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Athletes' autobiographical memories

by

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A thesis submitted in Partial Fulfillment of the Requirements for the Degree of
European Master of Sport and Exercise Psychology at The University of Thessaly in

July 2015

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Declaration by Author

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None

Acknowledgment

With much gratitude and appreciation, I would like to thank my advisor, Professor Dr. Marios Goudas. He introduced me to the topic of this thesis and in doing so, continually provided guidance and support. Without his advice, assistance, encouragement and wit, this thesis would not have been possible. I am also grateful to my advisor Stilian 'Ani' Chroni at Hedmark University College, Norway, for her continual feedback and comments on this thesis and to Mary Hassandra at the University of Jyväskylä, Finland, for her continual support.

I would like to extend my sincere gratitude to all the staff at the University of Thessaly who provided support and encouragement through all of my studies and to the EMSEP program for providing me with this opportunity to participate in this post graduate course.

Finally I would like to extend my deepest gratitude and appreciation to Sr. Patricia Egan. Without her endless support, encouragement and incredible attention to detail, this thesis would not have been possible.

Abstract

The purpose of this study was to examine the potential benefits of autobiographical memories in the support and counselling of athletes. In particular, it examined the levels of specificity associated with autobiographical memories as well as the functions such memories serve in the life of athletes. Three participants (two males and one female) were asked to recall four or five of their most vivid memories from their experience in sport. The responses from these participants were largely related to the general events and episodic levels of specificity and were associated with goal attainment and goal failure. The functions served by their autobiographical memories demonstrated that such memories facilitate social interaction, provide direction for future behavior and play a role in the construction of an athlete's identity. From the perspective of practical application, the findings demonstrate the value of asking athletes to recall memories rather than answer direct questions, since the narration of such memories can provide valuable information about events and experiences that shaped an athletes' identity and how this may serve as a directive function for future behavior.

Keywords: identity, sport, narrative, recollection, episodic memory

Table of Contents

Introduction.....	6
Literature Review.....	10
Autobiographical memory research.....	10
Levels of specificity.....	10
Functions of autobiographical memories.....	12
Autobiographical memory research in sport.....	15
Identity theory.....	16
Autobiographical memory and identity theory.....	17
Athletic identity.....	19
Method.....	17
Participants.....	17
Procedure.....	18
Data Collection.....	18
Results and discussion.....	22
Conclusion.....	35
References.....	42

List of Figures

Figure		Page
1.	Themes according to the levels of specificity.....	26
2.	Athletes' autobiographical memory at the general events level of specificity - selection in a representative team.....	28
3.	Athletes' autobiographical memory at the episodic memory level of specificity – embarrassment and ridicule.....	30
4.	Athletes' autobiographical memory at the episodic memory level of specificity – accomplishment and realization.....	32
5.	Social function of autobiographical memory.....	34
6.	Directive function of autobiographical memory.....	36
7.	Self function of autobiographical memories.....	37

Introduction

Why is it that certain memories can be recalled with complete clarity, yet other memories fade and some vanish? Memories are our personal history and are of great importance to who we are as individuals. We frame our life around stories and in doing so, we remember important events from our past. Research on memories that relate to the self is termed autobiographical memory (Conway & Pleydell-Pearce, 2000). Distinct from other forms of memory, autobiographical memories contain self-knowledge through episodes that are recollected from an individual's life (Conway, 2005). Moreover, memory of oneself and one's life provides information from which one can derive a sense of identity (Addis & Tippett, 2008). As such, autobiographical memories are important as they define who we are, who we have been and who we can yet become (Williams, Conway, & Cohen, 2008).

Examining autobiographical memories of athletes could unveil the ways in which their lives have developed and been shaped. This may shine a light on the various aspects of athletes' lives, such as past events and people, that have played a role in the construction of athletes' identities and influenced their coping strategies, motivation and performance. Furthermore, autobiographical memories could provide a holistic perspective on the particular characteristics and attributes that are inherent in athletes. This may enrich our understanding of athletes' lived experiences and how their personal stories can be used to direct their future behavior.

Previous research has shown that autobiographical memories consist of information relating to the self, including self-perceptions, beliefs and self-images, in addition to knowledge and stories about life experiences (Conway, 2005; Conway & Pleydell-Pearce, 2000). In the act of remembering, the knowledge one has of past experiences, according to Conway and Pleydell-Pearce (2000) is divided into levels of

specificity. This knowledge can range from highly abstract conceptual knowledge, such as where one lived as a child - termed lifetime periods - to knowledge of repeated events, such as football matches - termed general events (Conway, 2005; Conway & Pleydell-Pearce, 2000). At the most specific level of specificity is episodic memory. Episodic memories contain information relating to personally experienced events and include detailed contextual information about time and place (Conway & Williams, 2008). Previous research has shown that the details contained within general events and episodic memories relate to goal achievement and goal failure and as a result, create highly vivid images (Addis & Tippett, 2008; Conway & Pleydell-Pearce, 2000). Moreover, episodic memories have been shown to be associated with self-defining moments (Williams et al., 2008). These self-defining moments, in addition to the knowledge of past experiences, play a key role in shaping one's identity (Addis & Tippett, 2008).

Identity has been defined in the literature as “the self view that emerge from the reflexive activity of self-categorization or identification in terms of membership in particular groups or roles” (Stets & Burke, 2000, p. 225). More precisely, the taking up of roles includes a process of self-categorization whereby the individual has self-concepts, self-perceptions, and self-definitions that they employ, reflexively, to take on roles within groups in society. An individual may therefore have multiple identities depending on which groups they feel themselves to be a part of (Hogg, Terry & White, 1995). The various roles within society are accompanied with expectations and as a result, form a set of standards that guide behavior (Stets & Burke, 2000). Accordingly, an individual may identify as an athlete, and in doing so, the various roles associated with an athlete may influence their athletic identity (Brewer, Van Raalte & Linder, 1993). According to Addis and Tippett (2008), autobiographical

memories provide information on the content and continuity of an individual's identity. The content of identity, defined as the personal traits, social roles and group memberships that individuals take up, provides information on the extent to which individuals identify with various roles. The continuity of identity, defined as the different identities that exist over the life span, provide information on the extent of personal change and growth. From this perspective, when an individual reflects on past memories, their identity is continually constructed and developed over time.

Moreover, when an individual creates and shares personal memories of his or her experiences, Williams et al. (2008) suggests the memories serve three functions: directive, social and self. According to Williams et al. (2008), the directive function of autobiographical memory involves using memories of past events to guide and shape current and future behavior and to act as an aid to problem solving. The social function of autobiographical memory, in which one shares and retells experiences, is seen to facilitate social interaction. Lastly, and perhaps the most defining function of autobiographical memory, is its relationship to the self. The memory one has of one's past is an essential element of identity as it supports and confirms the knowledge and beliefs characterizing the individual, particularly in terms of continuity of identity (Addis & Tippett, 2008). For example, Addis and Tippett (2008) assert that when an individual consciously experiences the self over time, through the mental time travel of past events, a connection between past and present selves is formed, providing a sense of continuity. In light of this, McLean (2005) suggests that individuals choose which memories to express and in doing so; they have the power to construct whatever image of their identity they prefer to represent. For example, instead of listing one's attributes, McLean (2005) suggests that individuals tend to retell stories that provide insights to their characteristics and personality. In addition, the language

used when telling a story exemplifies the various roles and responsibilities one has, and may be reflective of one's social position within the respective culture. The very act of sharing memories is therefore a fundamental component of identity as it constructs the story of one's past whilst providing a holistic perspective of past events that have collectively shaped individuals self-beliefs and knowledge.

