

The experiences of adolescents rowing in New  
Zealand: An insight into the influences on attrition  
in school rowing

A thesis submitted to  
Auckland University of Technology  
in partial fulfilment of the requirements for the degree of  
Master of Sport and Exercise (MSPEx)  
2014

Faculty of Health and Environmental Services

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## **Abstract**

It is widely acknowledged that involvement in sport has positive physical and psychosocial benefits for adolescents. However, concerns have been expressed, both in New Zealand and internationally, about the relatively high attrition rates from sport participation for this age group. Although reasons for adolescent attrition rates in sport have been widely investigated, there is little evidence of studies that have examined reasons for drop-out in the sport of rowing. This study explores the experiences of adolescent athletes who have dropped out of high school rowing programmes in New Zealand. Rowing in New Zealand is a popular sport, yet it has shown to have comparatively high rates of drop-out, particularly from 16 years of age. It appears that there is limited research on attrition in rowing and to date there are no published studies that have used a qualitative research approach to investigate the reasons for the relatively high drop-out rates in rowing in New Zealand.

This qualitative interpretive study adopts a self-determination theoretical framework to examine reasons for adolescents' drop-out from school rowing. The participants were four males and three females aged between 16-18 years old, from seven different high schools. Each participant had rowed for two or three seasons and had dropped out before their final school rowing season. The study data was gathered through semi-structured interviews.

Three main themes emerged from the data: the reasons why these participants rowed, the influence of the coach, and issues related to lightweight rowing. Having a sense of relatedness, through feeling connected to teammates, coaches and parents were deemed to be especially important to the participants. Perceptions of competence were influenced through crew selection processes and the rowing environment. Feelings of autonomy were enhanced when participants had input into their training and crews but feelings of autonomy were often undermined through actions of the coach.

The main findings of the study suggest that having a sense of relatedness is probably the most important factor influencing ongoing participation in rowing. The results from this study provide an evidence-base which can be used to inform coach education and the development of rowing programmes for adolescent athletes.

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## Glossary of terms

**Adolescent** – Aged between 13-19 years old

**Athlete** – Person who is engaged in organised sport

**Athlete-centred** - a leadership style that caters to athletes' needs and understandings and where athletes are enabled to learn and have control of their participation in sport (Kidman & Lombardo, 2010).

**Autonomy** – the need to perceive our behaviours and thoughts as freely chosen and that we are origins of our own actions (M. R. Weiss & Amorose, 2008).

**Child** – Aged between 5-12 years old

**Coach-athlete relationship** – the relationship the coach and the athlete share and the way this is created and enforced.

**Coached- centred** – a controlling style that is focussed on the coaches' goals and needs

**Competence** – the need to perceive our behaviour and interaction with the social environment as effective (M. R. Weiss & Amorose, 2008).

**Coxswain** – person who sits in either the bow or stern of the boat and makes the calls throughout training and racing and steers the boat. They are required to weight 50kgs for under 15, 16 and 17 events and 55kgs for under 18 events (except lightweight where they weigh 50kgs). If the coxswain weighs less than this they are required to take weights in the boat to bring them up to weight. There is no penalty for being over-weight.

**Crew** – The people who are in the boat including the coxswain

**Double (2x)** – two person sculling boat, using four oars (two oars per person)

**Eight (8+)** - eight person sweep oar boat, using eight oars (one oar per person) and a coxswain

**Erg** – indoor rowing machine used for training and testing

**Erg time** - 2000m timed rowing test on the erg



## **External factors – Outside of the self**

**Flow** – “optimal experience where people are so involved in the activity nothing else seems to matter; the experience itself is so enjoyable that people will do it at a great cost, for the sheer sake of doing it” (Csikszentmihalyi, 1990 p.4).

**Four (4+)** - four person sweep oar boat, using four oars (one oar per person) and a coxswain

## **Internal factors – Within the self**

**Intrinsic motivation** – Doing an activity for its internally rewarding feeling and enjoyment.

**Lightweight rowing** – a weight class category of rowing. In NZ school rowing the events for lightweight are the under 18 lightweight four and the under 18 lightweight double. Lightweight requires females to be no more than 59kgs and males no more than 72.5kgs. Rowers must weigh-in between one and two hours prior to each lightweight event.

**Maadi** – New Zealand Secondary Schools Rowing Championships. Regatta for all rowing schools in New Zealand

**North Islands** – North Island Secondary Schools Rowing Championships (regionals). Only North Island Schools attend. Likewise the South Island has an equivalent.

**Pair (2-)** - two person sweep oar boat, using two oars (one oar per person)

**Quad (4x+)** - four person sculling boat, using eight oars (two oars per person) and a coxswain

**Rating** – strokes per minute in rowing is referred to as rating or rate

**Regatta** – Rowing competition lasting between one and six days depending on the size of the event.

**Relatedness** – the need to perceive that we are connected to those around us and that we experience a sense of belongingness (M. R. Weiss & Amorose, 2008).

**Sculling** – One type of rowing style where the individual rows with two oars, one in each hand. The oars are a shorter and lighter, and the blade is smaller than a sweep oar.

**Self-determination theory** – “SDT differentiates the content of goals or outcomes and the regulatory processes through which the outcomes are pursued, making predictions for different contents and for different processes. Further it uses the concept of innate psychological needs as the basis for integrating the differentiations of goal contents and regulatory processes and the predictions that resulted from those differentiations” (Deci & Ryan, 2000 p.227).

**Senior coaches** – head coach and senior coaches who have either, been around the longest, coach the senior crews or are in charge

**Single (1x)** – one person sculling boat, using two oars

**Squad** – All rowers of all age groups.

**Sweeping** – Another type of rowing style where the individual rows with one oar. Both hands are on the one oar. The oar is longer and heavier, and the blade is bigger than a sculling oar.

**Teacher in charge** – school representative who is required to attend to all rowing needs including admin, regattas, student welfare. The go-between for coaches and the school

**Training programme** – outlines time, type, frequency and duration of training sessions throughout the season.

**Weigh-in** – When lightweight rowers and coxswains weigh themselves in front of officials which gets officially recorded.

**Youth** – Young person aged between 0-18

## **Attestation of Authorship**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

A handwritten signature in cursive script, reading 'R Beattie', is written over a horizontal line.

Rebecca Beattie

1 May 2014

## Acknowledgements

This thesis was written with the support of various people whom I would like to acknowledge and thank.

Firstly, my husband Liam who has not only endured hours of having me preoccupied with endless hours of writing and typing, but who has given me the opportunity to undertake this journey. From doing extra chores around the house to staying up late and helping with editing, you have been my number one support through-out.

To my parents for your on-going encouragement and support. As usual, you were always there for me when I needed you. From looking after the dog and proof-reading 100 pages of my writing, to having food on offer whenever it was required.

I would like to acknowledge Dr Simon Walters and Sarah-Kate Millar, my supervisors, who always offered me encouragement, support and invaluable guidance. While I found the process at times challenging, you were always both available to offer me your time (including last minute late night chapter submissions), and words of reassurance which in turn, motivated me to continue.

I thank in particular, Sarah-Kate Millar, who if it wasn't for your support through my rowing coaching career and recommendation that I consider doing my Masters I would not be here today. Not only have you mentored me through my coaching but also through my Master's. You also provided me the opportunity to help with some fun new rowing testing which allowed me to learn and try new things I would never have done otherwise.

To Simon Walters, my primary supervisor, whom I feel truly indebted and grateful to for your proficient academic support, kindness and patience while teaching me along the way. No matter what I handed in to you, you always offered reassurance and words of support. You also seemed constantly enthusiastic about what I was doing which kept me motivated along the way.

To Tony Oldham who was an essential support through the whole process by providing guidance and advice whenever needed. Your depth of knowledge and

experience has been of great help through this whole process. Again you gave up a lot of your time to assist me in all the details, from planning, understanding, grammar and finding appropriate references.

Finally, I would like to thank and acknowledge the schools for inviting me in to do the research and the participants who so willingly helped out in my study. I am extremely grateful they so enthusiastically shared their experiences with me.

## **Ethical Approval**

The application for ethical approval to AUTECH – AUT University's ethics committee was completed in May 2013. The ethics application was referred to the AUT University Ethics Committee.

Ethical approval was granted on 3<sup>rd</sup> July 2013 by AUTECH. Reference: 12/141 (Appendix 1)

## **Chapter 1: Introduction**

This qualitative interpretive study explores the process of drop-out within the New Zealand rowing context. Drop-out in sport refers to an athlete discontinuing their involvement in the sport (Gould, 2007; Petlichkoff, 1996). Available evidence indicates that rowing in New Zealand appears to have larger than average sporting drop-out rates. As a consequence, examination of this phenomenon warrants further investigation. A sample of teenage participants who had competed in rowing for their school before deciding to drop-out, were interviewed and asked to discuss their reasons for withdrawing from their sport. Using self-determination theory as the framework for analysis, factors which enhanced and undermined forms of athlete motivation were revealed.

### **Background into the Research**

A large number of children and adolescents regularly engage in organised sport programmes (Jösaar, Hein, & Hagger, 2011). It is widely acknowledged that physical activity provides social, psychological and physical benefits to adolescents which can help to improve their health status and quality of life (Humbert et al., 2006; M. R. Weiss & Amorose, 2008). As sport can have a positive effect on these broader holistic aspects as well as influence motor development, sport should be considered an important component of being an adolescent (M. R. Weiss, 2008). In spite of this, research shows that adolescent drop-out rates are high across a range of sports, raising concerns that they are not getting enough physical activity to achieve the clearly identified health benefits (Humbert et al., 2006). Some studies lead us to believe that as many as two thirds of participants ages 7-18 withdraw from sport each year; with attrition rates being particularly high in adolescence (Fraser-Thomas, Côté, & Deakin, 2008b).

Recent research has tried to identify the reasons behind this drop-out. Reasons adolescents provide for participating in sport relate to: 1) learning and improving skills that demonstrate competence, 2) to have fun and experience enjoyment, and 3) establish positive social relationships with peers and significant adults such as, parents and coaches (Bailey, Cope, & Pearce, 2013; M. R. Weiss, 2008). However, for continued involvement the athlete must find value in participation. This may come through motives such as, exhilaration, social interaction, skill development, team affiliation and fitness (C. B. Green, 2005).

There is a large body of research examining the effects of attrition and why it occurs (for example Fraser-Thomas et al., 2008b; Strachan, Côté, & Deakin, 2009a; W. M. Weiss & Weiss, 2006). Much of adolescent sport attrition rates research has been framed within motivation theories. Most commonly cited reasons for withdrawal including conflicts of interest, and negative experiences such as lack of fun, coach conflicts, and lack of playing time (Fraser-Thomas et al., 2008b). In addition to motivation theories, is research surrounding the structure of organised sport. This considers factors such as too much time commitment, the over-emphasis placed on winning, and a dislike for the coach (Petlichkoff, 1996). A further factor to be considered in relation to attrition in sport is the fact that children develop other interests over time whether it be other sport or non-sport activities which create a conflict of interests (Petlichkoff, 1996). Coakley and White (1992) established several factors which adolescents considered when making the decision to withdraw from sport. These included feelings of competence, past experiences, personal preferences as well as external factors such as cost, parental and peer influences. Drop-out rates in adolescent continue to be a major concern for sports leaders, coaches, and physical educators (Jõesaar et al., 2011). Sport psychology researchers have therefore sought to investigate the motives behind sport participation with the goal of achieving a greater understanding of the reasons behind drop-out, and to ultimately better inform practitioners involved in the delivery of child and adolescent sport (Jõesaar et al., 2011).

Motivation in sport is the key determinant behind every action taken and every effort exerted (Deci & Ryan, 2000). It is therefore fundamentally important to understand what influences people's motivated behaviour in sport. Although one must consider that an individual's motivations are determined by their own beliefs, cognitions, and values; significant influences can also be exerted by key social agents (Deci & Ryan, 2000). There is increasing evidence that social agents, for example, peers, parents and coaches in the sporting context, all play an important role in influencing motivation (Keegan, Harwood, Spray, & Lavalley, 2009). However, while many studies have used a quantitative approach to understand the factors of drop-out, it has been suggested that research should focus more on achieving a deeper understanding of the reasons why adolescents may withdraw from sport (Fraser-Thomas et al., 2008b).



## **Context of the Research**

Rowing is an Olympic sport that has gained considerable momentum in New Zealand in recent years due in part to the performance of our national rowing teams' performances, particularly at the London 2012 Olympics where New Zealand won three gold and two bronze medals. Rowing is a non-contact sport that requires a combination of technical skill, strength, cardiovascular fitness, rhythm and balance, therefore it is not surprising that rowing appeals to the masses (McNally, Wilson, & Seiler, 2005). New Zealand's success in rowing would appear to have led to an increase in entry level numbers, but there is a large drop off by the time athletes are 17 years old. In New Zealand from 2006-2012 the average rowing registration numbers for each school age group are as follows: Under 15's 1181, under 16's 830, under 17's 610 and under 18's 360 athletes registered (K. Strickland, personal communication, September 28, 2012). It is currently unclear as to why so many athletes leave a sport which has been shown to have many benefits and is a popular sport within New Zealand. However, to date there has been no evidence of studies which has sought to understand the high attrition rates evident in school rowing.

