or breaking an age group record as their highest career achievement. When age is taken into consideration, an explanation for this could be possible. The results showed that younger swimmers tended to have higher AI's than older swimmers, and younger swimmers are making the junior South African teams and breaking age group records. Younger swimmers might also be working towards a goal of making a senior South African team and, as mentioned before, a high AI can have positive effects on the commitment to training and preparing for competing – which is necessary for achieving the goal of competing at an international level (Danish, 1983, cited in Brewer et al. 1993).

AI and Gender

Other studies have found that men have a higher AI than women, but in this study, the women swimmers actually had a slightly higher AI than the men, although there was not a significant difference. As mentioned earlier, swimming could be seen as an 'acceptable' sport for women to participate in, and therefore the female swimmers could feel that it is acceptable for the athlete role to be important (Allison, 1991; Marsh & Jackson, 1986; Royce et al., 2002).

AI has been found to be influenced to some degree by social and situational factors and may be higher when in a sporting environment surrounded by athletes (Brewer et al., 1993). The participants in this study were asked to fill in the AIMS while at a national sporting event while competing and being surrounded by other swimmers. This may have led to slightly higher AI scores for the sample in general,

but perhaps more so for the female swimmers who may have felt comfortable about expressing the importance of their identities as swimmers.

Conclusions

There are a number of interesting conclusions that can be drawn from the current research. As seen from the above results, athletic identity is correlated to many psychological and demographic factors. However, because of the multidimensional, hierarchical and dynamic nature identity the exact nature of the effect of the strength of athletic identity on salience of other identities is unclear. At first, it was thought that AI would have an effect on the ranking of life roles, however, this has not been so; there was no significant interaction of AI with the ranking of life roles. Only the athlete role was in fact affected, being ranked significantly higher by the swimmers with a high AI than those with a medium AI. These results suggest that a high AI does not necessarily lead to identity foreclosure, contradicting some previous research. There must be other factors associated with this identity state, such as profile and revenue production of a sport, and these need to be investigated further.

In addition to this, the runners in Horton and Mack's (2000) study with the same AI as the swimmers (both samples had high AI groups) ranked different life roles as more important. Age would seem to be only one contributing factor to the ranking of life roles along, possibly, with the elite status of the athletes. There could of course be a number of other factors influencing the salience of identities, for example social context, and these factors need to be researched.

This research has not been able to determine how each life role or identity is related to each other. Identities are not discreet categories separate from each other,

but rather, they rely on each other to give each one meaning and need to be correctly related to each other for the self to function efficiently (Cieslak, 2004; Fay, 1996). Those swimmers with a high AI did not rank the athlete role as the most important role, but the family role and even the friend role could be giving meaning to the athlete role, and therefore are ranked higher. The current study has opened up many questions about the effect of AI on salience of other life roles and the nature of the interdependence of different roles in an elite athlete's life and also the effect of age on AI.

The current study has also added to the body of knowledge about the link between performance and AI. No association could be found however, suggesting that high AI is necessarily a predictor of performance. Having said this though, no swimmers had a low AI. This could mean that within the group of elite swimmers AI did not related to performance, but possibly AI could differentiate between elite and non-elite athletes to some extent.

In contrast to previous research, females in the current study had slightly higher AI's than the males. The societal norms and values surrounding women and sport are slowly changing which could partly explain this result, but much more needs to change to help both male and female athletes in accepting and expressing their athletic identities in a healthy way.

The current study has answered some questions about AI, but the results have lead to many more questions that have not been able to be answered. Much more research is needed to investigate the complex construct of athletic identity.

Recommendations

1. As very little research has compared AIMS scores to the salience of other life roles, this avenue of research needs to continue to be pursued.
2. The interdependence of identities and the meanings that they give one another is an important area of investigation. A qualitative study regarding this would greatly supplement the current findings.
3. All studies done thus far on the effect of AI on the salience of other life roles has shown that the family role is ranked as the most important. Why this should be so is an area for future research.
4. The relatively low salience of the academic role in the swimmers is a concern, as swimming is not a viable career option in South Africa. The effect of the ranking of this role needs to be examined. Family, friends, teachers and coaches need to be aware of the potential negative side effects of a low academic role salience and help better prepare the swimmers for future careers.
5. The results of this study could have been influenced by forced choice options with regards to different life roles. Future research should take into account ratings as well as rankings. Role behaviour with regards to position in the salience hierarchy then also needs to be investigated.
6. The contradictory nature of the findings of the effect of AI on performance means that further research is needed to determine the relationship between these two variables.