Examining autobiographical memories of athletes can reveal previous events and situations that have influenced their identity. This may be particularly relevant for athletes who have autobiographical memories associated with goal attainment or goal failure, as it may expose factors that previously facilitated or obstructed their motivation and performance. Furthermore, such information can assist sport psychology practitioners and researchers to gain a more holistic perspective of athletes' lives. By considering how an athlete's past, such as significant others or past performances, influences identity, one can gain valuable information on how best to advise practice. To our knowledge, there is no research on athletes' autobiographical memories and only scarce respective research exists with physical education students (e.g. Phoenix, Smith & Sparkes, 2007; Schulkind, Schoppel & Scheider, 2012; Sinelnikov & Hastie, 2010). Outside the sport context, the research that does exist provides a rich platform with which autobiographical memories can be further explored.

The current study seeks to explore autobiographical memories within athletes in order to; (a) examine whether Conway (2005) and Conway and Pleydell-Pearce (2000) levels of specificity -- lifetime periods, general event and episodic memories -- are supported; and (b) examine the directive, social and self functions of autobiographical memories.

Literature Review

Autobiographical memory

Research on autobiographical memories has previously been explored through various sub domains within psychology, such as clinical, social, cognitive and neuropsychology (Conway, 2005). In light of this, Conway (2005) and Conway and Pleydell-Pearce (2000) proposed a framework in order to draw together the diversity of research concerning autobiographical memories. Conway and Pleydell-Pearce (2000) assert that autobiographical memories consist of two main components, the working self and the autobiographical memory knowledge base.

The working self contains self-images, beliefs and evaluations of what the self has been in the past, currently is, and what it may become in the future (Conway & Pleydell-Pearce, 2000). The autobiographical memory knowledge base, on the other hand, consists of autobiographical knowledge structures that are divided into levels of specificity, termed lifetime periods, general events and episodic memories (Conway, 2005).

Levels of specificity

At the most abstract level of specificity is lifetime periods and represents general knowledge of common locations, people and activities (Conway, 2005; Conway & Pleydell-Pearce, 2000). Lifetime periods have distinct periods of time with identifiable beginning and endings and have been found to contain evaluative knowledge characteristic of particular lifetime periods (Conway & Pleydell-Pearce, 2000; Williams et al., 2008). For instance, Conway and Holmes (2004) examined the free recall of memories in older adults and found that each decade was marked by a preponderance of memories related to the psychosocial theme relevant to that age. For example, the period from 10-20 years of age was related to themes of identity and

identity confusion, and from 20-30 years of age, memories were related to themes of intimacy and isolation. Moreover, previous research suggest that lifetime periods represent a summary account of an individual's history and can be further used to initiate more specific memories from the knowledge base (Conway & Williams, 2008).

The second level of specificity, termed general events, contains details of single or repeated events and has been shown to represent knowledge on the attainment of personal goals (Conway, 2005; Conway & Pleydell-Pearce, 2000; Williams et al., 2008). For example, Robinson (1992) examined "mini histories" for activities such as learning to drive a car, learning to ride a bicycle and first romantic relationship. Through content analysis, the findings revealed that memories associated with these events represented goal-attainment knowledge (both positive and negative) and appeared to convey information about the self, such as the success or failure in intimate relationships and how easily a skill was acquired. Moreover, general events have been found to play important roles in organizing events as well as providing access to abstract personal knowledge (Conway & Pleydell-Pearce, 2000).

The most specific level of autobiographical memory is episodic memories. Considered a different type of memory representation, they have been found to contain experience-near event specific details. These details invoke visual imagery and auto-noetic experience of mentally reliving a past event (Conway, 2005). Conway and Williams (2008) suggest that episodic memories provide a way to rapidly and effectively check that goal-related actions have been executed, such as recalling the events of a day or part of a day. The recall of such events, however, is very poor after a retention interval of approximately one month (Williams, Conway & Baddeley, 2008), thus, as argued by Conway (2005), only episodic memories highly associated

with goal attainment or goal failure become integrated with the autobiographical memory knowledge base.

A self-defining memory is one type of episodic memory that has been found to contain knowledge of goal attainment and goal failure (Williams et al., 2008). A self-defining memory is characterized as being high in vividness and affective intensity as well as being connected to an enduring concern or unresolved conflict (Conway, 2005; Williams et al., 2008). This was demonstrated in Moffitt and Singer's (1994) study that examined the affective response when university students were asked to write self-defining memories. The results found that students either recalled memories of positive experiences, such as success in academics, athletics and relationships; or they recalled memories related to feelings of frustration and acute pain when an unwanted event occurred.

The patterns of findings related to memories indicate that knowledge concerning personal goals permeate the access and retrieval of autobiographical memories (Conway & Pleydell-Pearce, 2000). Conway (2005) further asserts that most people do not explicitly cognize their goals on a moment-by-moment basis in everyday life. Rather, they are enacting plans to achieve goals and this is influenced by the knowledge contained within the autobiographical memory knowledge base.

Functions of autobiographical memory

Research on autobiographical memory has largely focused on how, how much, and how accurately, people remember their past (Bluck, Alea, Habermas & Rubin, 2005). Although these are important aspects of remembering, Bluck et al. (2005) suggests that it does not encompass the whole notion of human memory. The functions of autobiographical memory, therefore, offer a different and complementary view of the remembering individual as it provides information on why certain events

are recalled and reflected upon (Bluck et al., 2005). Despite receiving little attention in the literature, autobiographical memories have been found to serve three functions; directive, social and self (Buck, et al., 2005; Williams et al., 2008).

The directive function of autobiographical memory involves using the past to guide present and future behavior (Williams et al., 2008). This was highlighted in an earlier study by Goldsmith and Pillemer (1988) that examined the impact of parental involvement on the memories of university students. The results found that on recall, nearly half of the responses from the students indicated a directive function by describing advice or guidance given by their parents. Similarly, Pillemer (2001) suggests that past memories provide ‘anchors’ for personal values and assist in redirecting one’s life path. For instance, when an individual enters a new, uncharted life situation, he or she is influenced by particular events. The relationship between these events and present actions is mediated, according to Pillemer (2001), by memory. The directive function of autobiographical memory has also been shown to contain knowledge on how to behave in social and professional contexts as it provides information on how this was experienced in the past (Williams et al., 2008).

The social function of autobiographical memory facilitates social interaction as it provides material for conversation (Bluck et al., 2005; Williams et al., 2008). In doing so, the very act of sharing memories has been shown to build and strengthen social bonds as well as increase intimacy between relationships (Williams et al., 2008). Evidence to support the social function of autobiographical memories has been well established, particularly from initial research findings on memories (Conway & Pleydell-Pearce, 2000). For instance, Hyman and Faries (1992) asked participants to describe memories that they frequently talked about, then to describe the situations in which they talked about them. The findings demonstrated that people most often

recalled or retold memories for the purpose of talking to others, in other words, to facilitate social interaction. More recently, a study by Kulkofsky, Wang and Hou (2010) examined the contextual factors influencing memory. The results found that the social function was the primary function of autobiographical memory and that autobiographical memories only exist because they are socially sharable.

The self function of autobiographical memory supports the knowledge and beliefs of the self through the recollection of specific events (Conway, 2005). These events are considered to be personally significant and are the database through which the self is constructed (Williams et al., 2008). Conway (2005) suggests that if an individual did not have the ability to recall past events, they would be unable to represent past and present states as aspects of the same personal identity, which has previously been found in patients experiencing posttraumatic stress disorder (Conway, 2005). In terms of recalling past events, Wilson and Ross (2003) suggest that when an individual reflects on successes and failures, the events can be manipulated to 'belong' closer or more distant to the individual in the present time, regardless of the actual temporal distance. This was demonstrated when Wilson and Ross (2001) asked university students to evaluate their current self and a self '2-months ago'. By manipulating 'apparent time', the participants were asked to either "think of a point in time in the recent past, the beginning of this term. What were you like then?" Or, "think all the way back to the beginning of this term. What were you like way back then?" The results showed that the participants who were encouraged to regard the time period as recent, recalled their former selves as being just as impressive as they were in the present, whereas the participants who were encouraged to see the same period as distant were significantly more critical of their former than of their current self. The results therefore demonstrate that the content of past memories, such as

success or failure, may influence the beliefs and knowledge inherent in an individual depending on how close they 'belong' to the past event. In support of this, Conway, Singer and Tagini (2004) suggests that if individuals are able to recall past events that are stable and integrated with the self, they are then able to operate effectively, achieve goals, and relate to others in productive ways.