Sport New Zealand (Sport NZ) has started to encourage research to better understand the role sport and recreation plays in the lives of teenagers in New Zealand. Two recent studies were the Young Women's Views and Experiences of Sport conducted by researchers' at the University of Otago (2011), and the Sport New Zealand 2011 Young People's Survey. Within the New Zealand context these studies found that participation in organised sport drops off in the teenage years, particularly for girls. The Youth Participation in Sport Survey completed in New Zealand showed that 60-70% of 7-14 year olds participated in at least three hours of sport a week. However, 40% of girls and 50% of boys who were 15-18 years old participated in regular sport (Sport New Zealand, 2012).

For females in these studies, active recreational activities such as walking, running, and dance are the activities older girls spoke of doing most often, along with the organised sport of netball. Factors that would encourage more female participation in sport included: winter and summer seasons that do not overlap; having more sports teams at school; being better at sports; being able to play without joining a club or team; playing friendly games; and, getting more playing time. Constraints on participation included: the competitive nature of sport; concern about sporting ability; friends (if they

drop-out); lack of time; and costs (Burrows & McCormack, 2011; Sport New Zealand, 2012).

Overseas studies maintain that while many girls are put off competitive sport this does not mean they do not enjoy competition and competing. It is the overly aggressive and inconsiderate aspects of competition they do not like (Sport New Zealand, 2012). Girls like a challenge and showing their skills but also tend to be more considerate and team orientated rather than focused on individual achievements. It is important to acknowledge that while a focus on girls is important, the need to keep boys engaged in sport should also be part of the agenda (Burrows & McCormack, 2011; Sport New Zealand, 2012).

The 20% attrition rates shown in the Young People's Survey is not representative of rowing in New Zealand. The Rowing New Zealand figures for participation correlate to a 70% decrease from age 14 to age 18 years, considerable higher than the average (20%) drop-out numbers shown by Sport NZ. Therefore, this study undertook a qualitative approach to understand rowing drop-out in the New Zealand school system.

### **Choice of Research Methodology**

Adolescent drop-out has been a highly researched area of sport as people make sense of physical activity and the associated health benefits. There have been numerous studies completed on drop-out with the majority of studies utilising quantitative surveys and questionnaires, aiming to get large samples to enhance the generalizability of the findings (for example see Amorose & Anderson-Butcher, 2007; Gillet, Vallerand, Amoura, & Baldes, 2010; Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002). To date few have adopted a qualitative approach. From a personal perspective my interest in what appeared to be unusually high attrition rates in rowing led me to wonder if anyone had actually asked the athletes why they dropped out. Therefore, I felt that taking a qualitative approach was the best approach to answer my research questions and to learn more about this phenomenon in rowing in New Zealand.

The approach adopted in this study, therefore, is qualitative interpretive. A qualitative approach attempts to go beyond description, in an attempt to gain a deeper understanding of the phenomenon under study (Thorne, 2008). This qualitative study draws upon self-determination theory (SDT) (Deci & Ryan, 2000) as a guiding

framework for this research. SDT informed the analysis and interpretation of the results in this study, focusing on the three basic psychological needs that underpin this theory: competence, autonomy and relatedness. A content analysis was conducted, using SDT as a guiding framework.

### **Assumptions of the Research**

In adopting a qualitative approach it is important for researchers to present their assumptions at the onset, in order to alleviate against potential bias (Thorne, Kirkham, & MacDonald-Emes, 1997). The approach I opted for was qualitative interpretive or as some call it interpretive description. Thorne (2008) stated interpretive description studies should be supported by the researcher's background, knowledge about the topic, and by the literature. However, she cautioned that the researcher's knowledge and assumptions may impact on the data analysis process, often unconsciously (Thorne et al., 1997). One way to illuminate the researcher's knowledge and assumptions about the topic is to specifically identify these prior to commencing the study.

In any research there is an acknowledgement of potential influence from the researcher. In qualitative research it is readily acknowledged that the assumptions of the researcher may influence the research. By exposing these presumptions, it is hoped to limit the effect of any bias. This approach is utilised in many qualitative methodologies (Patton, 2002). The assumptions that I bring to this study are:

- The main reason adolescents would drop out of rowing would be because of coach conflict
- A secondary reason for dropping out of rowing would be due to pressure from parents and coaches
- The last main reason for dropping out of rowing would be due to the time conflict

Due to the nature of sport in New Zealand, different schools would hold different priorities regarding sport and more specifically rowing. Therefore, there are no standard guidelines for school rowing in New Zealand, meaning the experiences shared may be broader and more vivid to what I have experienced and formed opinions about.

As a rowing coach I have always experienced athletes dropping out to pursue other ventures. I believed that the athletes who dropped out were the ones who were not as able as the rest and therefore their departure was justified as they could experience

success elsewhere. However, what caught my attention was following one Maadi cup (New Zealand Secondary Schools Championship), I heard multiple athletes from one age group had dropped out from rowing programmes run by two prominent rowing schools in New Zealand. This intrigued me as I never realised that athletes who experienced success would want to drop out. Yet in this particular year there appeared to be two schools that experienced mass drop-out following what appeared to be a successful year. This made me wonder, what is going on in those environments for these successful athletes to walk away from something they were ‘good’ at? I felt it was important therefore, to try and capture athletes who had attended Maadi cup as a benchmark for competitive athletes who had dropped out.

With several years’ experience in rowing, as both a school and university rower and now a coach, I was keenly interested in this topic and my motivation was to pursue a study that would hopefully enable a better understanding of adolescent drop-out in rowing. My hope was that by undertaking this study I could identify why athletes row and why they quit to signify change in order to promote rowing as a long term sport not something that is done for two to three year years as it currently is by most people.

Even though I felt I had identified my assumptions, by conducting a pilot study I was able to see how these assumptions were influencing the structure of the interview. This was obvious following the pilot interview. One of the areas I had to change was to acknowledge and account for these preconceived ideas. By putting them to one side and allowing the participant to be open and express the experiences they wanted to, I realised how much more effective this was and the depth of the data that was able to come out of the interview. By the time I reached my first study participant, the experiences of rowing for that participant, were particularly revealing.

### **Aims of the Research**

The aims of the present study are as follows:

- To identify what rowers enjoy and do not enjoy within the sport
- Find out what is important to the adolescent athletes so we can better understand their needs and provide them with a positive rowing experience for long-term involvement
- Assist future young rowers to ensure all rowers have positive experiences

- Use the findings to educate rowing coaches, administrators, managers and other stakeholders to help create more athlete-centred rowing programmes

### **The Research Question and Purpose**

The research question for the present study is: What influences adolescent athletes' decisions to drop out of school rowing?

The purpose of this study was to capture the perspectives of those students who have invested time in rowing but removed themselves from the school rowing system. It was hoped that the information and experiences provided by the participants would be used to improve the rowing experiences for school rowers in the future.

### **Outline of the Research**

Chapter two presents a literature review related to the area of adolescent sport participation and drop-out. The chapter begins by broadly reviewing previous research on sport participation and attrition. The review then moves into the positive and negative influences of coaches, parents and peers with special consideration to the rowing coach. A section follows covering gender and body image issues in the adolescent. Lastly, relevant studies specific to the field of sport psychology are reviewed and the components of self-determination theory are introduced. The relevance of rowing is integrated within each section as required.

Chapter three outlines the methodological approach used in this research study. The chapter starts by reviewing the use of qualitative research and how self-determination theory was the optimal approach to select to inform the data analysis. The chapter moves on to discuss the specifics of the research process: study procedures, participants, data collection and data analysis. Finally, the ethical considerations are discussed in detail followed by the trustworthiness of the study which is considered and presented.

Chapter four presents the results and works through each theme for the study using the participants' own words to demonstrate the findings. This chapter is broken down into three main themes: why we row; the influence of the coach; and, adolescents and weight loss. These themes are discussed in relation to the basic needs of self-determination, competence, autonomy and relatedness.

Chapter five is the discussion presenting the main findings of the study. The same main themes used in the results section are again presented here. This section utilises previous research to support the current findings as well as present new ideas.

Chapter six wraps up the study by stating the overall conclusions. Limitations, implications and future study recommendations are discussed at the conclusion of the thesis.

## **Chapter 2: Literature Review**

### **Introduction**

This chapter reviews the literature concerning adolescent participation and attrition in sport. Particular attention will be paid to factors influencing adolescents to drop out of sport. Drop-out in sport refers to an athlete discontinuing their involvement in the sport as the cost of the sport, such as time and effort, outweighs the benefits, such as awards and feelings of competence (Gould, 2007; Petlichkoff, 1996). A number of studies have examined factors which influence drop-out in sport, such as: parent, coach and peer influences (Baxter-Jones & Maffulli, 2003; Keegan et al., 2009; Knight, Neely, & Holt, 2011); athlete experiences which impact on participation and withdrawal (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Keathley, Himelein, & Srigley, 2013); effects on motivation (C. B. Green, 2005; Jõesaar et al., 2011; Keegan, Spray, Harwood, & Lavalley, 2010); and gender differences (Slater & Tiggemann, 2010; Yungblut, Schinke, & McGannon, 2012). Current research includes both quantitative studies using questionnaires such as the Sport Motivation Scale (Amorose & Anderson-Butcher, 2007), and qualitative studies using either focus groups or individual interviews with adolescents (Yungblut et al., 2012), parents (Wall & Côté, 2007), and coaches (Strachan, Côté, & Deakin, 2011). However, existing literature on adolescent participation and drop-out has predominantly used quantitative research methods. To date, there has been limited qualitative research conducted in this topic area. The aim of this review is to examine the literature related to the reasons why adolescents decrease their involvement in sport, and the relevance this may have to rowing in New Zealand.

### **Adolescent Participation and Attrition in Sport**

It has been claimed that the leading reasons youth participate in sport are: for competence (learning and improving new skills); affiliation (being with and making new friends); team identification (being part of a group); health and fitness, competition (excitement, demonstrating skills); and to have fun (Coakley, 1992; Jurbala, 2012). These aspects of sport are considered important to youth physical development and have a positive influence on the development of social attitudes and behaviours such as a respect for others, cooperation and self-discipline (Smoll & Smith, 2010). However, youth participation can be influenced by the structure the coach provides and the priorities, values and behaviours they convey (Smoll & Smith, 2001). It has been

suggested that youth should be encouraged to participate in a variety of sports during childhood (ages 6-12) to allow these identified positive developments to occur before restricting the athlete to fewer activities during adolescence (Fraser-Thomas, Côté, & Deakin, 2008a; Fraser-Thomas et al., 2008b; Strachan, Côté, & Deakin, 2009b; Wall & Côté, 2007). By encouraging youth involvement in a variety of activities, basic movement skills such as running, jumping, hopping and catching can be enhanced (Balyi, 2011).

Research from Canada, United States of America (USA), Australia and Ireland has shown participation rates in youth sports peak at age 12 and from that age forward there is a common trend of decline (Bergeron, 2012; Jurbala, 2012; Physical Activity Council, 2012; Slater & Tiggemann, 2010; Woods, Tannehill, Quinlan, Moyna, & Walsh, 2010). Research to date has indicated that significant others, alternative commitments and athlete perception of the activity environment and their ability can all influence ongoing participation in sport (C. B. Green, 2005). If individuals feel they are good at an activity they are likely to enjoy it more and continue to participate. Conversely, if an individual feels less competent they are less likely to experience enjoyment and more likely to decrease participation in that activity (M. R. Weiss, Amorose, & Wilko, 2009). Adult attitudes of coaches or parents can also impact both positively and adversely upon adolescent participation in sport. However, behaviours which represent an over-emphasis on competition, outcomes or adherence to rules have been identified as contributing towards drop-out, as these adult perspectives may not be in line with the reasons adolescents have for their involvement (Bergeron, 2012; Coakley & White, 1992; Jurbala, 2012).

When investigating reasons for drop-out across the adolescent age group, there are certain commonly recurring factors. These factors include injury, a dislike for the coach, time conflicts, work and school life commitments, and access to sports (Belanger et al., 2011; Fraser-Thomas et al., 2008a, 2008b; Lim et al., 2011; Stewart & Taylor, 2000). It is to be expected that as youth grow up, various other areas of their lives begin to take precedence which can cause conflict with the sport or sports they may have previously invested time into (Fraser-Thomas et al., 2008a, 2008b; Lim et al., 2011; Stewart & Taylor, 2000). The behaviours and influence of coaches, parents and peers combined with the perceived learning environment (for example a mastery environment where effort and skill improvement are encouraged compared to a performance environment where social comparison with opposition and teammates is emphasised



[Weiss et al., 2009]), are critical components influencing adolescent participation as they can impact upon overall enjoyment and commitment to sport (Stevenson, 1990; Strachan et al., 2009a).

Kirshnit, Hams and Richards (1989) identified two major reasons which explained drop-out. Firstly, interest in other activities and conflicts (such as time) with these other activities (for example, involvement in other sport, social life, school work and employment) often resulted in choosing one activity over another. Secondly, the negative and overly professionalised nature of organised youth sports programs. These negative aspects include: the young athlete rushed through the grades to train with older athletes (Strachan et al., 2009a); specialising in one sport or one position (Strachan et al., 2009a); an increased focus on strength and conditioning training (Wall & Côte, 2007); and less deliberate play (activities designed to maximise enjoyment in sport while still enhancing motor skills such as running, jumping and throwing) (Wall & Côte, 2007). A number of studies investigating drop-out in youth sport reinforce these findings, with young participants indicating that an over-emphasis on winning resulted in them deciding to withdraw from sport participation (Petlichkoff, 1996).