References

- Allison, M.T. (1991). Role conflict and the female athlete: Preoccupations with little grounding. *Journal of Applied Sport Psychology*, 3, 49-60.
- Anderson, C.B. (2004). Athletic Identity and its relation to exercise behaviour: Scale development and Initial Validation. *Journal of Sport & Exercise Psychology*, 26(1), 39-57.
- Brown, C., Glastetter-Fender, C. & Shelton, M. (2000). Psychosocial identity and career control in college student-athletes. *Journal of Vocational Behaviour*, 56, 53-62.
- Brewer, B.W., Selby, C.L., Linder, D.E. & Petipas, A.J.(1999). Distancing oneself from a poor season: Divestment of athletic identity. *Journal of Personal & Interpersonal Loss*, 4(2), 149-153.
- Brewer, B.W., van Raalte, J.L., & Linder, D.E. (1993). Athletic Identity: Hercules' Muscle or Achilles Heel? *International Journal of Sport Psychology*, 24, 237-254.
- Burke, S (2002). *Athletic Identity Measurement Scale*. Retrieved 6 January, 2004, from: <http://dlibrary.acu.edu.au/staffhome/stburke/su02p47.htm>
- Burke, P.J. & Reitzes, D.C. (1981). The Link between Identity and Role Performance. *Social Psychology Quarterly*, 44, 83-92.

- Cieslak, T.J. (2004). Describing and measuring the Athletic Identity construct: Scale development and validation. *Doctoral Thesis*. Retrieved December 10, 2004, from Ohio State University, OhioLINK Web Site: <http://www.ohiolink.edu/etd/view>
- Cohen, S., & Wills, T.A. (1985). Stress, Social Support and the Buffering Hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Curry, T.J., & Parr, R. (1988). Comparing commitment to sport and religion at a Christian college. *Sociology of Sport Journal*, 10, 73-87.
- Curry, T.J. and Weaner, J.S. (1987). Sport Identity Saliency, Commitment and the Involvement of Self in Role: Measurement Issues. *Sociology of Sport Journal*, 4, 280-288.
- Fay, B. (1996). *Contemporary Philosophy of Social Science*. Oxford:Blackwell Publishers.
- Giddens, A. (1991). *Modernity and Self Identity*. Oxford:Polity Press.
- Green, S.L. & Weinberg, R.S. (2001). Relationship among athletic identity, coping skills, social support and the psychological impact of injury in recreational participants. *Journal of Applied Sport Psychology*, 13(1), 40-59.
- Good, A.J., Brewer, B.W., Petipas, A.J., van Raalte, J.L. & Mahar, M.T. (1993). Identity foreclosure, athletic identity, and college sport participation. *The Academic Athletic Journal*, Spring, 1-12.

- Haywood, C. & Mac An Ghail, M. (1997). Materialism and Deconstructivism: Education and the Epistemology of Identity. *Cambridge Journal of Education*, 27(2), 261-273.
- Horton, R.S. & Mack, D.E. (2000). Athletic Identity in Marathon Runners: Functional Focus or Dysfunctional Commitment? *Journal of Sport Behaviour*, 23(2), 101-120.
- Hurst, R., Hale, B., Smith, D. & Collins, D. (2000). Exercise Dependence, Social Physique Anxiety, and Social Support in Experienced and Inexperienced bodybuilders and Weightlifters. *British Journal of Sports Medicine*, 34(6), 431-435.
- Lantz, C.D. & Schroeder, P.J. (1999). Endorsement of masculine and feminine gender roles: differences between participation in and identification with the athlete role. *Journal of Sport Behaviour*, 22(4), 545-558.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551-558.
- Markus, H., & Nurius, P. (1986). Possible Selves. *American Psychologist*, 41(9), 954-969.
- Marsh, H.W., & Jackson, S.A. (1986). Multidimensional self-concepts, masculinity and femininity as a function of women's involvement in athletics. *Sex Roles*, 15(7/8), 391-415.
- Marsh, H.W. & Shavelson, R. (1985). Self-Concept: Its Multifaceted, Hierarchical Structure. *Educational Psychologist*, 20(3), 107-123.