Autobiographical memory research in sport

Until recently, little attention had been given to the role of autobiographical memories within sport and exercise. Nevertheless, the emerging research provides a starting point in which autobiographic memories can be understood and further explored. Accordingly, Sinelnikov and Hastie (2010) examined the recollections of a cohort of high school students who participated in a sport education program. Using a cue-word technique to retrieve autobiographical memories, students' recollections provided evidence to support the implementation of the sport education program. In doing so, the information recalled from the general events level of specificity were indicative of the outcomes of the curriculum, whilst the information related to episodic memories confirmed the positive impact the sport education program had on their school experience.

In a study designed to examine gender differences in autobiographical memory, Schulkind et al. (2012) employed university athletes as their participants. Using open-ended (narrative) and factually oriented questionnaires, the students were asked to recall the details of their respective hockey match immediately after the game, and after a period of six weeks. The results found that women told longer, more evaluative narratives than men. Women were also more likely to include internal language reflecting not just what was happening to them, but what others involved in the event were thinking and feeling. Men, on the other hand, were more likely to reflect on

factual information, such as game facts. Despite not examining the levels of specificity, it nonetheless provides an insight into the gender differences associated with the selection of autobiographical memories.

Also employing a narrative analysis, Phoenix et al. (2007) explored how biographical time was storied by a group of young athletes. Reflections based on who the young athletes think they are, they were, and who they can become in the future were highlighted using semi-structured, life history interviews. The findings from this study illustrate the intimate connections between time, self, and society and the central role that embodied narratives play in how individuals make sense and give meaning to their lives.

Identity theory

The concept of identity has been explored through various traditions, such as social psychology and sociology (Stryker & Burke, 2000). Through the perspective of social psychology, Stets and Burke (2000) suggest that identity theory and social identity theory are linked in several fundamental ways. For instance, in both theories, the self is considered reflective in that “it can take itself as an object and can categorize, classify or name itself in relation to other social categories or classifications (Stets & Burke, 2000, pp224). In spite of having similarities, important distinctions, such as group or role based identities, separate the two theories. In light of this, identity theory was used as the theoretical framework as the notion that different roles may influence identity has previously been highlighted in autobiographical memory research (Addis & Tippett, 2008).

Identity theory attributes an individual’s concept of self to the roles one takes up (Hogg et.al, 1995; Stets & Burke, 2000). In identity theory, roles are available to

individuals as a result of the relationship between the self and society. For instance, as an individual interacts with society, roles become available that the individual may or may not choose to take up. The availability of roles is largely influenced by the structural positions in society that a person may occupy (Stets & Burke, 2000). The taking up of roles includes a process of self-categorization where the individual has self-concepts, self-referent cognitions, and self-definitions that they employ, reflexively, to take on roles within groups in society (Hogg et.al, 1995). An individual may therefore have as many identities as they have distinct groups who they feel themselves to be a part of.

Previous research suggests that identities are organized hierarchically. Social cues signal to the individual which role to take up depending on the context and the individuals' commitment to that role (Hogg et al., 1995). Moreover, Stets and Burke (2000) suggest that individuals assume self-meanings to the different roles they take up and in doing so, expectations of those roles influence both the individuals' behavior, as well as the behavior of others who occupy roles within a group. Therefore, according to identity theory, the core of one's identity is the manner in which one internalizes the expectations for behavior, attitudes, and values that are associated with a specific role performance (Stets & Burke, 2000).

Autobiographical memory and identity

Psychological conceptualizations of identity have recognized that autobiographical memory is an important source of information about oneself and one's experiences, as it provides the raw material from which identity is constructed (Addis & Tippett, 2008). According to Addis and Tippett (2008), autobiographical memories provide information on the content and continuity of an individual's identity. The content of

identity has been defined as the personal traits, social roles and group memberships that individuals take up (Addis & Tippett, 2008). Previous research suggests that during late childhood and early adulthood, many experiences occur that influence the content of identity. For example, Conway and Holmes' (2004) study on the free recall of memories of older adults found that memories that were recalled during the period of late childhood and early adulthood contained novel experiences and self-defining memories. Conway and Holmes (2004) concluded from this study that identity may influence both the encoding and retrieval of autobiographical memories. Moreover, the content of autobiographical memory has also been examined through neuropsychological investigations of individuals with damage to either personal semantic or personal episodic memory. For instance, in a study examining autobiographical memories of patients with Alzheimer's disease, Addis and Tippett (2004) found that changes in identity were related to autobiographical memory loss, particularly the inability to recall personal statements from late childhood and early adulthood. For example, compared to a control group, patients with Alzheimer's disease could recall fewer identity statements, such as "I am kind", as well as fewer statements in response to the question "who am I". Addis and Tippett (2004) suggested that this was the result of limited autobiographical memories from childhood and early adulthood.

In addition to the content of identity, the continuity of identity, defined as the different identities that exist over the life span, has been postulated to provide information on the extent of personal change and growth (Addis & Tippett, 2008). Despite having little empirical evidence, Addis and Tippett (2008) suggest that the act of retrieving a personal episodic memory produces a 'recollective experience'. This involves the mental time travel and the auto-noetic awareness of an event that was experienced in

the past. Therefore, when an individual reflects on past memories, they are comparing a past and present self, which conveys information regarding development of a continuous self.

Athletic identity

Athletic identity has been defined as the degree with which an individual identifies with the athlete role (Brewer et al., 1993). Considered an important social dimension of self-concept, athletic identity consists of the cognitive, affective, behavioral and social concomitants of identifying with the athletic role (Brewer et al., 1993). Strong athletic identity has been found to be associated with a strong sense of self-identity and positive athletic experiences (Horton & Mack, 2000). Moreover, Horton and Mack (2000) suggest that social interactions, such as those with family, friends, coaches and the media may all support an individual's identification as an athlete. In spite of this, previous research has revealed that the various roles associated with athletes, particularly student-athletes, may cause role conflict (Brewer et al., 1993; Adler & Adler, 1991). For instance, in an earlier longitudinal study examining intercollegiate male basketball players, Adler and Adler (1991) found that when the athletes transitioned from student-athlete to college-athlete, their associated identities were challenged. For example, the student-athletes felt that they were able to develop and meet expectations for a variety of identities during high school years, however, during college the student-athletes began to re-organize their identity hierarchy as they felt it was more challenging maintaining a balance of academic and athletic identities.

Retiring athletes may also be confronted with challenges, such as the loss of athletic identity. Previous research has demonstrated that athletic identity can

influence the psychosocial aspects of adaptation to retirement from sport (Lavallee, Gordon & Groove, 1997). For instance, through a micronarrative methodology, Lavallee et al. (1997) examined how a sample of elite athletes coped with retirement from sport. It was found that individuals with a high athletic identity at the time of retirement experienced a higher degree of emotional adjustment difficulties. This was particularly highlighted when the athletes lost social interaction with other roles associated with their athletic identity, such as the coach and other teammates. Similarly, Sparkes (1998) explored a female swimmers involuntary retirement from sport. Through interviews it was found that the athlete's physical changes influenced her sense of self, including a loss of identity and difficulties in developing a new sense of self. Despite the challenges associated with identity and retirement from sport, other research suggests that athletes may renegotiate their identity when faced with such challenges. For example, Carless and Douglas (2009) examined two female professional golfer's narratives, identities and experiences over six year. Although one of the two athletes expressed the difficulties associated with post-sport life, Carless and Douglas (2009) found that one athlete was able to discover a balanced self with a variety of identities post-sport life. Thus, the different stages of the athletic career appear to influence an individual's athletic identity, particularly during stages of transition or retirement and, as suggested by Brewer et al. (1993), the degree to which an individual identifies with the athletic role may further influence an athletes identity when faced with such challenges.