The studies reviewed in this section suggest that the development of fundamental motor skills while making activities motivating and enjoyable should be the priority in adolescent sport. Further, these studies indicate the decline of sport participation from age 12 can result from a variety of factors. Ultimately, these studies have attempted to reach a greater understanding of why adolescents are dropping out of sport and have established common themes showing that when an athlete's needs are not met, it can set in motion the decision by the athlete to drop-out of sport (K. Green, 2010).

### **Coach Influences**

A range of studies have identified that the relationship with the coach can play a major part in an athlete's experience of sport. The behaviours the coach displays and the values they establish in the training environment are important factors in developing a positive coach-athlete relationship and enabling a positive experience for young athletes (Fraser-Thomas et al., 2008b; Mageau & Vallerand, 2003). Autonomy-supportive coaching (where the coach supports freedom, encourages autonomy and implicates individuals in the decision process) is an approach which emphasises the needs of the athlete ultimately providing them with a positive experience (Sarrazin et al., 2002).

## Negative Coach Behaviours

Having a poor relationship with the coach and experiencing coach conflict have been identified as reasons influencing athlete drop-out from sport (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Petlichkoff, 1996). Characteristics described by athletes of their least favourite coaches include; being mean, unfair, not encouraging, having poor coaching skills, poor communication skills and being too strict (Purdy & Jones, 2011; Purdy, Potrac, & Jones, 2008; Stewart & Taylor, 2000). A lack of one-on-one coaching and coach favouritism has also been shown to have negative effects on the training environment (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b). These types of coach behaviours and the environment in which they are conducted have led to athlete drop-out in sport.

Fraser-Thomas and Côté (2009) showed that having a poor relationship with the coach can contribute to drop-out: the negative relationship with the coach can be a result of poor communication, a coach having favourites, being intimidating (yelling, lack of empathy and only focusing on results), demonstrating a poor work ethic (being lazy, missing practices and putting minimal effort into training programmes), and displaying inappropriate behaviours (commenting on weight and crossing healthy boundaries of the coach-athlete relationship by knowing every aspect of their lives). Purdy and Jones (2011) also established poor coach behaviours as significantly impacting upon the athlete experience in their study of elite rowers. This ethnographic study examined how athletes develop ideas of what sort of coaching behaviours were perceived as “good” or “bad”. Perceptions around communication were deemed to be very important to these athletes particularly with regards to feedback and contradicting messages. Lack of feedback, negative feedback (“I never hear anything positive, I never hear if I’m doing anything right” [p.337]), lack of congruence, lack of explanation (and therefore understanding) of technique being employed, and confusing instructions all caused frustration for these athletes and negatively impacted upon their respect of, and relationship with the coach.

Studies consistently identify poor coach communication as an important factor. Communication comes in several forms such as providing information to the athletes, feedback on technique and performance in training and competition and conveying instructions (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; M. R. Weiss et al., 2009). The way in which feedback is provided to athletes has been widely

investigated (Amorose & Smith, 2003; Mouratidis, Vansteenkiste, Lens, & Sideridis, 2008; Stein, Bloom, & Sabiston, 2012; Tzetzis & Votsis, 2006). Athletes will interpret the information obtained in different ways, causing the athlete to feel either competent and in control of their behaviour, or feeling a lack of competence and control depending on their perception of the feedback provided (M. R. Weiss et al., 2009). Weiss et al. (2009) noted that positive and informational feedback from coaches enhances athletes' perceptions of competence, enjoyment and intrinsic motivation. Conversely, when coaches use abusive comments (often in pursuit of success), these types of punitive behaviours are more likely to induce feelings of resentment from athletes as opposed to improving performance. These negative approaches to feedback and athlete communication have been linked to adolescent drop-out (Walters, Schluter, Oldham, Thomson, & Payne, 2012).

### **Positive Coach Behaviours**

Studies looking at adolescents in sport and focusing on the impact of the coach have found common trends in positive coach behaviours. Favourable coach characteristics include being fair (Walters et al., 2012), being fun and nice, listening to and understanding athletes, encouraging individuals, being knowledgeable and pushing the team to do their best (Stewart & Taylor, 2000). These positive coach behaviours are shown to influence athlete motivation. Keegan, Spray, Harwood and Lavallee (2010) found that the manner in which coaches perform key roles, for example how they use instruction, selection and management, can positively influence motivation so long as it is conducted collaboratively, positively and tolerantly. Coaches who demonstrate a belief in athlete capabilities, have a positive focus and bring enthusiasm into trainings, increase athletes' confidence and motivation (Fraser-Thomas & Côté, 2009).

Coach communication stands out in the literature as an important factor for athletes. Positive communication from coaches includes providing meaningful feedback (specific, constructive and consistent), the adoption of a democratic coaching style (athletes having input into their training and competition), being supportive of the athlete, having good listening skills and a genuine interest in each individual (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b). Key strengths for coaches include treating athletes equally and being perceived as fair, teaching and monitoring goal setting practices, pushing athletes, and holding high expectations. The coach-athlete relationship can be enhanced by making special connections with each athlete including

establishing an interest outside of their sport performances, having the ability to joke with the athletes, serve as a role model, and partake in one-on-one coaching for everyone (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Keegan et al., 2010). These behaviours are perceived favourably by athletes and emphasise the importance of the coach-athlete relationship (Vallerand, 2001). The ability to establish an effective coach-athlete relationship has been stressed by many authors as being crucial to the athlete's satisfaction, motivation and overall performance (Mageau & Vallerand, 2003).

### **Autonomy-supportive Coaching**

With regards to coaching style, researchers (For example Deci, Schwartz, Sheinman, & Ryan, 1981; Pelletier, Fortier, Vallerand, Tuson, & Brière, 1995; Pelletier & Vallerand, 1996; Vallerand, 1997) have been interested in the effects of two interactive styles: a controlling style, where the coach acts in a coercive, pressuring, authoritarian way; and an autonomy-supportive style, where the coach supports freedom, encourages autonomy and implicates individuals in the decision process (Sarrazin et al., 2002). The positive coaching style characteristics, such as good communication, meaningful feedback, being fair and forming connections with each athlete as highlighted in the previous section, are a close representation to what has become known as autonomy-supportive coaching. This term was coined by Mageau and Vallerand (2003) who describe the autonomy supportive interpersonal style as having the following characteristics:

- (1) Provide as much choice as possible within specific limits and rules; (2) provide rationale for tasks, limits and rules; (3) inquire about and acknowledge others' feelings; (4) allow opportunities to take initiative and do independent work; (5) provide non-controlling competence feedback; (6) avoid overt control, guilt inducing criticisms, controlling statements and tangible rewards; and (7) prevent ego-involvement from taking place (p.886).

Therefore an autonomy-supportive coach would acknowledge the athlete's perspective and feelings and provide the opportunity for choice while minimizing the use of pressures and demands (Amorose & Anderson-Butcher, 2007; Gillet et al., 2010; Mageau & Vallerand, 2003). These autonomy supportive behaviours have been shown to have a positive influence on athletes by promoting the highest form of motivation, self-determined motivation (behaviour emitted out of choice through the pleasure and

satisfaction derived from participating in the activity), in both physical education and exercise domains (Gillet et al., 2010; Keegan et al., 2010). The effects of motivation will be discussed in more detail later in this review. In summary, coaches who are autonomy-supportive can increase their athletes motivation (Keegan et al., 2010).

### **The Rowing Coach**

Studies on rowing are limited, and relate predominantly to the high performance environment (Côté & Sedgwick, 2003; Purdy & Jones, 2011; Purdy et al., 2008). These articles, however, offer insight into the perceptions of rowers and some of the conflicts that arise around coach behaviour. Côté and Sedgwick's (2003) study undertaken in Canada interviewed both rowers and coaches to establish perceptions of effective coaching behaviour. The behaviours perceived as important by both the coach and the rowers were: 1) plan proactively, 2) create a positive training environment, 3) facilitate goal setting, 4) build athletes' confidence, 5) teach skills effectively, 6) recognise individual differences, and 7) establish a positive rapport with each athlete. These behaviours were the themes established from interviews with the athletes and coaches and are reflective of the autonomy-supportive behaviours proposed by Mageau and Vallerand (2003).

While Côté and Sedgwick's study interviewed both the coach and athlete, Purdy has looked at the athlete perceptions of the coach and training environment. The study by Purdy, Potrac and Jones (2008) used an auto-ethnographic approach to explore the primary author's own experiences with a coach, and highlighted the importance of recognising the power ridden nature of coaching. This study analysed the way in which a new coach entered an environment creating high hopes and excitement for the squad but over time the squad lost respect for the coach as she became unfriendly, went back on her word, and did not show appreciation of the rowers' commitment and sacrifices creating a tense environment. These coach behaviours caused the crew to work against the coach, question her competence, knowledge, professionalism and personal attributes resulting in an overall breakdown of trust and respect. A follow-up study by Purdy and Jones (2011) went into the elite environment to investigate the relationship between the coaches and rowers. This study revealed that these athletes have perceptions and expectations of how a coach should behave and when these expectations are not met evaluations and respect for the coach are compromised. These studies provide important insights into the social expectations of the rower towards the coach.

## **Parent Influences**

Parents have also been identified as significant influences on an adolescent's desire to continue participating in sport (Baxter-Jones & Maffulli, 2003; Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Knight et al., 2011). The nature of parent behaviour sits on a continuum between extremely negative and controlling, to positive and reinforcing (Humbert et al., 2006; Keegan et al., 2009; Knight et al., 2011).

### **Negative Parental Behaviour**

Parents are often the ones to introduce their children to sport particularly at a young age, often because the parents participated in that sport themselves or know other parents with children involved (Baxter-Jones & Maffulli, 2003). Early involvement in sport depends heavily on parent support and remains a key factor in the continued participation of adolescent athletes (Baxter-Jones & Maffulli, 2003; Fraser-Thomas et al., 2008b; Strachan et al., 2009a). Research into parental influences has shown that adults appear to focus more on outcome rather than effort and young athletes have identified that this can place pressure on them, making sport less enjoyable (Knight et al., 2011). Knight et al's (2011) comprehensive study on parent behaviours in sport asked female adolescent participants to compile a list of 'dos' and 'don'ts' for parents during competition in their respective sports. The 'don'ts' include; do not draw attention to yourself or your child; do not coach; and do not argue with officials. Fraser-Thomas and Côté's (2009) study of adolescent drop-out and engaged swimmers, showed that it was only athletes who had dropped out of their sport that spoke of parents providing coaching tips at practices and competition. Coaching advice from parents, particularly if it is conflicting to what the coach has said, can leave the athlete confused and distressed as to who to listen to as they do not want to disappoint either adult (Knight et al., 2011).

Offering rewards and bribes for performance can put a lot of pressure on young athletes and are also indicators of athlete drop-out (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b). Parents who insisted adolescents continue in their sport also create pressure with some drop-out athletes describing how parents made them feel guilty for wanting to 'quit' (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b). This adult behaviour can reflect a different approach to sport between adults and adolescents. When it comes to success (as in what is considered an achievement), research has shown that adults put more of an emphasis on winning, with some adolescents caring more about winning as they get older. Overall, adolescents value

effort, feeling competent and enjoyment of sport participation (Amorose & Weiss, 1998; Fraser-Thomas et al., 2008b; Knight et al., 2011).

### **Positive Parental Behaviour**

Other evidence suggests that parents support their children in many positive ways particularly through indirect means (transportation to and from trainings and competitions, purchasing equipment, fundraising, volunteering as officials, providing unconditional support and serving as role models in physical activity and work ethic), which are especially important to adolescents (Davidson & Jago, 2009; Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Keegan et al., 2009; Keegan et al., 2010). Some of the participants interviewed in these studies spoke of developing a close bond with their parents through the early morning car rides to training and experiencing the highs and lows of their sport with them (Fraser-Thomas & Côté, 2009). It was also identified by these participants that it was important for them to be able to discuss their feelings about wanting to drop-out with their parents and being given the chance to make their own decision (Fraser-Thomas et al., 2008b). These athletes were also those who had remained involved in their sport suggesting that parents giving them choice and supporting their decisions may be the best way to help them stay physically active and stay engaged in sport. Encouragement and support were also indicated as positive behaviours even when the parents did not understand the sport their child was participating in. By supporting their child's involvement and being proud of them was important in maintaining the child's investment and motivation in the sport (Davidson & Jago, 2009; Fraser-Thomas et al., 2008b). Other studies investigating parental involvement have found that how parent involvement is perceived (quality versus level) and behaviours can influence ongoing participation of the athletes (Stein, Raedeke, & Glenn, 1999).

In Knight et al.'s (2011) study, the 'do's' for parents suggested by these athletes related to providing support during pre-competition, competition and post-competition phases and include: helping athletes prepare for competition by performing basic functions such as making sure they get to the competition on time, having sufficient food intake and hydration before and during the competition; understanding how they mentally prepare themselves either by helping them relax by taking their mind off the competition or giving them space and time on their own; encouraging the entire team; focusing on the effort the team puts in not the outcome; providing positive and honest

feedback; and allowing the athlete time after the competition is complete so they can debrief with their coach and teammates. These findings show that parents play an important role in supporting and facilitating ongoing participation in sport, and the manner in which this support is provided (unconditionally, positively, and collaboratively) appears to be a key factor in positive and continued participation in sport (Keegan et al., 2009).

### **Peer Influences**

While coaches and parents have been identified as significant influences on sports participation, studies have also focused on the influence of peers on sports participation and attrition.