- Martin, J.J. (1999). Predictors of social physique anxiety in adolescent swimmers with physical disabilities. *Adapted Physical Activity Quarterly*, 16(1), 75-85.
- Martin, J.J. & Adams-Mushett, C. (1995). Athletic Identity and Sports Orientation of Adolescent Swimmers with Disabilities. *Adapted Physical Activity Quarterly*, 12(2), 113-124.
- Martin, J.J., Eklund, R.C. & Adams-Mushett, C. (1997). Factor Structure of the Athletic Identity Measurement Scale with Athletes with Disabilities. *Adapted Physical Activity Quarterly*, 14(1), 74-82.
- Miller, P.S. & Kerr, G.A. (2003). The Role Experimentation of Inter-Collegiate Student Athletes. *The Sport Psychologist*, 17, 169-219.
- Murphy, G.M., Petipas, A.J. & Brewer, B.W. (1996). Identity Foreclosure, Athletic Identity and Career Maturity in Inter-Collegiate Athletes. *The Sport Psychologist*, 10, 239-246.
- Oler, M.J., Mainous, A.G., Martin, C.A., Richardson, E., Hamey, A., Wilson, D. & Adams, T. (1994). Depression, suicidal ideation and substance abuse among adolescents. Are athletes less at risk? *Archives of Family Medicine*, 3(9), 781-785. In Dwivedi, K.W., & Varma, V.P. (1997). *Depression in Children and Adolescents*. London: Whurr Publishers.

Royce, W.S., Gebelt, J.L. & Duff, R.W. (2002). Female athletes: Being both athletic and feminine. *Athletic Insight: The Online Journal of Sports Psychology*. Retrieved on September 29, 2003, from:

<http://www.athleticinsight.com/Vol5Iss1/FeminineAthletes.htm>

Stryker, S. (1968). Identity salience and role performance: The importance of symbolic interaction theory for family research. *Journal of Marriage and the Family*, 30, 558-564.

Stryker, S. & Burke, P.J. (2000). The Past, Present and Future of Identity Theory. *Social Psychology Quarterly*, 63, 284-297.

Stryker, S. & Serpe, S. (1994). Identity salience and psychological centrality: Equivalent, overlapping, or complementary concepts. *Social Psychology Quarterly*, 51, 16-35.

Webb, W.M. & Nasco, S.A. (1998). Athletic Identity and Reactions to Retirement from Sports. *Journal of Sport Behaviour*, 21(3), 338-363.

Weichman, S.A. & Williams, J. (1997). Relation of athletic identity to injury and mood disturbance. *Journal of Sport Behaviour*, 20(2), 199-211.

Appendix A

Research Questionnaire

Research Project
An Investigation into the Different Roles (Identities) of Swimmers

Everyone has at least some idea about who they are and who they would like to become. As swimmers, swimming takes up a big part of your life and being a swimmer is one role that you have in life. This research project is looking at the way that that sportspeople think about themselves and the different roles that they have in life.

This research involves you answering a few questions about yourself and the way you think about yourself as a swimmer and as a person. You were chosen on the basis of your qualification for the SA national championships and thus you being an elite swimmer.

You do not have to give your name in this study and all information is considered confidential. If at anytime you wish to stop participating in this study you are free to do so.

Thank you for your participation, it is greatly appreciated.

Kirsten van Heerden

Demographics

Age:

Gender:

Highest School Grade/ year of study passed:

At What age did you start swimming competitively?

How many times have you swum at SA Senior National?

What is your highest achievement at nationals (eg. making a final, getting a silver medal)?

What is your highest achievement in your swimming career?

What is your personal best time in your main event?

Athletic Identity Measurement Scale

Circle the appropriate number that describes how you feel about each statement.