Method

Participants

Three participants were chosen for this study. The first participant was a male 21-year-old rugby union player from Spain, known to the researcher for six months. During his 16 years playing experience, he represented his national team once, in addition to playing in the top level for his respective club. The second participant was a female 27-year-old former netball player from Australia, known to the researcher for 15 years. She had played netball for approximately 20 years, during which time she represented her respective state whilst also playing in the top tier for her respective club. The final participant was a male 23-year-old long distance runner from the United States of America, known to the researcher for one year. In 2012 he completed a four-month charity run from the west coast to the east coast of the U.S.A. In addition, he has completed several marathons and ultra-marathons.

The selection of participants was based on the following criteria; (a) long-term sporting experience; (b) three different geographical locations; and (c) personal acquaintance. In light of the first criteria, Conway and Pleydell-Pearce (2000) assert that clear and meaningful lifetime periods do not become apparent until approximately 35 years of age. Thus, given the age of the participants, long-term sporting experience was considered important factor in order to draw as much depth as possible from the participants' autobiographical memory. In support of the second criteria, Maki, Kawasaki, Demiray and Janssen (2014) suggest that although the functions of autobiographical memory should be present in every culture, there may be differences observed, such as meanings of the personal past. The different geographical locations may therefore yield a variety of autobiographical memories. Finally, each participant was an acquaintance with the researcher. On one hand, this

created open communication between the participants and the researcher, however; on the other hand, it may have influenced the participants to say what they believed the researcher wanted to hear, thus reducing authenticity. Issues of trust, friendship, reciprocity and authentication have previously been found within sociological research (Watts, 2008). In order to address these challenges Pitts and Miller-Day (2007) suggest that the development of rapport with participants is a priority for researchers; however, the rapport must be mutually constructed in order to develop empathy and mutual understanding. Therefore, every effort was made to develop a rapport between the parties whilst also acknowledging one's position as a researcher. In light of this, previous research suggests the role of the researcher as an instrument may influence all stages of a study (Etherington, 2007). Thus, the biography and positioning of the researcher is relevant to this study, as she had already established informal relationships with the participants. These relationships can therefore not be divorced from the interpretations presented. Nevertheless, the experience the researcher had with the participants' respective sports, provided knowledge on the sport culture and as a result, helped improve openness and trust in the researcher-participant relationship.

Procedure

After receiving ethical approval by the researcher's Departmental Bioethics Committee, each athlete was contacted via email inviting him or her to participate in the study. Prior to data collection, athletes were given a brief overview of the study, and were told that the study 'would explore your previous participation in sport'. However they were not informed of the exact purpose of the study as previous research suggests that narratives are reconstructed at the time of retrieval (Conway et al., 2004). It was therefore deliberated that prior knowledge might have changed the

choice or narration of their memories. In light of this, each athlete was informed that at any stage during the process they may withdraw from the study.

Data Collection

Previous research on autobiographical memories has been based principally on a methodology where participants deliberately recall personally experienced past events in response to a particular word or are asked to recall their most vivid memories (Van den Hoven & Eggen, 2008). In this study, each participant was simply asked to recall four or five of their most vivid memories as these relate to sport. They were encouraged to share their personal memories, adding detail where they felt necessary. Follow-up questions were asked such as “why do you remember this event”, or “why is this meaningful to you”, in order to elicit more depth. Each interview lasted between 25 and 50 minutes. Two of the interviews were conducted via Skype and one was conducted face to face. The Skype interviews were videotaped as this has been shown to provide information, such as non-verbal communication, that may otherwise be excluded from oral narratives (Smith, 2000). Accordingly, Smith (2000) suggests that narratives must be transcribed in such a way as to preserve all information that might affect interpretation, such as pauses in speech. All interviews (total of 109 minutes) were therefore transcribed verbatim yielding a total of 27 single spaced pages. Each participant received a copy of the transcript to confirm the accuracy of the data, to which no changes were made.

An important aspect of research concerning autobiographical memory is that it represents interpretations or meanings of experienced events (Conway & Pleydell-Pearce, 2000). The aim of the interviews therefore, was to allow participants to create meaning out of their personal memories as they relate to sport.

The approach used for treating the data was narrative analysis, as narratives have been found to play a key part in constituting meaning, making sense of experiences, and communicating meanings and experiences (Smith & Sparkes, 2009a). Additionally, Smith and Sparkes (2009a) suggest that individuals live in, through, and out of narratives. In doing so, narratives serve as an essential source of psycho-socio-cultural learning and shape who one is in the present and who one might become in the future. Narratives can therefore reveal a great deal about an individual's experiences, including their emotions, feelings, sense of health, and motivations as these change through time (Smith & Sparkes, 2009b). Furthermore, narrative analysis opens up the possibilities for a variety of analytic strategies. According to Reissman (2005), different analytical approaches can be combined, particularly in relation to oral narrations of personal experience.

Thematic analysis therefore drove the data analysis as the combination of narrative and thematic analysis, which has been used in other studies (e.g., Carless & Douglas, 2009), provided the necessary depth to the narrations, while also revealing similarities across the data set. According to Braun and Clarke (2006), thematic analysis provides a rich and detailed, yet complex, account of data. It also allows the researcher to see patterns across the data. In accordance with the recommendations set by Braun and Clarke (2006), each transcript was read by the first researcher several times. During the second stage, initial codes were generated across the entire data set. All of the codes were then collated into themes. Once themes were established, they were then reviewed in order to ascertain whether the themes work in relation to the data set. During the next stage, themes were assigned a level of specificity according to autobiographical memory research (Conway & Pleydell-Pearce, 2000), as well as the functions they serve according to Williams et al. (2008).

In an effort to improve trustworthiness, reflexivity was carried out in a number of ways. Morrow (2005) suggests that keeping a self-reflective journal is a valuable form of reflexivity as it keeps an ongoing record of reactions and it provides information on assumptions or biases that might emerge. Self-reflective journals were therefore employed throughout the research process in order to allow the researcher to become aware of her own reactions and assumptions on the data. In addition, this strategy involved consulting with the study supervisors in order to check for rival explanations and relationships in relation to the data.

Results and Discussion

Three themes were identified according to the levels of specificity (Conway, 2005; Conway and Pleydell-Pearce, 2000): selection in a representative team; embarrassment and ridicule; and accomplishment and realization. The themes were then categorized according to the level of specificity in which they were recalled, namely general events and episodic memory as seen in figure 1. In addition, themes were identified and then categorized according to the functions of autobiographical memory - social, directive and self, as seen in figure 5, 6 and 7. Raw data was used to highlight the social, directive and self functions of autobiographical memory, as only one theme was identified for each function.