#### **Negative Peer Influences**

Adolescents experience conflicting interests as they get older, such as the desire to attend social occasions and other events that may clash with their sport commitments. Athletes speak of missing out on experiences that their peers had at various stages of their lives, such as sleepovers, parties and holidays with friends (Coakley, 1992). Adolescents may struggle to continue to participate in sport and still be friends with others outside of their sport if their friends do not understand their commitment to the sport (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b).

Conversely, the peers who are involved in the sport may be judgemental, place a lot of pressure on each other, be competitive and potentially create a negative training environment, taking some of the enjoyment out of the sport (Stewart & Taylor, 2000; Strachan et al., 2011; Yungblut et al., 2012). Some of the negative peer influences experienced by adolescents in sport can undermine motivation and cause conflict in friendships. Jealousies and rivalries seem to create the biggest conflict through the mocking of teammates they have beaten, displaying anger and criticism towards teammates, and an increase in pressure when teammates and opposition execute good skills (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b; Keegan et al., 2010). Females are more likely to speak about 'bitchiness' when talking about problems with teammates (Slater & Tiggemann, 2010). These characteristics reflect an ego-involved environment which is where the focus is on being the best and on peer comparison and can negatively impact upon motivation and the desire to participate (M. R. Weiss et al., 2009). Other negative influences experienced by adolescent athletes with their peers include frustrations at peers' poor work ethic, teammates skipping training sessions,



being off-task during training, and the effect of teammates moving on so no longer having friends within their team (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b).

### **Positive Peer Influences**

The positive role of peers revolves around friendship, cooperation and the reinforcement of roles and values among the team (Keegan et al., 2010). Positive peer influences come in the form of establishing unique friendships, sharing common goals, having a similar work ethic, genuine support and care for each other and a shared enthusiasm for the sport (Fraser-Thomas & Côté, 2009). These group dynamics in sport can also contribute towards positive team cohesion, where each member feels connected to the group (Weinberg & Gould, 2003). Studies have shown that group activities such as establishing team goals contribute towards both task and social cohesion because as commitment and importance of the goal increased for the athletes, group cohesion and unity increased too (Carron & Eys, 2012; Weinberg & Gould, 2003). Peers can also build confidence in each other through acts of kindness and friendship and provide emotional and moral support. These acts of friendship have also been shown to positively influence athlete motivation (Jõesaar et al., 2011; Keegan et al., 2010). Athletes tend to describe this type of environment they share with their peers as a sense of family (Fraser-Thomas et al., 2008b; Keegan et al., 2010). The significance of peer influence is also identified by those athletes who remain involved and state that ongoing participation is easier when they have supportive friends outside of the sport who understand their involvement (Fraser-Thomas & Côté, 2009).

Fraser-Thomas and Côté's (2009) participants (adolescent swimmers aged 14-18 years) emphasised the way their sport enabled them the unique opportunity to form special relationships with older and younger athletes. This allowed personal development in other areas to take place for these athletes by providing opportunity for leadership and role modelling. The participants also shared experiences of helping each other with homework while away on team trips to show the bond and positive environment within the group.

Peer satisfaction occurs if the athlete senses that everyone in the team has an important role and their teammates emphasise cooperation, personal involvement and sustained effort (Jõesaar et al., 2011). These factors are likely to be associated with a task-involving motivational climate which has been shown to satisfy the needs for

competence, relatedness and autonomy and positively influence motivation (Jøesaar et al., 2011). This type of environment might be considered as the source of the reciprocal energy peers experience (Fraser-Thomas & Côté, 2009).

### **Gender**

There is conflicting research relating to the influence of gender on adolescent attrition rates. Some research has suggested higher drop-out rates of females particularly during adolescence (Slater & Tiggemann, 2010). However, other research suggests that drop-out rates are in fact steeper for boys because fewer girls participate in sport prior to adolescence. Therefore girls move into their adolescent years (13 years and over) at a lower participation rate and continue to engage in less physical activity throughout teenage years (Whitehead & Biddle, 2008). The most recent Youth Participation in Sport Survey completed in New Zealand (Sport New Zealand, 2012) showed that 60% (female) and 70% (male) of 7-14 year olds participate in at least three hours of sport a week. By the time they are 15-18 years old there is a decrease to 40% of girls and 50% of boys participating in regular sport. Wales is one nation to report an increase in club memberships for 11-16 year olds since 2004 but this report also showed that this increase was seen mostly for males (Sports Council Wales, 2009). Although female involvement has been shown to increase overall in recent decades, males still participate in sports more than females in many countries (Chalabaev, Sarazzin, Fontayne, Boiché, & Clément-Guillotin, 2013). This may be due in part to the stereotyping of some sports and as females reach adolescence they do not want to be considered “butch” or seen to be competing in a ‘male’ sport (Chalabaev et al., 2013). As females move into adolescence there is evidence to suggest they do not want to be seen to be engaging in a male sport which contributes to drop-out in this age group. (Chalabaev et al., 2013; Slater & Tiggemann, 2010; Whitehead & Biddle, 2008; Yungblut et al., 2012).

Yungblut et al. (2012) identified some attitude and behavioural changes toward sport as females progressed into adolescence. They found that as the athletes got older, sport was used as a pathway to meet new friends. These adolescents enjoyed working hard and pushing themselves by way of challenge and feeling good, but they did not like doing sport in the middle of the day and having to go back to class ‘sweaty’, so this turned them away. When there was an emphasis on performance and competition it was difficult for those who still wanted to be involved but who were not considered the best. At times the athletes felt like they were been judged and did not want to let the team

down. These findings were consistent with other studies looking at female drop-out who showed insufficient time, conflicting interests, perceptions of femininity (including not liking being sweaty at school), self-perceptions around competence and body image and lack of enjoyment being the biggest factors influencing drop-out (Chalabaev et al., 2013; Slater & Tiggemann, 2010; Whitehead & Biddle, 2008). These articles show the need for coaches to be aware of gender differences and also the life stage the athletes are at and how that may impact upon program planning and delivery.

## **Body Image**

Sport and physical activity is used as by many adolescents as a way of keeping fit and maintaining a desired physical appearance (Pietrowsky & Straub, 2008; Yungblut et al., 2012). However this search for the perfect body and a competitive advantage comes with its concerns. When considering body image, weight and disordered eating in sport, research differentiates between lean-sports, (those that value aesthetics for example, gymnastics, running, dance and diving) (Reinking & Alexander, 2005), and weight class sport, where athletes have to obtain a certain weight before competition as a requirement of the sport (for example, wrestling, weightlifting and lightweight rowing) (Jorunn Sundgot-Borgen & Garthe, 2011). Both types of sports are identified as risk factors towards disordered eating habits and extreme weight loss methods. There is limited research in this field using adolescent participants, with a focus instead on elite and college athletes. However some of the weight, diet and body image issues identified in the studies of these elite and college athletes showed experiences as teenagers influenced most cases of anorexia nervosa, with initial onset occurring around 13-14 or 17-18 years of age (Reinking & Alexander, 2005; Thompson & Sherman, 2010).

Sports medicine health care providers have become more aware over recent years of the unique health concerns of athletic women relating to three conditions: disordered eating, amenorrhea, and osteoporosis, or best known under the term “the female athlete triad” (Reinking & Alexander, 2005 p.47; Thompson & Sherman, 2010). These studies highlighted that the prevalence of the triad components among female athletes in weight-restricted and aesthetic sports is high. Personality factors, pressure to lose weight, fluctuating weight or regular weight cycles, body dissatisfaction, early start of sport specific training, injuries, symptoms of overtraining, and the impact of coaching behaviour are all factors considered to increase risk for eating disorders

(Reinking & Alexander, 2005; Thompson & Sherman, 2010). There is increased concern and awareness for adolescent athletes' health from, health, sport, and exercise professionals when it comes to the dieting culture evidenced in some sports (Jorunn Sundgot-Borgen & Garthe, 2011). Due to the consequences related to restrictive eating, menstrual function and loss of bone mass it is strongly advised that adolescent athletes should not diet for athletic purposes (Jorunn Sundgot-Borgen & Garthe, 2011).

Weight loss methods for sports performance can include healthy dieting but also methods which are not considered 'normal', yet are normalised within a specific sport setting and can be acknowledged as accepted behaviours (Jorunn Sundgot-Borgen & Garthe, 2011). Extreme weight loss methods include restrictive diets, fasting, saunas, dehydration, laxative, diuretics, vomiting and excessive exercise (Jorunn Sundgot-Borgen & Garthe, 2011). These methods are often introduced by the senior team member (McMahon & Penney, 2011). These behaviours and weight loss methods can be brought about in a variety of ways. In sports with weight categories such as wrestling, judo and lightweight rowing, athletes aim to gain a competitive advantage by obtaining the required weight limit with the greatest possible strength, power and endurance. However they often compete in weight categories below their natural weight and have the weigh-in timing to contend with at competitions (Jorunn Sundgot-Borgen & Garthe, 2011). The effect of trying to maintain a required weight has contributed to athlete drop-out as the psychological and physiological effects start to take place. McMahon and Penny (2011) found that many of these experiences, including poor health practices toward the athletes' bodies, had begun for many as teenagers.

To date there appears to be limited research on the effects of body image for weight- category sports and the influence on athlete drop-out. However, several studies have found that girls worried about how their bodies looked in sport uniforms, particularly swimwear, and these concerns were increased in the presence of boys (Chalabaev et al., 2013; Slater & Tiggemann, 2010; Whitehead & Biddle, 2008). Also highlighted were the self-comparisons adolescent females made in relation to those who are perceived to be "skinnier" or more beautiful than themselves (Whitehead & Biddle, 2008). Though these factors may cause anxiety or prevent adolescents from future participation there are other issues related to body image and weight which affect some athletes in sport.

## **Lightweight Rowing**

Rowing offers lightweight events for both male and female rowers. The requirements of being a lightweight rower are that a male lightweight crew average weight should not exceed 70kgs and no individual rower may weigh more than 72.5kg. For females, a crew should have an average weight of 57kgs and no individual should weigh more than 59kgs (FISA, 2013). To meet these weight restrictions, athletes who are naturally heavier diet intensely. The dieting strategies of these athletes to maintain lightweight status lead to a risk of osteoporosis in women and a variety of dieting deficiencies in both sexes (McNally et al., 2005). Lightweight events are offered at international level, club and in some cases school level. New Zealand is one example of a country that includes lightweight events at school level, with a Lightweight Under 18 four and Lightweight Under 18 double for both boys and girls included in the school programme (New Zealand Secondary School Rowing Association, 2009).

There is limited research on adolescents and the effects of lightweight sport participation however Sundgot-Borgen (1994) reported that female athletes who later became eating-disordered often participated in lightweight sports during adolescence. On the other hand, Sanford-Martens, Davidson, Yakushko, Martens, and Hinton (2005) found no link of lightweight athletes of either gender reporting more problematic eating behaviours. This is further supported by Karlson et al., (2001) whose rowers in their collegiate sample did not show a higher rate of probable eating disorder cases. They did, however, find that rowers endorsed laxative misuse more than the other groups of athletes and non-athletes in their sample.

Going by the limited research on lightweight rowing thus far it appears that lightweight rowers do tend to have highly controlled eating habits (a risk factor for disordered eating) and are accepting of extreme weight loss methods such as laxatives and sweat runs, but are less likely to develop eating problems than runners or other lean body sports (Karlson et al., 2001; Pietrowsky & Straub, 2008; Reinking & Alexander, 2005). It has been suggested that this is because they are less concerned about the way their body looks and more concerned about competing at optimal level for their weight (Karlson et al., 2001). They also are trying to reach a certain weight for competitive reasons and have no reason for their weight to go lower than necessary (Karlson et al., 2001). However, the connection between weight restricted sports, specifically lightweight rowing, and its link to adolescent drop-out is yet to be investigated. This is

an area which requires further investigation particularly around some of the weight loss methods, pressure, support and choice around rowing lightweight from coach, parents and peers in adolescent lightweight rowers.

## **Sport Psychology**

### **Development**

It would appear that little attention has been paid to developmental issues in adolescent drop-out; however the few investigations that have examined age related issues have found differences between younger and older athletes who drop out (Petlichkoff, 1996). For example, youth under 13 have cited an over emphasis on winning, whereas high school aged drop-outs withdrew more because of conflict of interest. Adolescents considered such factors as feelings of competence, past experiences, personal preferences, as well as external factors such as money, parents and friends before making the decision to withdraw from sport (Petlichkoff, 1996). These findings show the need to be aware of the life stage the athletes are at and how that may impact program planning and delivery.

A lack of consideration of an athlete's developmental needs is linked to adolescent drop-out, because if the sport structure does not support their needs for participating and their ability to participate at the right level there is potential for drop-out. There are several approaches and ideas around how to progress athletes through sport to enhance their experience and maximise development. One worth considering is the Long Term Athlete Development (LTAD) model (Balyi, 2011). LTAD takes into consideration chronological age (number of years and days since birth) and developmental age (level of physical, mental, cognitive and emotional maturity) when developing training and competition structures (Balyi, 2011). Within the coach development framework in New Zealand, the characteristics and needs of athletes of different life stages are outlined as early childhood, middle childhood, late childhood, early teen, and late teen (SPARC, 2006). This framework suggests that early teens (13-16 year olds) require more structure to their environment with consequences if they are irresponsible. Athletes of this age require a variety of training experiences and simple tactics but still need to be challenged both physically and mentally and to be included in decision making. The older teens (17-19 year olds) require more specific and precise training, more ownership and control, making them overall more independent and specialised. However, both groups still require encouragement and support and need

their lifestyles to be recognised, in other words, need to be accepted as individual humans acknowledging that there are other areas of importance in their lives (SPARC, 2006). What both these frameworks consider is how to provide an appropriate sport structure where the athletes will get maximal benefits. These types of models can assist coaches in designing programs that are appropriate for the participant's level of development to ensure the athletes' needs are being met both physically and cognitively which is important in preventing athlete drop-out (Balyi, 2011).