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
1. I consider myself a swimmer.	1	2	3	4	5	6	7
2. I have many goals related to swimming.	1	2	3	4	5	6	7
3. Most of my friends are swimmers.	1	2	3	4	5	6	7
4. Swimming is the most important thing in my life.	1	2	3	4	5	6	7
5. I spend more time thinking about swimming than anything else.	1	2	3	4	5	6	7
6. Other people see me mainly as a swimmer.	1	2	3	4	5	6	7
7. I feel bad about myself when I do badly in swimming	1	2	3	4	5	6	7
8. Swimming is the only important thing in my life.	1	2	3	4	5	6	7
9. I would be very depressed if I were injured and could not compete in swimming.	1	2	3	4	5	6	7

Life Roles Inventory

Which role in each of the following pairs do you consider to be more important to how you view yourself. Tick the role you feel is more important to you.

- Athlete or Academic
- Athlete or Family
- Athlete or Friendships
- Athlete or Romantic Partner
- Athlete or Extracurricular
- Academic or Family
- Academic or Friendships
- Academic or Romantic Partner
- Academic or Extracurricular
- Family or Friendships
- Family or Romantic Partner
- Family or Extracurricular
- Friendships or Romantic Partner
- Friendships or Extra curricular
- Romantic Partner or Extracurricular

Appendix B

Ethical Clearance

Tables

Table 7.

Persons Correlation between age and AI

Correlations

		AGE	AI total
AGE	Pearson Correlation	1	-.238*
	Sig. (2-tailed)	.	.017
	N	101	101
AI total	Pearson Correlation	-.238*	1
	Sig. (2-tailed)	.017	.
	N	101	101

*. Correlation is significant at the 0.05 level (2-tailed).

Table 8.

A Factorial Analysis of Variance investigating the association between age and the ranking of life roles.

Between-Subjects Factors

		Value Label	N
ROLE	1.00	Athlete	95
	2.00	Academic	95
	3.00	Family	95
	4.00	Friends	95
	5.00	Romantic	94
	6.00	Extra	94
CATAGE	1.00	Less than 18	310
	2.00	18 and Older	258

Tests of Between-Subjects Effects

Dependent Variable: PREF

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	906.934 ^a	11	82.449	79.251	.000
Intercept	3409.867	1	3409.867	3277.642	.000
ROLE	896.241	5	179.248	172.297	.000
CATAGE	6.726E-02	1	6.726E-02	.065	.799
ROLE * CATAGE	7.222	5	1.444	1.388	.227
Error	578.430	556	1.040		
Total	4941.000	568			
Corrected Total	1485.364	567			

a. R Squared = .611 (Adjusted R Squared = .603)

Table 9.

Independent sample T-Test to investigate the association between AI and gender.

Group Statistics

GENDER		N	Mean	Std. Deviation	Std. Error Mean
AI total	male	48	44.71	8.287	1.196
	female	53	45.55	8.018	1.101

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AI total	Equal variances assumed	1.069	.304	-.517	99	.606	-.84	1.623	-4.060	2.382
	Equal variances not assumed			-.516	97.278	.607	-.84	1.626	-4.066	2.388

Table 10.

ANOVA investigating the difference between career performance and AI.

Descriptives

AI total

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
SA snr team	24	44.67	8.865	1.809	40.92	48.41	28	59
Sa jnr/age grp rec	34	46.18	7.570	1.298	43.54	48.82	24	58
medal other gala	16	44.94	6.971	1.743	41.22	48.65	30	57
making nat	27	44.41	8.997	1.731	40.85	47.97	23	58
Total	101	45.15	8.117	.808	43.55	46.75	23	59

Test of Homogeneity of Variances

AI total

Levene Statistic	df1	df2	Sig.
1.391	3	97	.250

ANOVA

AI total

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	57.042	3	19.014	.282	.838
Within Groups	6531.731	97	67.337		
Total	6588.772	100			

Table 11.

ANOVA investigation the difference between performance at the Senior South African Aquatic Championships and AI.

Descriptives

AI total

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
medal	28	44.68	7.635	1.443	41.72	47.64	29	59
final	28	46.21	8.582	1.622	42.89	49.54	24	58
semis	16	45.25	8.004	2.001	40.98	49.52	30	57
heats	29	44.52	8.484	1.575	41.29	47.74	23	57
Total	101	45.15	8.117	.808	43.55	46.75	23	59

Test of Homogeneity of Variances

AI total

Levene Statistic	df1	df2	Sig.
.281	3	97	.839

ANOVA

AI total

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49.709	3	16.570	.246	.864
Within Groups	6539.063	97	67.413		
Total	6588.772	100			