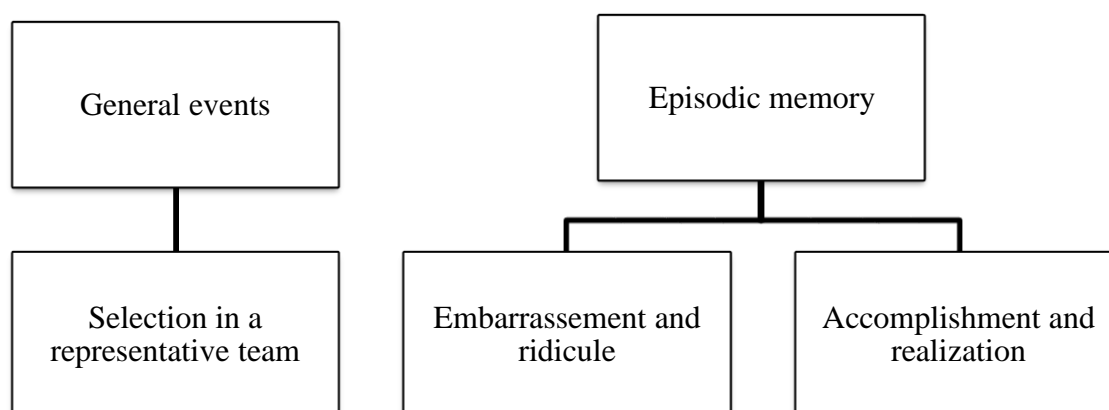


Figure 1. Themes according to the level of specificity

Levels of Specificity

Lifetime periods. Lifetime periods is considered an important source of information as it represents knowledge of significant others, locations and goals, and moreover, has identifiable beginnings and endings. Whilst the participants shared

some childhood memories associated with siblings, they were not significant enough to highlight specific periods of the participants' development in terms of the self.

Similar results were evident in Sinelnikov and Hastie's (2010) study on students' autobiographical memories within sport education. Accordingly, Conway and Williams (2008) found that important periods of development in terms of the self were highlighted when adults, who were approximately 35 years and older, recalled autobiographical memories. Thus, perhaps the lack of information reflective of lifetime periods is a result of the age of the participants, as they may not have developed clear and meaningful lifetime periods within their lives. Nonetheless, autobiographical memories recalled from the participants were reflective of general events and episodic memories.

General events. Information recalled from the general events level of specificity were largely associated with repeated events, such as training sessions and games in a competition. Indeed, there is a significant amount of research confirming the association between repeated events and this level of specificity (Conway & Pleydell-Pearce, 2000; Conway & Williams, 2008; Sinelnikov & Hastie, 2010).

One theme identified in the data was 'selection in a representative team', as shown in figure 2. For example, the netball player recalled the anxiety she felt in waiting for her name to be "called out" in order to "make" her state team. She explained the pressure that she was experiencing to make this particular netball team, followed by the satisfaction associated with her success when she finally had her name "called out". Interestingly, despite being "happy" for herself and her teammates, she also recalled "feeling guilty" knowing her friends "did not make it", particularly when their parents were comforting them and "taking them away". Thus, the

satisfaction of achieving a goal appeared to be somewhat undermined by feelings of guilt, suggesting that perhaps she felt undeserving of such an achievement.

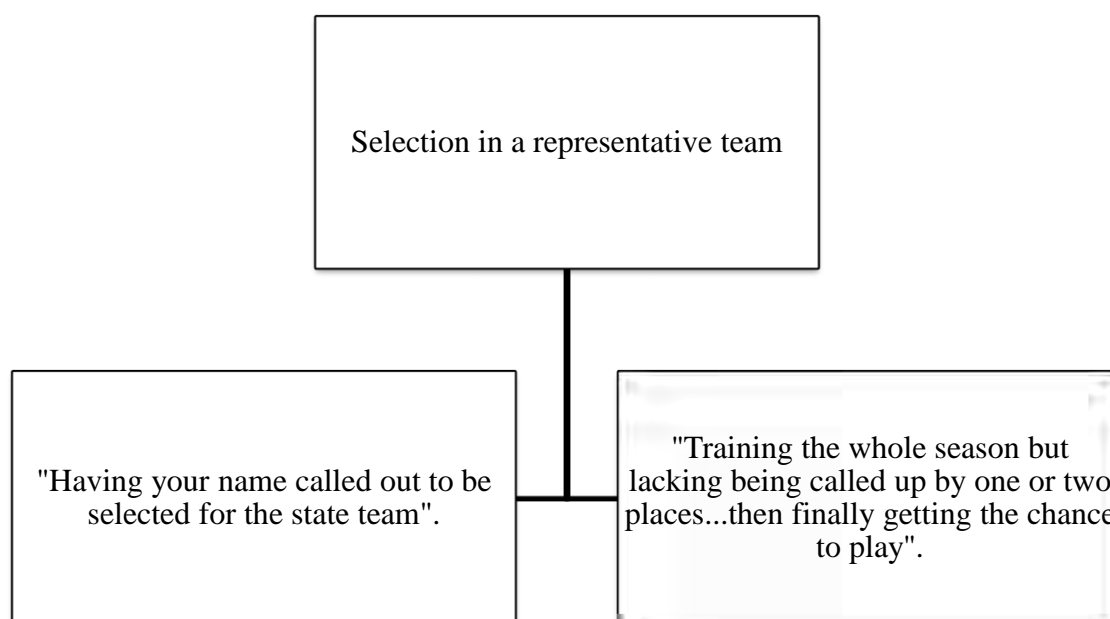


Figure 2 - Athletes' autobiographical memory at the general events level of specificity – selection in a representative team

Alternatively, there may have been other underlying factors, such as fear of her friends' reaction to her being “called up”, or compassion for her friends who were not chosen. Nonetheless, this recollection appeared to influence the way she evaluated herself, which in turn, may have some bearing on her identity.

The rugby player also reflected on making a representative team by being “called up” to play for the first division within his rugby union club. He recalled training with the club for the whole season, but failing to be called up to play for the top team, until the final game for the playoffs when some players got injured. Thus, he was finally given a “chance” to play, albeit for just seven minutes. He reflected on those seven minutes as being “more thrilling” than having played for his national

team two years prior to this event, as he believed the level was “actually higher” and more challenging.

Both recollections are associated with goal attainment, particularly the progress towards such an achievement. These findings are similar to the study of Phoenix et al. (2007), in which young athletes reflected on their past achievements and success in sport. In so doing, the young athletes used their past achievements as building blocks for memories that ultimately served to provide feelings of competency and fulfilment in their life. Thus, as suggested by Conway and Williams (2008), information associated with goal attainment appears, in the case of these participants, to have powerful implications for the self, especially the conceptual self, and how they evaluated themselves.

Episodic memories. Episodic memories are related to specific events that had occurred in the participants’ past. They are identified as highly vivid and predominantly visual in nature and can be decidedly self-inherent. Such themes that emerged in this study included ‘embarrassment and ridicule’ and ‘accomplishment and realization’, as shown in figure 3.

One ‘embarrassing’ event recalled by the netball player occurred during a netball game when she was “kicked off” the court after a call was made against her. During the recollection this participant could remember specific comments exchanged between the umpire and herself. Furthermore, she could visually recall her mother shaking her head in disappointment. In addition to feeling “angry” over the incident, she commented that she was “more embarrassed” than anything at “being sent off in front of all these people”.

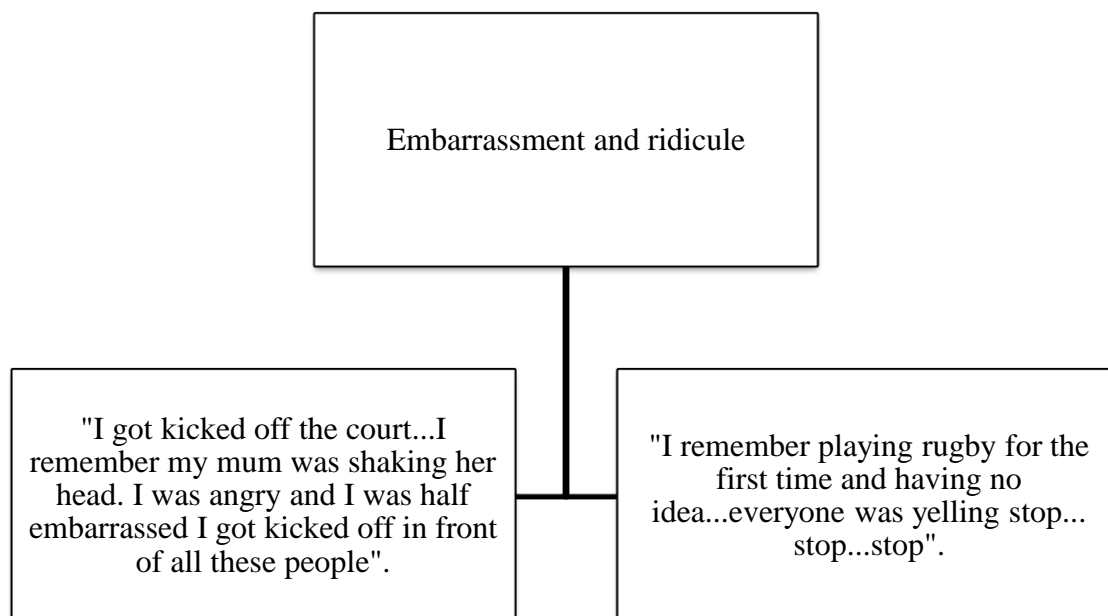


Figure 3 - Athlete’s autobiographical memory at the episodic memory level of specificity – embarrassment and ridicule