Another area investigated related to athlete development and drop-out is the issue of specialisation. Specialisation is a natural progression of sport as athletes' progress from one level to the next becoming focussed on a particular sport or perhaps a particular position within a sport. This can result in, an increase in training hours, specialised fitness work such as weights, running and cycling, attending training camps and being promoted to a higher or more competitive team or squad (Strachan et al., 2009b; Wall & Côte, 2007). Early specialisation in sport has been shown to lead to drop out as it often results in young adolescent athletes being trained more like adults. This means only been involved in one activity and having less time for deliberate play, both of which have been shown to be important factors related to drop-out in adolescent sport (Strachan et al., 2009b; Wall & Côte, 2007). Strachen et al., (2009b) define the sport specialising years as 13-15 years old and the investment years age 16 onwards. Wall and Côté's (2007) study shows the effects of early specialisation as their drop-out participants were 14.5 years of age. Wall and Côté (2007) also found that ice hockey players who dropped out began off-ice training at a younger age and spent more time in off-ice training compared to active players. This approach to treat sport more seriously and less playfully may undermine athlete intrinsic motivation over time (Wall & Côte, 2007).

### **Motivation and the Psychological Mediators**

The field of sports psychology has introduced a number of theories to help researchers better understand reasons for ongoing participation in sport. Motivation theory and reasons for attrition in sport participation helps us to understand better why some people continue and others discontinue in sport and physical activity (M. R. Weiss & Amorose, 2008). Common themes around physical competence, social acceptance and enjoyment are important components of understanding motivation and the theories which have developed to learn more about the phenomenon of attrition and participation

(M. R. Weiss & Amorose, 2008). Self-determination theory (SDT) has been presented as an appropriate conceptual framework from which to study sport persistence and drop-out (Calvo, Cervelló, Jiménez, Iglesias, & Murcia, 2010).

Developed by Deci and Ryan (M. R. Weiss & Amorose, 2008), it is a theory composed of four related sub-theories, including cognitive evaluation theory, organismic integration theory, causality orientation theory, and basic needs theory (M. R. Weiss & Amorose, 2008). These theories all share the concept of the fundamental psychological needs for competence (where we perceive our behaviour is effective and that we have adequate ability), autonomy (we perceive we are the origins of our own behaviour and have control of our actions), and relatedness (represents the need to feel secure and a sense of belongingness or connection to others) (Amorose & Anderson-Butcher, 2007; M. R. Weiss & Amorose, 2008). According to SDT, motivation comes in three forms. Firstly, intrinsic motivation, which is referred to as; performing an activity for the pure enjoyment of it in absence of any external regulators. Secondly, extrinsic motivation, performing an activity for an external benefit, and lastly, amotivation (a state in which purpose for undertaking an activity is unknown, it is neither intrinsically or extrinsically rewarding) and that the basic psychological needs can determine where a person may fall on the motivation continuum (Gillet et al., 2010). Intrinsic motivation is the most powerful form of motivation, where an athlete participates in the sport for themselves. This is perhaps best illustrated by Csikszentmihalyi's (1990) concept of flow, where someone participates in an activity for the all encompassing enjoyment of the experience.

### **Dropping Out as a Motivational Consequence**

A significant body of research has been conducted in the sports domain using SDT and the effect on motivation, sport participation, and attrition. Generally these studies have used questionnaires to get large quantities of data on athlete motivation. Some of these questionnaires include the Sport Motivation Scale (Amorose & Anderson-Butcher, 2007; Calvo et al., 2010; Gillet et al., 2010; Hollembeak & Amorose, 2005; Sarrazin et al., 2002), Sports Climate Questionnaire (Amorose & Anderson-Butcher, 2007), Perceived Motivational Climate in Sport Questionnaire (Ntoumanis, 2001; Sarrazin et al., 2002; M. R. Weiss et al., 2009), Perceived Competence in Life Domains Scale (Sarrazin et al., 2002), Perceived Autonomy Support Scale for Exercise Settings (Gillet et al., 2010), Situational Motivational Scale



(Gillet et al., 2010), and the Leadership Scale for Sports (Hollembeak & Amorose, 2005).

These studies all found that high levels of amotivation and low levels of intrinsic motivation were predictive of intentions to drop out (Calvo et al., 2010; Sarrazin et al., 2002). These types of motivation correlated with low levels of feelings of relatedness and autonomy and often represented ego-involved climate (a sport environment where social comparison and outcomes are used as measures of success) which in turn cause having a sense of autonomy and self-determination to decrease. Thus it has been recommended that intrinsic and self-determined forms of extrinsic motivation should be nurtured to facilitate athlete persistence in sport (Calvo et al., 2010; Gillet et al., 2010; Sarrazin et al., 2002). However these studies also showed a positive side. Weiss et al's (2009) findings revealed that positive and informational feedback from coaches along with the creation of mastery and performance climates, were significantly related to athletes' perceptions of competence, enjoyment and intrinsic motivation. Other studies also support this, that when the climate is task involving, then perceptions of autonomy, competence and relatedness are high and enhance self-determined motivation. The more the athletes feel they are competent, autonomous and have a sense of relatedness, the more their reasons for participating are self-determined in nature (Amorose & Anderson-Butcher, 2007; Sarrazin et al., 2002).

Qualitative studies investigating motivation are limited. Williams, Whipp, Jackson and Dimmock (2012) used semi-structured interviews to understand the factors that determined feelings of relatedness in adolescent female golfers. Those who felt relatedness support from parents, coaches and peers as well as a sense of belonging and connection to their club appeared more likely to continue playing golf. These findings are consistent with Calvo et al, (2010) who found that a lack of relatedness support from these social agents was a significant predictor of social drop-out. Keegan et al., (2009) used semi-structured focus groups with 7-11 year old girls and boys to find out what behaviours among parents, peers and coaches influenced motivational outcomes. Their findings showed that at this early age coaches and parents have a strong influence on motivation, showing similarities in leadership style, feedback, and pre-performance motivating behaviours. However the influence of peers at this young age appeared to be less significant. The behaviours were less consistent compared to parents and coaches, potentially due to the number of peers participating and the varying relationships they share between them.

## **The Motivational Influence of the Coach**

The above studies highlight the importance the coach plays in either enhancing or diminishing self-determined motivation. It is posited that controlling environmental conditions (for example, using rewards, deadlines, threats) undermine self-determined motivation, whereas autonomy-supportive contexts facilitate self-determined motivation (Gillet et al., 2010). Consistent with SDT (Ryan & Deci, 2000) as well as Vallerand's (2001) hierarchical model of motivation, studies have provided evidence that the relationship between coaching behaviours and motivation is mediated by the needs for competence, autonomy and relatedness. While many dimensions of a coach's behaviour may affect athletes' motivation, one that would appear particularly relevant is the extent to which the athletes perceive their coach to be autonomy supporting versus controlling in their interactions with the athletes (Amorose & Anderson-Butcher, 2007).

Amorose and Anderson-Butcher's (2007) results show that high levels of intrinsic motivation were associated with the perception that coaches provided frequent positive and informational based feedback and low frequencies of punishment oriented feedback and ignoring behaviours. All three of the needs were positive predictors of the athletes' motivational orientation; the more the athletes felt competent, autonomous and a sense of relatedness, the more their reasons for participation were self-determined in nature. This study also found the degree to which the athletes perceived their coach to be autonomy-supportive in their interactions positively related to each of the three needs as well as demonstrating a significant indirect effect on the athletes' motivational orientations. In the context of the coach-athlete relationship it is thus in the athletes' best interest for coaches to nurture their athletes' intrinsic motivation and self-determined types of extrinsic motivation (Mageau & Vallerand, 2003). These studies show the importance of educating the coaches on the impact their behaviour has on athlete motivation in order to bring about changes in coach behaviours that can lead to positive changes in athletes' motivation and level of persistence (Sarrazin et al., 2002).

## **Summary**

Sport has consistently been found to be both a popular and time consuming activity in which many people take part (Fraser-Thomas & Côté, 2009). Adolescents participate in sport primarily to experience enjoyment, health and fitness, skill learning, competition and to be with friends (Jurbala, 2012). However, research on youth sport participation shows a peak in participation at age 12 followed by a continuing decline

throughout adolescence (Bergeron, 2012; Jurbala, 2012; Physical Activity Council, 2012; Sport New Zealand, 2012; Woods et al., 2010). Factors which contribute to the decline in adolescent participation include: time conflict, injury, coach conflict, pressure to perform and other interests such as work, school and social life (Belanger et al., 2011; Fraser-Thomas et al., 2008a, 2008b). Qualitative interviews with adolescents have repeatedly brought up significant others' influences on adolescent participation and withdrawal (Fraser-Thomas et al., 2008a, 2008b; Knight et al., 2011; Strachan et al., 2011).

Simply identifying reasons for sport withdrawal may no longer be appropriate. Rather, a better understanding of the factors influencing drop out of sport should be the focus of adolescent sport withdrawal research. From the literature reviewed here it would appear that the most appropriate framework that could be adopted to build upon previous attrition research, and to inform a better understanding of this issue in adolescents rowing, can be drawn from the sport psychology literature specifically related to SDT. When trying to explore these findings within rowing it is challenging as current qualitative research in rowing is limited to high performing athletes. Rowing in New Zealand at an adolescent level shows dramatic drop-out rates on registration numbers and is an area in need of further investigation. While rowing research is limited, attrition research thus far could lead to assumptions for drop-out related to time constraints, pressure, coach conflicts and sport specialisation. However, without actually asking the athletes who have been affected and made these decisions these will remain assumptions. There would appear to be a clear need for a study to explore the perceptions of adolescent rowers to find out, what they enjoyed about rowing, what their experiences were like of the sport and ultimately what influenced them in their decision to discontinue in the sport.

## **Chapter 3 Methodology**

### **Introduction**

This chapter discusses the research methodology and the philosophical underpinnings of the present study. An in-depth description of self-determination theory is provided along with an explanation of how it is applied in this study. This chapter also includes a description of the research methods, and the processes related to ethical consent and considerations. Details around participant recruitment, data gathering, data analysis and rigour are explained.

### **Qualitative research**

Qualitative research is an inquiry completed in the natural setting, an exploratory study of experience-as-lived and everyday life in the world (Magilvy & Thomas, 2009). The goal of a qualitative study is “to produce a rich description and in-depth understanding of the phenomenon of interest, the cultural or lived experience of people in natural settings” (Magilvy, 2003 p.123). With qualitative study, the researcher is the instrument of research. Data can be generated through asking questions (in personal interviews or focus groups), making observations, note taking, and participating in an event and reflecting on the participation, or taking photos (Magilvy & Thomas, 2009). The researcher explores meanings and insights into a given situation while allowing for individual perceptions, interpretations and contexts of participant experiences (Carpenter, 1997). The data is examined to notice similarities and differences in the data, categories, patterns, and themes that are described and sometimes interpreted to provide a rich description of the experience-as-lived (Magilvy & Thomas, 2009).

Qualitative research refers to a number of theoretical perspectives, however, all these perspectives share certain characteristics. These include: exploring people’s everyday lives and how they make sense of their experiences; conducting research in real-life settings; presenting data in a narrative form in the words of the individual; and the researcher being part of the research process (Carpenter, 1997). The choice of methodology lies in the researcher’s ability to recognise which paradigm will best answer their research question (Grant & Giddings, 2002). The current study complied with these characteristics by conducting one-on-one interviews to understand the phenomenon of attrition in rowing and analysed the data using a theoretical framework

to glean a deeper understanding of the participants' words. The following sections detail the approach adopted in this study.

### **Research methodology**

Methodologies in the interpretive paradigm (grounded-theory, phenomenology, and ethnography) share assumptions about what counts as truth and what it means to understand human experience yet they differ in the theoretical lens of how they view the world (Grant & Giddings, 2002). These approaches require different aspects of experience, methods, data collection and analysis. Interpretive description was designed to answer clinical questions rather than develop theory and has theoretical foundations within a traditional naturalistic inquiry perspective (Audulv, 2013). Interpretive description fits within the present study as the intention of the research was to illuminate current positive and negative factors in the school rowing environment, not to develop theory but to build on current research in a specific context. Though interpretive description is liked for its straightforwardness, some researchers may be critical in its analysis as it is considered limited in its ability to move beyond what is being said (Smyth, 2012). However, without a specific theoretical underpinning, interpretive descriptive research allows the researcher to hear the voices of people, analyse themes and present an overview of the data (Smyth, 2012). In the current study, interpretive description provided the necessary first step in the phenomena under study while maintaining a stronger analytical approach than is possible under qualitative description.

The interpretive paradigm requires the researcher to develop an inter-subjective relationship with the participant. Within this paradigm both the researcher and the participant are involved in data collection with the researcher being at the fore front of analysis (Grant & Giddings, 2002). In the current research, the semi-structured nature of the interview allowed the participants to express a full range of beliefs, feelings and behaviours. The analysis process stimulated interpretation of events and stories, and allowed commonalities to be recognised and established as new ideas or themes. The findings of the qualitative inquiry are then linked to previous research, either in support or to contradict earlier findings (Carpenter, 1997).

When working in the interpretive paradigm the researcher attempts to understand the meanings people attach to the events of their lives. The researcher interprets the significance of events that the participants share and then searches for

understandings that the participant themselves may not have seen (Grant & Giddings, 2002). Interpretive description is designed to create ways of understanding phenomena by providing an account using reflection and critical examination to guide and inform practice. The present study enabled interpretation by “unpacking” the descriptive data in an attempt to uncover what was influencing adolescents to disengage from school rowing. Sandelowski (2000) claims that while qualitative interpretive description is especially open to answering questions of special relevance to practitioners, this qualitative approach can also be influenced by other approaches which she describes as “hues” or “overtones” (p.337). Neergaard, Olesen, Andersen and Sondergaard (2009) agree, suggesting qualitative approaches often aim to develop concepts and analyse data in a reflective or interpretive interplay with existing theories. During the course of the current research, data collection and analysis was informed by self-determination theory (SDT; Deci & Ryan, 2000). SDT was used in the present study to assist in analysing the data. SDT provided a framework to understand how the rowers’ experiences and decision to drop out of rowing were influenced by the psychological needs of competence, autonomy and relatedness. It also meant the research could expand on the current literature on SDT in sport, by adding adolescent rower perspective through a qualitative approach.

### **Self Determination Theory**

Self-determination theory is increasingly being used to understand motivation in sport and physical activity (M. R. Weiss & Amorose, 2008). SDT suggests that people are naturally self-motivated, active, interested in pursuing activities that are enjoyable, and are inherently motivated to master their social environment (Deci & Ryan, 2000). SDT also proposes that “all humans have a need to feel competent, autonomous and related to others” (Deci & Ryan, 2008 p.15). Competence represents the need to perceive our behaviour and interaction with the social environment as effective (M. R. Weiss & Amorose, 2008). Autonomy represents the need to perceive that our behaviours and thoughts are freely chosen and we are in control of our actions (M. R. Weiss & Amorose, 2008). Relatedness represents the need to feel connected to those around us and experience a sense of belongingness (Amorose & Anderson-Butcher, 2007; Ntoumanis, 2001; M. R. Weiss & Amorose, 2008). Situations that satisfy these needs will promote optimal functioning, whereas situations that inhibit satisfaction of these needs will lead to non-optimal outcomes (M. R. Weiss & Amorose, 2008). The present study aims to build upon previous research (for example Pelletier, Fortier,

Vallerand and Bri  re (2001), who found more autonomous swimmers were likely to remain involved in their sport) to examine reasons for adolescents' decision to drop-out from rowing.

Of the four mini-theories of SDT (Cognitive Evaluation Theory, Organismic Integration Theory, Causality Orientation Theory, and Basic Needs Theory), basic needs theory proved an appropriate framework for the current study because it covers all three of the basic needs and allows for individual differences (M. R. Weiss & Amorose, 2008). The theory was also used to inform the questions asked of participants and in extracting the data for a more comprehensive analysis. During data collection, questions were asked to determine the rowers' feelings and perceptions of their competence within the squad, to identify the options provided to fulfil their need for autonomy in training and racing, and to establish rowers' perceptions of feelings of relatedness and belonging in the rowing environment. Analysis drew on these three needs to provide a framework to better understand the behaviours and actions within the rowing environment that supported or undermined the athletes' motivation to remain involved in rowing.

### **Research design**

This interpretive description study utilised semi-structured interviews. Content analysis was used to analyse the data, using the SDT framework which added depth to the analysis and created a link and progression to current literature on adolescent attrition. This approach differed from typical studies in the field of adolescent physical activity and SDT which often utilize questionnaires and surveys (Amorose & Anderson-Butcher, 2007; Hollembeak & Amorose, 2005; Patton, 2002; Sarrazin et al., 2002). Interviews were used as they were considered advantageous to the area being explored by allowing a deeper understanding of athlete thoughts and feelings to emerge.

### **Pilot Study**

Prior to commencing data collection, one pilot study was conducted. The pilot study allowed for personal development of the research process by providing the opportunity to assess the effectiveness of the interview questions and process, and also the direction of investigation. The pilot study was completed with one 17 year old male who had rowed for his school. The participant had rowed for two seasons meaning he also matched the study criteria. The interview was completed approximately six weeks

prior to data collection, allowing time to analyse the interview and develop it further for the first participant interview.

As a result of the information gained from the pilot study, the interview schedule (see Appendix 3) was able to be revised. Significant reflection and learning occurred around asking more probing questions and listening to the answer provided by the participant and letting that guide further questioning. Several questions were developed from the initial analysis and informed the structure of the next interview. The pilot interview also brought up some new content which was unexpected requiring further reading around different areas of attrition in sport.

By reading and re-reading the transcript, data and information was able to be drawn out of the quotes. This was useful as a way to practice analysis and work through the content to prepare for the true data collection. The pilot interview allowed further development and reflection on interview techniques to be utilised. Most importantly, analysis of the pilot transcript enabled me to identify where follow-up questions could have been introduced. Understanding how to listen more actively were key learning experiences in this process.

The information gained from the pilot study proved invaluable. It served to familiarise the researcher with the interview process, data collection and initial data analysis. The pilot participant was also provided an opportunity to provide feedback to the researcher in relation to the relevance of questions and any thoughts he had on the interview. The participant felt the interview was thorough and felt he had an opportunity to speak freely about all aspects of his involvement in sport.

### **Procedure**

Thirteen High Schools in a large urban area of New Zealand who offer large rowing programmes were invited to participate in this study. Schools were deemed to have large rowing programmes if they had more than 20 students in their rowing programme in the 2012/2013 season. Using the New Zealand Rowing information website 'www.rowit.co.nz' schools were identified by the number of rowers competing at the 2013 regional Secondary School Championship. This regatta was chosen as schools with large rowing programmes are likely to take all their rowers to a regional event and fewer to the New Zealand Secondary School Rowing Championship (Maadi



Cup) therefore providing a better indication to the true number of athletes in their programme.

Of the schools approached the largest programme had 70 rowers competing at the regional tournament while the smallest had 24 athletes competing. Seven of the schools were co-educational, seven single sex schools (three female, four male), six were private schools while seven were public schools.

The Auckland Rowing Association made initial contact with all the schools Sports Directors via email (Appendix 2). Once the email had been distributed a follow up phone call was made to check the schools interest in having the information sent out to them. All schools agreed to have the information sent to them. This information came in the form of an email with a letter addressed to the Sports Director (Appendix 2) asking their interest and permission for the study to take place in their school. Of the thirteen schools approached seven agreed to take part.

The Sports Director notified the researcher of how many students fit the eligibility criteria so the correct number of Information Sheets (Appendix 3) and Consent forms (Appendix 3) could be delivered to the schools and handed out to the students. In line with ethical guidelines, the consent forms were returned in an unmarked envelope which was collected from the school one week after delivery.

The information sheet outlined who the researcher was and the intention of the study so only those who felt comfortable interacting with an adult, and answering questions, were likely to consent. Common language was used by the researcher as to not overwhelm the participants with adult or academic jargon. Dress code and the environment were also considered in the bid to create an informal and relaxed environment to allow comfortable conversation. During this process it was important to keep all information and participant contact to an age appropriate level by ensuring that communication and information was provided in a clear manner to ensure understanding. On consultation with experts in the field of student education it was advised to keep information brief when working with adolescents with the main points written in bold so they stand out (Appendix 4). All the participants were very willing to help and gave open and honest accounts of their experiences.

## **Participants**

Information sheets inviting the students to take part in the study were delivered to 34 students, nine were returned and seven were chosen to take part. Students who signed the consent form were excluded at random if there were too many from one school. This was necessary to prevent a bias towards one particular training programme. It was decided that a maximum of two students from each school would be taken into the study in order to prevent this bias from occurring. Of those who consented, five of the rowers had completed three seasons with their school while two had completed two seasons. Five of the participants had represented their school at one or more Maadi Cups. The youngest participant was 16 years of age, the oldest 18 years of age; five of the participants were 17 years of age. As per ethics requirements with all participants being over 16 years, parents were not required to sign consent forms. All participants were happy for the interview to be recorded and transcribed and understood how the information they provided would be used.

## **Data collection**

Data was collected through semi-structured interviews. This type of interview has been described as a ‘purposeful conversation’ involving open-ended, broad and non-descriptive questions (Carpenter, 1997). Examples of questions from this study (see Appendix 3) included ‘What did you enjoy about rowing’, ‘How did that make you feel when the coaches didn’t put as much time into your crews?’, ‘What was motivating you during this period?’ and ‘What were the main reasons you dropped out of rowing?’ Data collection commenced on 15 August 2013 and was completed on 4<sup>th</sup> September 2013.

The interviews were scheduled to take approximately 30 minutes. While most fit in this time frame, there were two interviews which went on longer when the participant was keen to talk further. On these occasions the participant was asked if they were happy to continue with the interview, which they were. In line with a semi-structured interview, questions were used to guide the interview, but the interview structure was very open and encouraged the participant to lead the discussion (Baumbusch, 2010). This was achieved by asking an opening question and using the participant’s response to guide the follow up questions (see Appendix 3 for interview guide). Key words and follow-up questions were written down as the participant spoke. However this interview process was often dependent on the participant and the way they communicated their thoughts and experiences.

There were initial concerns that it may be difficult to get responses out of the adolescent participants and it was important to be aware of making sure it did not feel like an interrogation and that there were no right or wrong answers (Adams, 2010; Bassett, Beagan, Ristovski-Slijepcevic, & Chapman, 2008). Chocolate biscuits and some opening questions at the beginning of the interview were used to develop a rapport with the participant. Each participant was different in the way they interacted, however, each opened up more as the interview progressed and they started to relax and share their stories and experiences. All the participants provided some insightful comments and revealed interesting experiences throughout the interview.

### **Analysing the data**

Qualitative data analysis is complicated by the volume of data generated creating a challenge for the researcher to conduct an in-depth analysis while presenting the findings in a concise and logical way (Carpenter, 1997). Directed content analysis (Hsieh & Shannon, 2005) was the main method used for this research study, however at the beginning of the current data analysis process Braun and Clark (2006) proved a useful start point. Braun and Clark's (2006) phases of analysis was used as a guide for the initial analysis process by providing the basic analytical steps to follow. Table 1 outlines the analytical process Braun and Clark suggest. This table was a useful guideline, however the current study had main themes to code under SDT so step two was made easier by coding into predetermined groups. As the analysis progressed sub-themes were also identified.

The data was transcribed verbatim following each interview which represented the first phase of analysis. By listening, writing and reading what was being said in the interview, thoughts and themes were being formulated from the start (Wolcott, 1994). Following the first interview a new topic which was not considered prior to data collection was brought to the fore. This prompted new questions to be asked in the other interviews as well as being aware of undertones in the same area. As each interview and transcription took place, awareness around what was important to rowers heightened and allowed the identification of common positive and negative experiences which arose. Completion of transcribing marked the end of the first phase in the analysis process (Patton, 2002).

**Table 1:** Phases of thematic analysis (Braun & Clarke, 2006 p.87)

Phase	Description of the process
1.Familiarising yourself with the data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2.Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3.Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4.Reveiwing themes:	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

The qualitative software tool, Weft QDA (Fenton, 2006), was utilised to sort the qualitative data into key themes and sub themes. The transcripts were individually loaded onto the programme in preparation for the first round of coding. In order for the present study to adopt cross-reference rigour, two other experienced qualitative researchers (one sport sociologist and one sport psychologist) examined the theory codes and themes. These colleagues were able to confirm that the quotations were a true representation of the codes and that the sub-themes within accurately reflected the quotations. The basic psychological needs definitions from SDT were analysed in relation to sample extracts from the transcripts to ensure the framework was being used consistently. These definitions and extracts were important in order to set clear boundaries which enabled the researcher to confidently proceed with the analysis.

Analytical comparisons were conducted on the pilot data initially with the subsequent analysis being verified by a series of regular review meetings.

Once the first transcript was uploaded on to Weft QDA, the first stage of coding was able to begin. Initially six main codes were used; positive competence, negative competence, positive autonomy, negative autonomy, positive relatedness and negative relatedness. Analysis resulted in sub-headings emerging (for example under negative competence was coach behaviour). Extracts from the transcript were separated into these headings based on whether the statement was deemed to be positive (in relation to the three needs) or not. Where data was considered important but did not have a specific place under the existing codes a new code was established (Hsieh & Shannon, 2005). On completion of the first transcript coding, a follow up meeting took place to discuss the analysis to date for confirmation of the analysis approach and theory being used. Clarity was provided around areas of uncertainty and a clear understanding of each need and how the data fits emerged through the discussions. Following this meeting, transcript one was re-coded into clearer themes; Competence, Autonomy and Relatedness, each with sub-themes of positive and negative influences and any other themes as they arose (for example Autonomy – positive – boat feel).

To ensuring rigour in the coding, transcript two was also looked at by the primary researcher, the sport psychologist and sport sociologist researchers using Weft-QDA following guidelines established at the previous meeting. There was reliable consistency between the transcription of interviews one and two which provided a solid foundation for the remainder of coding. The coding of the next five transcripts followed. Initial coding went smoothly as it was a matter of reading a statement and putting it into the code which fit best. As new information emerged, a new code was added.