In another instance, the same participant recalled a “humiliating” event that occurred whilst she was warming up in front of her peers. She recalled highly vivid images of herself being ridiculed whilst “everyone was killing themselves laughing”. Accordingly, feelings of humiliation and ridicule appear to create highly vivid memories, particularly when one is made to feel vulnerable in front of others (Rubin, Dennis & Beckham, 2011).

Similarly, feelings of embarrassment were also highlighted when the rugby player recalled the first time he played rugby union as a child. Having never played before and ‘having no idea’, he recalled receiving a “pass that was forward” but not hearing the whistle being blown. He therefore recalled hearing people yell “stop... stop... stop” and feeling confused in front of his peers. Thus, despite containing different information, autobiographical memories associated with embarrassment or ridicule were apparent across the data. This not only suggests that such events are

highly relevant and accessible to the individual, but also that vulnerable memories may be more common than athletes or practitioners realise. This has further implications from an applied perspective, as it suggests that, perhaps, many athletes subconsciously have vivid memories of feeling embarrassed or humiliated. Consequently, these memories may be a burden for athletes and as a result may undermine their ability to deal with adversity or challenging times, if they have not effectively coped with them. Moreover, as highlighted by Conway et al. (2004), images that one has of oneself in the past may influence images of what the self may become in the future. Thus, such images of embarrassment and ridicule could potentially hinder future motivation and performance if such damaging images are highly accessible to the individual.

By contrast, episodic memories associated with accomplishment and realization were characterized by positive images and by details relating to conversations, time and place, as shown in figure 4. The rugby union player illustrated this when he recalled the “highlight” of his playing career whilst playing rugby union in the first division. He described a moment in which he “nearly scored a try”, but he did not “quite make it past” the opponent. This opponent later congratulated him, recognizing the level he was competing in. Furthermore, he recalled a specific compliment that was given to him at the end of the match by a senior member of the club. Interestingly, the participant explained that this moment was especially meaningful for him, because, although he had previously represented his country in rugby union, he felt his level of performance had improved following that period. Thus, despite playing in a lower division, as opposed to his national team, he felt that during this particular moment in his life, he was more “conscious” of who he was as an athlete and that he had finally “made it”.

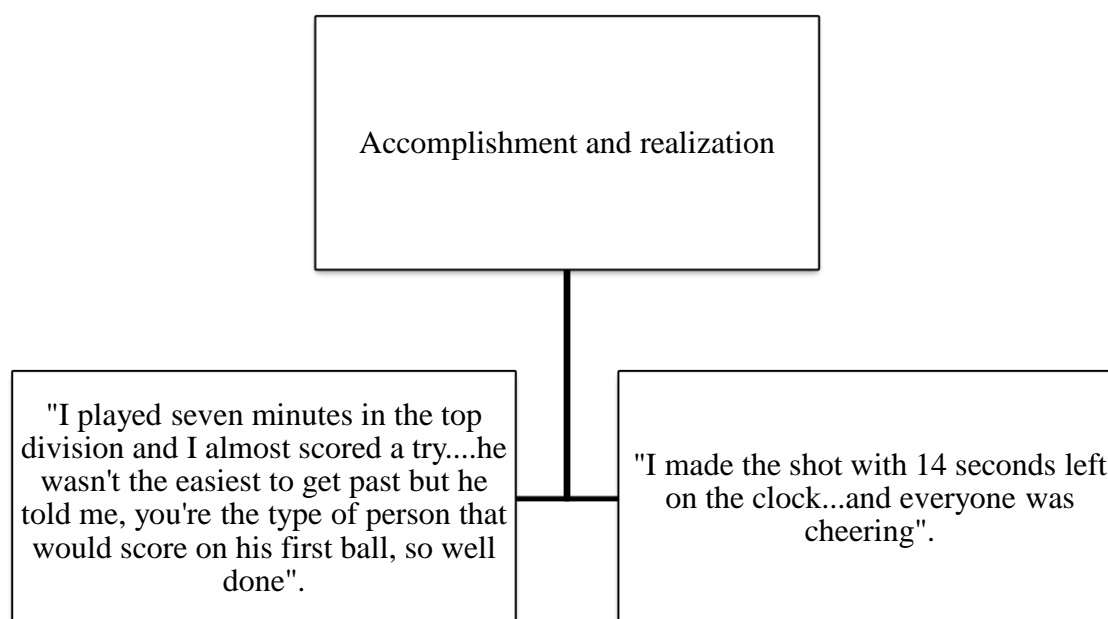


Figure 4 – Athletes’ autobiographical memory at the episodic memory level of specificity – accomplishment and realization

In a similar fashion, several participants recalled ‘small achievements’ that had an impact on their athletic careers. For example, the netball player described a highly vivid moment whilst playing basketball in a high school competition. With “14 seconds left on the clock” she scored a “long shot” and recalled the scene of everyone cheering. The same participant recalled a similar scene whilst playing cricket, in which she “stuck the left hand out...and caught the ball”, which was again, accompanied with images of people cheering.

These findings are relevant to Bandura’s (1977) self-efficacy theory in which past performances play a role in shaping one’s self-efficacy. Moreover, performance accomplishments have been shown to be the most influential source of efficacy information, because they are based on an individual’s own mastery experiences (Bandura, 1997). Thus, the ability to recall past accomplishments appears to have an

effect on one's self-efficacy, particularly when the episodic memory contains vivid details of the success, or lack thereof, of a task. If one repeatedly views past experiences as successes, self-efficacy beliefs will increase. On the other hand, if past experiences are viewed as failures, self-efficacy beliefs will decrease. This has significant implications for athletes, as the content of their episodic memories may influence their self-efficacy, which in turn, may have consequential effects on performance. Furthermore, from a practical standpoint, small achievements appeared to play an important role in one's self-efficacy, particularly given the fact that each participant was asked to recall just four or five of their memories. Thus the ability to recall both small and great achievements may be an important source of information, as the details contained within the memories may have a lasting effect on them, which in turn, may enhance self-efficacy.

The results thus far have illustrated the various levels of specificity with which autobiographical memories can be accessed. During data analysis, the themes that were identified were categorized according to the function in which they serve, namely social, directive and self. Despite receiving little attention in the literature, the above functions were exemplified across the data in this study.

Functions

Social function. The social function of autobiographical memory, in which stories are shared as a form of entertainment, was highlighted several times, particularly by the long distance runner. He recalled an "extremely vivid" moment during his four-month run across the U.S.A, in which he came across some wild life whilst running during the middle of the night. Having to turn his headlight off, he recalled step-by-step his movements as he tried to "get passed a herd of buffalo" as quietly as possible. This story was accompanied with details relating to the strategies

he employed to get out of this dangerous situation, in addition to the fear he was experiencing. However, during the recollection, this particular memory was delivered in such a way as to generate laughter and portray the humorous side of the situation. McLean (2005) found that male adolescents were likely to recall memories for entertainment, especially memories associated with mishaps, in which something goes wrong and is resolved. Moreover, McLean (2005) found that when adolescents recalled memories from childhood, they often involved family members, such as siblings and parents.