Once all transcripts were coded, each section was read separately (for example all quotes within Competence) to see if all the quotes were correctly placed. This researcher immersion in the data through constant reading and re-reading allowed deeper understanding and appreciation of the theory and the data to emerge. As each section was read, ideas began to formulate and note taking and voice recordings became important methods utilised to ensure ideas were recorded as they arose. Analysis was dynamic and fluid as even within the set categories, new themes and explanations began to emerge and change, and as a consequence facilitated a deeper understanding of the

data. Common themes and thought processes started to formulate themselves under each main code (Competence, Autonomy and Relatedness).

### **Ethical considerations**

The Auckland University of Technology Ethics Committee granted ethical approval for this study on 3 July 2013 (Appendix 1). Ethical commitment was adhered to by carefully considering the ethics committee's recommendation of allowing participants the option of having a support person in the interview with them and ensuring interviews were conducted outside of class time. Below are special ethical considerations for this study.

### **Consultation**

Consultation took place with two AUT staff members from the Pedagogy stream in the School of Sport and Recreation (Appendix 4). The two staff members (one male and one female), are experts in the field of education as ex-high school teachers, Heads of Physical Education Departments and also parents of teenagers. This consultation process acknowledged recommendations towards accessing the school and then working with the adolescent participants.

Initial contact with the schools was made through the Sport Director at the school as they have delegated responsibility for all sports related activities within the school. An offer was made to go into the school to discuss the study with the Sport Director and ensure they were aware that the school will remain anonymous at all times. This was done twice at the Sport Director's request.

It was felt that teenagers would be more than willing to share their emotions and opinions in a safe and private environment. Therefore it was confirmed that the interviews would take place on the school grounds. All participants, by taking part in the research, were reassured that their conversations would remain private; their anonymity would be preserved, and as a consequence would feel safe taking part in this research.

### **Informed and Voluntary Consent**

All interested participants (aged 16-18 years) were first made aware of the study through an information sheet delivered through their school. Following their interest in the study all participants completed a consent form (Appendix 3) which was attached to

the back of the Participant Information Sheet (Appendix 3). These forms stated voluntary consent and the right to withdraw at any stage which was reinforced at the start of each interview.

### **Confidentiality and Anonymity**

To maintain anonymity no schools or individuals were identified in this research. The school Sports Director collected consent forms so was aware of who was participating but did not know what was discussed. The consent form with the participant's name and school were stored in a locked filing cabinet. Code names of participants and schools were used on all working documents to ensure no identifying features were exposed.

### **Minimisation of risk**

The nature of interviewing can sometimes reveal negative feelings and experiences for the participant. While it was not the intention of the study to create embarrassment or discomfort there is always potential for emotional distress. AUT Health and Counselling were contacted prior to interviews being conducted however they felt it was a low risk study and suggested providing Youthline contact details if necessary (Appendix 4).

### **Avoidance of conflict of interest**

Due to the researcher's personal involvement in rowing as a coach, any eligible participants the researcher had been involved with were excluded. This also meant the school at which the researcher is a coach was not approached for the study. The social imbalances and gender differences within the interview process were considered, however it was advised in consultation with the Pedagogy stream that this would be unlikely, so long as participants were provided the opportunity to discuss all issues as they arose.

### **Treaty of Waitangi**

Whilst researching in New Zealand, it is necessary to take into consideration the Treaty of Waitangi. Durie (1989) refers to the principles of the Treaty of Waitangi as: partnership, participation and protection.

### *Partnership*

Acknowledging participants from different backgrounds with different experiences and to allow participants to feel comfortable talking in confidence during the interview was important. This was achieved by outlining confidentiality prior to commencing the interview (Appendix 3). It was important to be respectful to these adolescents as the aim of the study was to give youth a voice. The intention of the study was to inform relevant stakeholders of the perspectives of adolescent rowers and to highlight areas of change to enhance adolescent rowers' sporting experiences.

### *Participation*

Participants were given the opportunity to have a voice to better enhance the experiences of future adolescent rowers. This conforms to an athlete-centred philosophy (Kidman, 2005) which at its heart focuses on athlete participation in enhancing coaching approaches for youth.

### *Protection*

The Information Sheet and Consent Form set out the guidelines for confidentiality. All participants were reassured about confidentiality prior to the interview (Appendix 3). Care was taken to respect the relationship this group of people have within their school, sport and rowing. Information about those who participated was not identified. Code names were used on all working documents so that no written records link the data to an individual. Individuals were provided with the opportunity to member check transcripts to ensure the reporting accurately reflected their views and to make certain they were comfortable with any of their comments being made in a public arena. The participants were not placed in any harmful situations and by completing the interviews at their own school; they were in an environment they are familiar with. There was no monetary cost to the individuals. Their contribution was to the time given to the interview. Care was taken to ensure that no unnecessary time was spent in the process and that the time needed for interviews was adequately communicated prior to consent being given.

## **Rigour and Trustworthiness**

Maintaining the integrity and rigour of qualitative research is important and ongoing to ensure a rigorous study (Carpenter, 1997). The aim of all research studies is to interpret or analyse meaning from the data, (Denzin & Lincoln, 1998). Within qualitative research the different methodologies require different ways of determining



their trustworthiness (Krefting, 1991; Sandelowski, 1986). The framework suggested by Lincoln and Guba (1985) has been utilised to test rigour in the current research project. The four aspects of this framework: credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985) are examined in more depth below.

### **Credibility**

Credibility is suggested by Guba and Lincoln (1981) as the criterion in which truth value (experience lived and perceived by its subjects) should be assessed. This is established when readers can relate to the findings or identify the experience when confronted with it after having only read about it in text (Sandelowski, 1986). Credibility is commonly achieved through respondent validation where participants review their transcripts for validation of information (Fraser-Thomas & Côté, 2009; Fraser-Thomas et al., 2008b).

All transcripts in the present study were emailed out to the participants for member checking. Only one transcript came back with alterations, the recording of this particular interview had a lot of back ground noise so some words and sentences were missed. The participant went through the transcript and ‘filled in the gaps’. The data analysis process allowed for verification from the researcher’s supervisory team through regular meetings and discussion around the transcript analysis. This peer examination ensured the research process and findings could be examined with impartial colleagues.

### **Transferability**

Transferability has been adapted from the term applicability and refers to the way in which the findings can be applied to other contexts and settings with other groups (Krefting, 1991). Guba and Lincoln (1981) suggest that fittingness is perhaps a better term in relation to qualitative research; simply, would the findings fit into a context outside the study situation? (Krefting, 1991; Sandelowski, 1986). Researchers provide thorough information on their participants’, research context and setting to allow others to determine its transferability (Krefting, 1991).

The current study ensured that only a maximum of two students per school were able to be part of the study to prevent bias of one particular rowing programme. Through the rowers’ experiences from a variety of school programmes, commonalities which arose could be considered something that is applicable across more than one environment. While the current study was conducted with adolescent rowers, it is

expected that rowers of all ages and ability would benefit from these findings as well as athletes from other sports.

### **Dependability**

Dependability refers to the stability of qualitative data over time and conditions. It has been argued that there can be no credibility without dependability (Guba & Lincoln, 1981). Strategies used to ensure dependability therefore overlap with the strategies used to ensure credibility. The data and relevant supporting documents are made transparent in this research report, and an audit trail maintained, so that external reviewers can examine how conclusions are reached. The research question, analysis of the data and interpretation of the findings have been linked to ensure that a structured and linked pathway have been followed. The reasons for undertaking the study therefore have been explained, the research question identified, the reason for the choice of methodology identified, and data collection and analysis explained.

### **Confirmability**

Confirmability refers to the objectivity or neutrality of the data, which means that the accuracy, relevance and meaning of the data would be agreed by other independent persons (Polit & Beck, 2006). Confirmability is Guba and Lincoln's (1981) criterion of neutrality, referring to the degree in which the findings are a function of the informants. Information provided reflects motivation and perspective of the information and not researcher bias (Krefting, 1991).

The present study's interview recordings and transcripts allowed the participants to establish the positive and negative experiences of rowing. Analysis through coding to find themes, recoding notes on ideas and experiences of the interviews, voice memos and personal experience allowed thoughts and themes to develop and be recorded for future use. The analysis process was in depth with continued input and reassurance from supervisory colleagues with experience in rowing, adolescent drop-out and self-determination theory to ensure that all areas were being met.

### **Summary**

The method chapter has detailed the use of qualitative interpretive approach and the theoretical considerations that underpinned this approach were discussed. The rationale for using SDT has been explained as well as outlining how it was used in this thesis. The specific methods for participant recruitment, data collection, data analysis

and the use of a pilot study were described. Further, the ethical considerations for this thesis have been included in the chapter. The chapter concluded with outlining how rigor was maintained throughout the research process.

## Chapter 4: Findings

In relation to the self-determination theory framework, feeling competent (perceive behaviour as effective in the environment), having a sense of relatedness (connected to those around us and a sense of belonging), and having a degree of autonomy (perceive to be in control of thoughts, behaviours and actions) were found to be important to the adolescent participants in this study. Since the social environment can either nurture or impede one's needs (Mageau & Vallerand, 2003), it was therefore not surprising to see data emerging which confirmed the influence that coaches, peers and parents had on the participants' involvement in rowing. Each of these significant others were positive and negative influences on these rowers and impacted on their experiences and motivation.

Analysis of the transcripts revealed three main themes in relation to influences on why these participants dropped out of rowing. These themes are: 1) why we row; 2) the influence of the coach; and 3) adolescents and weight loss. Each of the themes that emerged was examined in relation to how they affected the participants' psychological needs of competence, autonomy and relatedness, and their influence on drop-out. Understanding athletes' perceptions of autonomy, competence and relatedness, can help to establish a greater understanding of athlete motivation to continue in sport (Mageau & Vallerand, 2003). Each of the three themes are further broken down into sub-themes. While some sub-themes do not relate directly to drop-out, they do show what was important to the participants about their sport. Thus, when the participants' needs and reasons for participating were not being met or were being undermined it indicated their rationale to drop out. While each basic need is examined in relation to the data, it is important to acknowledge that autonomy, competence, and relatedness do not exist in isolation, but are inter-related.

The names used in this section are pseudonyms.

### Why we row

As the analysis of the data progressed, factors associated to why the participants were involved in rowing emerged. The main factors the participants commented on included: a sense of camaraderie and being with friends; the love of being in the boat and the satisfying feeling it produced; and what they viewed as important in sport, such as health benefits, the feelings of athleticism, and valuing effort. Four sub-themes

emerged relating to why adolescents row: 1) the rowing family; 2) the feel of the boat; 3) I love it but still dropped out, and 4) effort versus results.

### **The rowing family**

A sense of belonging to a family emerged as a key theme. Significant others such as peers, parents and coaches have been shown to be important to continued involvement in sport and can influence drop-out for adolescents (Fraser-Thomas & Côté, 2009). There are clear feelings of relatedness associated with this theme as the rowing family signifies strong connections with the environment and belonging to something unique.

When participants were asked “what did you enjoy about rowing”, the majority commented on the camaraderie they experienced with some relating it to being like “siblings”.

I liked the camaraderie, well through the community, just through the group it was a good bunch of guys. Training together so much you get pretty close so yeah that was good. - Tom

Their peers were an important part of their involvement and at times it was their friends that helped them through and kept them involved. For example, Sarah stated:

Quite a lot of what was keeping me there was the whole social aspect because I really enjoyed having friends in that atmosphere.

One of the unique aspects to rowing discussed by several of the participants was the opportunity to develop relationships with older and younger rowers. The rowing environment provided them with an opening to widen their friendships as well as allowing the ability to become role-models and demonstrate leadership.

Also the relationships with older people, I think rowing is one of the only sports that actually does that. There were actually a lot of guys who were a lot older and yeah guys that were younger than you, and you form friendships with guys that are older than you and you look up to them and things as well which is different from say a rugby team where you're very separated from the first 15 when you're under 15s or Seven A or whatever. These guys you're actually training with, you're around them all the time there's definitely a rower you can look up to when you're a junior or vice versa when you're a senior. – Nathan

Like peers, parent involvement is often linked to adolescent participation in sport, providing support such as transport, paying for fees and giving encouragement (Humbert et al., 2006). Parent support did not go unnoticed by the participants in the present study with parental involvement being a key aspect of the sense of being part of the rowing family. The participants discussed the support provided at regattas and training and touched on some unique features such as cooking breakfast which gave prominence to the feel of a rowing family.

Without a doubt we had one of the most involved parent groups out there, we had massive support at regattas and stuff, our parents filling up the bank at all the regattas was a reflection of that. It was the same every time you know helping out with camps and regattas as well as helping in the kitchen and taking us to and from the lake in vans and everything. There was the committee doing all the work behind the scenes and things as well so, yeah working on fundraisers and so parent support was absolutely tremendous, couldn't have asked for more. – Nathan

With all their support the rowers were able to grasp the value of what the parents got out of their involvement in the sport. Not only did the rowers experience feelings of relatedness but their parents did too:

Even though the cost of it was so much money and all that but [mum] still enjoyed it, enjoyed the people that were there, the parents, the other rowers yeah she enjoyed it, she enjoyed me being a part of that group. - Jack

The level of involvement is important in relation to the aspect of creating a family feel. Over involvement adversely impacts the family feel and affects the autonomy of the athlete. While the rowers really appreciate the parent support they did not like it when parents got involved in crew selections or put too much emphasis on performance outcomes.