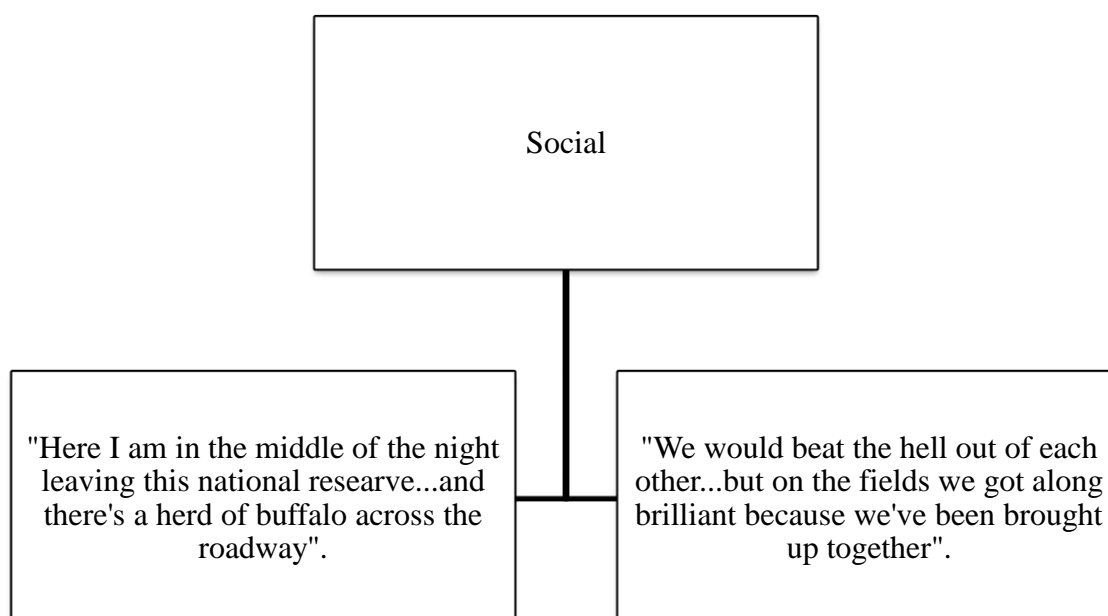


Figure 5 - Social function of autobiographical memory

This was evident in several recollections by both the netball and rugby union player. For example, the rugby union player recalled several memories of “just running around having fun” with his brothers. He further commented that his brothers “would beat the hell out of each other”, but on the field they “got along brilliant” and “had their own language”. Such recollections involving significant others, even when

expressed with a comic annotation, unveil small insights into the participant's personal life. Furthermore, they reveal connections between people without having to engage in a deeper kind of personal disclosure. By contrast, however, the long distance runner recalled a "powerful" moment when a stranger "on the side of the road" stopped him whilst running. Realizing the man was hard of hearing, they were not able to verbally communicate, but he described a moment in which they interlocked their hands together in an act of prayer. Despite not knowing the man, he referred to this event as something that "will stick with me forever". He reflected on the fact that they "would never again see each other in this life", but they still had a "positive sense" with one another. The long distance runner later described the positive impact that certain people had on him while running, expressing that "there's a lot more good out there in the world than bad".

Such stories, therefore, not only provide a way to generate laughter, but allow one to communicate details of important life experiences. Moreover, memories that are recalled that express a significant aspect of one's life have been shown to be an important part of identity construction, due to the presence of explicit meaning (McLean, 2005). Thus the social function of autobiographical memories influences identity because they effectively allow connection with others, even strangers, whilst building and maintaining relationships.

Directive function. The directive function of autobiographical memory was revealed in participants' memories of challenging or difficult circumstances. For example, there was a situation in which the long-distance runner had an "unavoidable" situation that required him to change his route, which meant physically "climbing a mountain to get over it". When he reflected on the four-month run as a whole, he commented that such an event in his life "shows you what is possible and

that there are times when I am not sure if I can do something....so I reflect back on my run to give me that sense of confidence”. Thus, his past experiences with running, particularly when he was faced with adversity, provided life lessons that he uses when faced with similar challenges, and indeed, may be used to shape future behaviour.

In a similar fashion, the rugby union player recalled times when he was being “constructively criticized” after representing his national team. He reflected on the difficulties he initially experienced trying to get the “chance” to play with his national team, then lacking the “bulk” and “experience” to continue training and playing with them. Despite not being explicitly mentioned, this experience was perhaps the catalyst that prompted him to gain more experience as a rugby player.

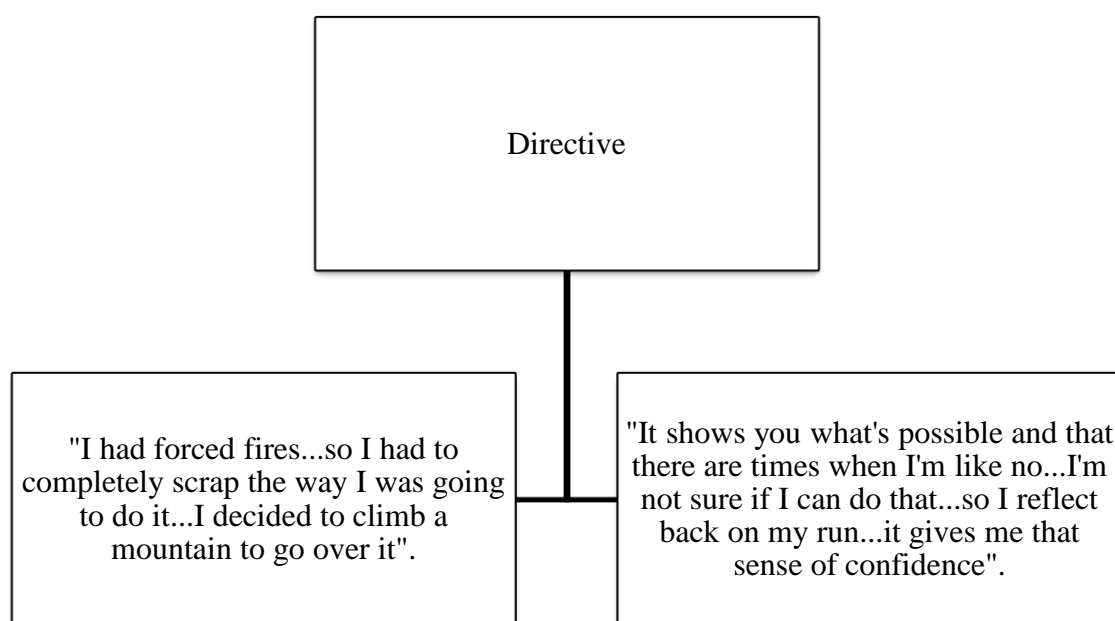


Figure 6 - Directive function of autobiographical memory

In support of this, Kulkofsky et al. (2010) suggest that individuals may reflect on past experiences and believe they are engaging in remembering for other purposes,

such as telling a story, yet the act of reflecting on past experiences may serve another purpose, such as directing future behaviour.

Self function. Autobiographical memories associated with the self were exemplified through positive self-evaluations and identity building. In this research positive self-evaluations were highlighted in conversations and compliments that each participant had received, particularly from significant others.

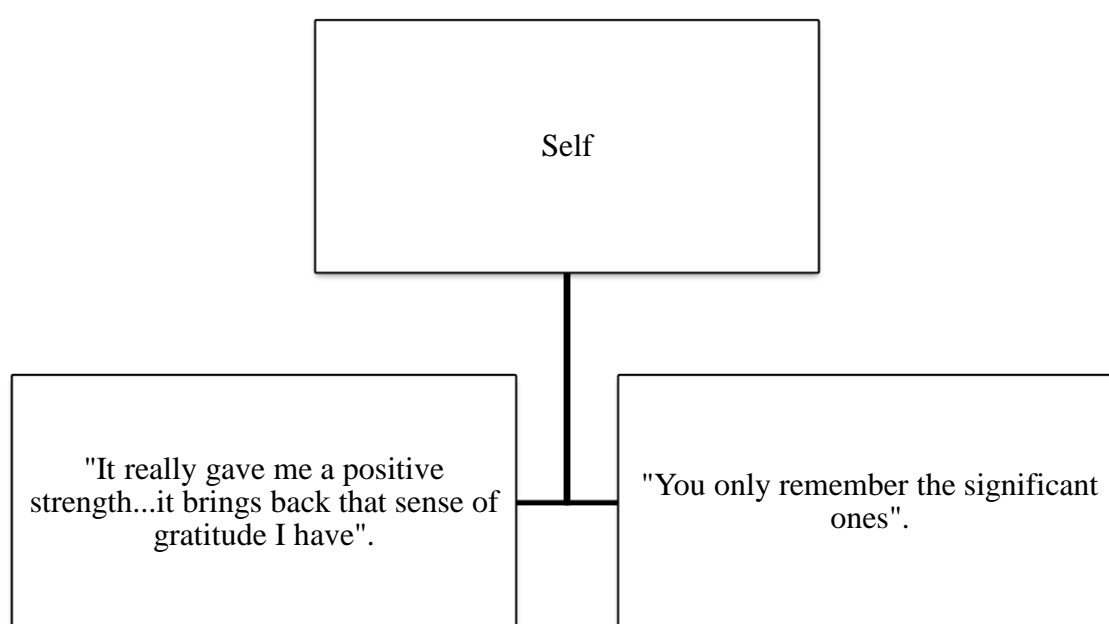


Figure 7 - Self function of autobiographical memories

The long-distance runner recalled one such finding related to self-evaluations. During his four-month run across the U.S.A he spent one night with a family he had met along the way. Upon reflecting on the experience, he could recall a hand written note one of the children had given him. The note, which acknowledged his determination and effort, gave him ‘positive strength’ during his run and, moreover, it is a memory that he reflects on in order to “bring back that sense of gratitude” he has. The detail with which this memory was recalled, in addition to its content, seemed to

confirm the beliefs and attributes that mark this participant's identity. As Anderson (2004) asserts, the self evaluates the level of support it receives from others as a performer of exercise, sports, or physical activity. Accordingly, the level of support this long-distance runner received confirmed his athletic self. The information contained within this memory supports the knowledge and beliefs inherent to this participant and moreover, may be used as a source of validation in future situations.

The very act of sharing memories appeared to be an important aspect of identity building and indeed, was apparent across the data. The memories that each participant shared, in addition to the language used, shed light on the various events, roles and relationships that have collectively shaped who they are in the present.

The rugby union player described a "brilliant" moment with his brothers when they scored a try in which the ball "got passed five or six times" between them. He continued to describe the event as "one of those moments when you start talking jibberish....you go from your own 22 to the try line...just dropping jibberish", but there was "complete understanding" between them. Whilst not explicitly mentioned, he has acknowledged two roles with which he identifies: a rugby union player and a brother. Furthermore, the specific language he used expressed the enjoyment associated with the memory in addition to the relationship he has with his siblings.

Similarly, the netball player recalled events that had occurred outside of sport, such as playing with her siblings "in the backyard". Likewise, she described these events with a positive connotation. Such memories unveil the various roles that influenced the athlete's identity, particularly from a young age. Furthermore, it suggests that events that do not directly relate to exercise, sport or physical activity, such as interaction with one's siblings, may have a significant impact on one's

identity in the present and indeed on one's self-efficacy in sport, as highlighted by the netball player when she commented that 'you only remember the significant ones'.

The three functions of autobiographical memory - social, directive and self - therefore provide information on the content and continuity of an athletes' identity (Addis & Tippett, 2008). This was especially highlighted through the variety of events that had occurred over the participants' lives and, more importantly, through the way in which they interpreted and made meaning of the various events. As such, the memories that each participant recalled from their past, effectively embody who they are in the present, and as highlighted by the long distance runner, may provide direction for future behaviour. Thus, from a practical perspective, the results suggest that the very act of sharing memories may provide a means of enhancing communication with athletes, in addition to providing a platform through which athletes can indirectly express their identity. Moreover, this may also allow athletes to reflect on their past, in order to guide future behaviour.

Conclusion

The purpose of this study was to examine the potential benefits of autobiographical memories in the support and counselling of athletes. In doing so, it examined Conway (2005) and Conway and Pleydell-Pearce (2000) levels of specificity - lifetime periods, general event and episodic memories, in addition to the directive, social and self functions of autobiographical memories.

The results of this study supported Conway (2005) and Conway and Pleydell-Pearce (2000) levels of specificity in relation to general events and episodic memory while lacking evidence of lifetime periods. As noted previously, this lack may have been due to the age of the participants. Nonetheless, notable memories were recalled from the general events level of specificity and were shown to be associated with goal

attainment and goal failure (Conway & Pleydell-Pearce, 2000). Similarly, in this study episodic memories contained information that was highly vivid and visual in nature and these memories were clearly related to goal attainment and goal failure. One significant, and unexpected, finding associated with episodic memory was the recollection of *small* achievements in providing a strong sense of goal attainment. This has further implications, as according to Wilson and Ross (2001) events that occur in an individual's past can be manipulated so as to 'belong' closer to the individual in the present time. Thus the ability to identify small achievements may enhance the one's self beliefs and knowledge.

In addition, the functions of autobiographical memories highlighted the ways in which memories facilitate social interaction through story telling. The very process of sharing memories also unveiled characteristics and attributes inherent in the participants and showed how past events provided direction for future behavior.

From a practical perspective, asking athletes to share their stories, as opposed to asking direct questions, may provide rich information regarding their past and present self. The level of specificity in which memories are recalled may uncover previous events that contain vivid details of goal attainment or goal failure. This, in turn, may shine a light on various factors that influence athletes' motivation and performance. Furthermore, encouraging athletes to share their memories may instill a sense of achievement and self-actualization that previously remained unspoken and unacknowledged, particularly memories of small achievements. Therefore, with such knowledge researchers and applied professionals can gain a deeper holistic understanding of what has shaped an athlete's past and how this may be used to guide future behaviour. In addition, sharing memories is a means of social interaction and communication. It provides a platform in which athletes can share life experiences,

reflect on what has been and, perhaps more importantly, reflect on what is yet to come. Thus, sharing memories may be used as a tool to promote communication between athletes in a team environment, in addition to providing an opportunity for athletes to reflect on their own past achievements and failures.

The limitations within the design of this study must be acknowledged. Due to the nature of qualitative research, the findings of the study cannot be generalized to any larger population and are therefore limited to the participants and context of this study. For example, gender differences was not considered as a variable in this study, as the authors wanted to concentrate on the narration of autobiographical memories without stressing the differences between men and women. In light of this, future studies on athlete's autobiographical memories could include gender as a variable, as there may be differences observed. Furthermore, the functions of autobiographical memory may yield different results across cultures, particularly in relation to self-expression and beliefs about the meaning of the personal past. Despite including athletes from three different geographical locations, it did not encompass a broad spectrum of cultures, thus as recommended by Schinke and Hanrahan (2009), future research in sport psychology should expand to include more research on cultural diversity. Finally, the researcher as instrument may have influenced both the participant's recall of memories and the interpretation of the data. In spite of every effort made to practice reflexivity, the role of the researcher could not be divorced from the study and the researcher therefore played an integral role in the interpretation of the data.

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