I think that there are some parents who talk to the coaches and try to get their daughters into boats and don't really understand how competitive it is and what you have to do to get into that boat and they just shouldn't interfere. – Kate

Having a sense of belonging, as showed in these participants' responses, can result in positive motivation and involvement. Contributing to this sense of belonging for these athletes were peers of various ages and parental support. However, the level of parent involvement is a factor for further consideration.

## **The feel of the boat**

The second feature of ‘why we row’ emerged from a discussion of knowing when the boat ‘feels’ good. When the participants further discussed the question “what did you enjoy about rowing?” the enjoyment of being in the boat was expressed. The ‘feel of the boat’ was a major source of pleasure to the athletes which strongly emerged from the data. This is a clear example of intrinsic motivation which refers to doing an activity for the pleasure and satisfaction derived from engaging in the activity (Deci & Ryan, 2008). The participants discussed how rowing can be an intrinsically motivating activity demonstrated through experiencing ‘flow’ (an optimal positive state of energised focus, where one is completely absorbed in what they are doing) (Csikszentmihalyi, 1990; Kowal & Fortier, 1999) where these athletes are participating in an activity for the pure pleasure it can provide.

All the rowers said they loved the feel of the boat and being out on the water. For example, Nathan stated:

It was sort of an energy rush, I guess that positive energy rush, it felt really good to be out there on the water. It was something that I really enjoyed. It was just pure love of being on the water, the feeling, the feeling of being on the water, it was just amazing, it was a sort of a kick. I just loved it and kept on doing it – Nathan

Jen felt the same although acknowledged the difficulty in expressing the feeling, much like the idea of flow, but she was certainly aware of when the boat, was going well:

It’s hard to describe, it’s just a better feeling and more free and that’s kind of what we had been training for, to row, and it’s just nice to be on the water [...] so usually you can feel when something is right in the boat and then when that’s gone it just doesn’t feel right anymore – Jen

Kowal and Fortier (1999) found there is a relationship between the basic psychological needs and flow, whereby perceptions of autonomy, competence and relatedness were positively related to flow.

## **I love it but I still dropped out.**

For the most part the participants shared their sense of enjoyment of being involved in rowing. The participants discussed the commitment they made to rowing by attending multiple early morning trainings every week and also referred to the intensity

of the sport. The participants spoke of the enjoyment of being on the water, the fun they had with their friends and the health and fitness benefits gained from the sport of rowing. However, even with these benefits experienced by the participants they still dropped out.

Several factors appeared to result in their decision to drop out. Firstly, when team mates dropped out they experienced doubts about their continued involvement:

Well basically the guys who I had been rowing with the previous two seasons they all dropped out and I realised I wasn't as good as the other athletes who were still in the programme. – Nathan

Nathan's sense of competence is affected here as he feels his teammates are now superior to him. Other participants mentioned their ability to continue in rowing was limited due to their teammates dropping out:

Like now I'd like to go back but like I'd have no-one to row with –  
Jen

The participants' sense of having no-one to row with stemmed from their perceptions that the coaches were only focussed on the top athletes. This was the second influence on drop-out as the participants felt unwanted.

[The coaches] had a tendency to focus more on the top level I guess, well that's to be expected in the environment, but it did leave you feeling a bit left out some of the time. - Tom

Two participants were essentially asked to leave the sport. While earlier Jen shared her love of rowing, she later talked about how she dropped out. It is of interest that somebody who can experience such enjoyment from the sport should be asked to leave:

I was really upset because I was excited to come back to rowing to try another year to get better, but to say at the start that I can't get in because [my erg test result] is not good enough, it's like well I could try and make it good enough and if then it's not good enough well then I can understand why they say that. It sort of made me feel like I wasn't wanted there and they sort of didn't want to train me so I was kind of less motivated to actually row. - Jen

In Nathan's case he was asked to leave by the coaching team. However, the coaching team did not speak to him directly, but rather the message was relayed through



his father. This strongly highlights the lack of opportunity for input by the athletes in making any decisions, even the decision as to whether they could continue in the sport or not:

Well I was told [to leave] through my dad because he was the one in the interview and stuff and I was pretty gutted, pretty disappointed and shocked because I love the sport so much. – Nathan

With these factors at play, the time constraints of rowing and their lack of enjoyment lead these participants to pursue other interests.

[Rowing] was a massive sort of time constraint, there was other things I wanted to do, other sports I wanted to get involved in, academically as well I needed to spend a bit more time studying. – Tom

School work was an area several participants decided they would be better off focusing on rather than staying with rowing. The final factor which arose with the decision to drop out of rowing was trying to be competitive in two sports. Jack explains:

[Rugby and rowing] was manageable until I became year 12 because I wanted to make the first 15 [rugby] team but in order to do that I had to attend all the pre-season trainings which was just at the beginning of [rowing] North Islands Champs and stuff like that. So it was hard because I wasn't able to attend rowing trainings because I had to attend rugby, I couldn't attend regattas and stuff like that, I missed out on quite a bit – Jack

Jack expressed his focus was on rugby but at the same time he felt his rugby benefitted from being involved in rowing. However his ability to do both sports was restricted by the structure of the sport and the expectation of the coaches:

If I could have, I would've stuck with rowing to the end, it just wasn't going to happen because one coach wanted me here, one coach wanted me there. I can't be two places at once. – Jack

## **Effort versus results**

Participants acknowledged that winning made them feel good, reinforcing feelings of competence. However, for all the participants this was not their main motivator for being a rower. All of the participants discussed the benefits they got out of rowing with the opportunity for 'effort' being the dominant factor. How hard the athlete tried in both training and competing was an important factor for the rowers. A difference in goals between coach and athlete emerged, with the coach appearing to

focus more on outcome, and the athletes focusing on other more personal goals. For example Tom had other motivators for his involvement in rowing:

I was in high school, rowing, because I wanted to do a sport. Obviously you don't get into rowing and train 8 times a week because you're not that motivated but it wasn't exactly the end of the world if I didn't come out of Maadi with three gold's. I was just there personally because I wanted to get fit, I liked the guys I was rowing with and I enjoyed what I was doing. – Tom

While these views were shared by other participants they were also aware of the coaches having a different focus:

[Winning] was important, it was definitely something that they made important, made seem very important but I don't think that that is what rowing is all about really. I think it is if that's what you want to do for your entire future [...] but I think if you're not thinking of doing that then you should be more focussed on enjoying it and the athleticism of it rather than just doing whatever you can to get on the podium. – Kate

Kate was not the only one to highlight the importance placed on winning by external sources. Jen also shared that while it is good to win, effort and enjoyment are important and should be considered too.

I think that the school just want to win and stuff and for us yeah winning is great but we also want to have fun, and all they care about is them winning and to us it's about having fun and doing the best we can but they don't really take that into consideration. – Jen

These coach behaviours appear to ignore personal goals and are in line with controlling behaviour which encourages athlete ego-involvement (social comparison with peers to assess level of ability) and undermines athlete autonomy (M. R. Weiss & Amorose, 2008). Ego-involvement narrows people's focus on the outcome and limits their behaviour to be directed solely towards achieving those outcomes (Mageau & Vallerand, 2003). The ego-involvement is supported by the following extract:

Each rower has a different goal whether they want to get into an A final or get a medal or just to have fun you know and I think the coaches definitely lost sight of that. To them it was only about medals and not about the rowers own personal satisfaction and I think the rowers definitely caught onto that and so they thought the only way they would be happy with themselves in rowing is to be able to do well, and even if they did well for their circumstance then they wouldn't be happy with themselves because they didn't do as well as someone else. – Sarah

### *Summary*

Reasons as to why these athletes rowed, showed what these athletes valued as being important in rowing. These include being with friends, getting a 'rush' from the boat, and acknowledging effort, athleticism and enjoyment as factors for involvement. Often these factors enhanced the sensation of 'flow' which contributed to the sense of intrinsic motivation. When these values are being met, their needs for relatedness, autonomy and competence are satisfied, enhancing their motivation to continue participation and contributing to the flow experience. However, when these needs are undermined, their motivation to continue in their sport is affected.

### **Influence of the coach**

Many factors can impact an athlete's motivation, however the coach-athlete relationship is one of the most important influences affecting athlete motivation and future performances (Mageau & Vallerand, 2003). After evaluating the data three sub-themes emerged. Firstly, feeling valued was highlighted by several participants and had strong implications on athlete feelings of relatedness. Secondly, the behaviours of the coach created a lack of autonomy for the rowers when they were controlling, and positive coaching behaviours nurtured a sense of enjoyment expressed by the athletes when they felt they were being provided opportunities for autonomy. Thirdly, the importance of coach communication largely impacted upon feelings of competence.

### **Feeling valued**

The need to feel connected to others and to feel a sense of belonging is an important feature in the influence of the coach. Several participants discussed how they felt unwanted or were not provided with the coaching they felt they were entitled to. While the lack of feeling a sense of belonging is the dominant need here, there are connections to feelings of competence as these rowers perceptions of their own ability

are in doubt when they are put in situations which result in comparison to their peers' ability. As a consequence they begin to question their place in the squad.

These perceptions of their own ability were highlighted when the rowers discussed teammates being provided with better treatment such as all the coaches only wanting to coach the best athletes, the top athletes getting more input and feedback from coaches, having a coach beside the top athletes all the time and the 'better' athletes provided with better equipment. When the rowers did not feel valued they lost motivation as they did not feel as if they were wanted. As a result they established a 'what's the point' attitude. For some participants, experiences of negative perceived ability led to lack of motivation to compete:

I think for me it made me not want to try as hard in races because I knew that the coaches didn't really care anyway. [...] it definitely made us not value our crew because we really didn't think we were any good anyway, um and it would've been nice to actually feel like what we were doing was actually worthwhile to someone. – Sarah

The participants perceived that the rowers with medal winning potential had more time and effort put into them by the coaches leaving the others 'second best' often resulting in a lack of focus by the coaches on the development of those perceived weaker athletes.

Ok so like if you're in the second crew you're doing the workout without a coach beside you so the gap grows, the other guys are getting constant coaching, improving whereas second tier guys you're just training but um it's not as effective so the gap grows, you get left behind a bit. – Tom

Separation from peers aroused tension between teammates as this perceived favouritism extended to equipment and coach delegation. The rowers spoke of their personal goals and interests in rowing which often did not match the coaches:

Yeah that's an achievement if I improve at least. Because we're the ones that have put a lot of our time into it and money and stuff and for them to just not want to help us, it's kind of, it's not a waste of money but it's a waste of like, I don't know it's just a waste because we didn't get the best that we asked for. – Jen

When coaches put the rowers in situations where they were in competition with their peers, it disrupted their sense of relatedness and influenced their enjoyment of the sport.

When we use to split the eight up into fours that became really nasty and stuff later on because our coach was like sort of making us compete against each other when we kind of didn't want to [...] because they're meant to be your crew and your meant to get along and to be kind of forced into competition and forced into trying to be better than them it kind of affected our family of rowing – Jen

While not feeling valued influenced their motivation, the rowers also used this predetermined information about their ability to weigh up their options of crews they might see themselves competing in, in the future. Several of the rowers discussed the thought of continuing with rowing but “didn't have a crew to row in”. Each had different reasons for this such as a clash with another sport, other rowers dropping out so they ended up having no-one to row with, or being told they were not good enough to continue. The impact of the feelings on athletes' sense of relatedness and competence are both at play here as they are losing their feeling of belongingness and their views on where they 'fit' are based on their preconceived level of ability, which is shaped by the coach behaviours they experience.

I just kind of weighed out all the positives and negatives and what I was going to do this season, what crews I would be rowing in [...] So I was just deciding what crew I'd go for, where would I fit in, instead of just being left on the side, ninth man for the season, which I wouldn't want to waste a summer for. That's what I was deciding about, I don't know, there wasn't a crew I was definitely going to go for or be in so yeah I didn't see a place to be. – Matthew

### **Controlling coach behaviours**

Motivation towards an activity can be influenced by internal and external forces. Internal forces such as guilt and external forces such as the coach can interfere with one's self-determined motivation. The controlling behaviours of a coach can undermine one's autonomy leaving the person feeling pressure to engage in an activity (Mageau & Vallerand, 2003). The data revealed controlling coach behaviours, such as, control of decision making and exercising power over athletes. The participants, however, did speak of opportunities for autonomous decision-making which had a positive effect by increasing the levels of motivation and learning which in turn enhanced their enjoyment.

The trainings were fun when we could decide on what we wanted to do sometimes. They would give us things that we could choose from not just like us picking it, so yeah that was nice to be able to pick what you wanted to do cause they don't know how we feel with our rating sometimes so they ask us about it [...] I guess I was more willing to do it instead of them always just telling me that I need to do this and that. – Jen

Having the ability to communicate ideas with the coach varied between participants. While Jen felt more motivated when she was provided with opportunities to input her ideas into training, it was not a common incident. Most rowers had limited input into their training and were unlikely to approach their coach about the programme:

I don't know, probably would, he might change his mind or look into it something like that, but [coach] is pretty hard so I don't know, discuss stuff like that, he's pretty straight lined, but yeah it probably could work if we had a proper talk about it and worked out a better training programme, especially during the winter, yeah it could work.  
– Matthew

While Matthew comes to the conclusion that making suggestions to the coach could work, his hesitation suggests that it is unlikely this type of coach approach would ever occur. The participants also showed having their needs supported and feeling considered could contribute to feelings of autonomy. For example:

That they care about their rowers, that they actually value your time and take into consideration what the rowers think about a particular thing [...] like review every aspect of a crew and not just make their decisions – Sarah

However, some of the more controlling coach behaviours were shown to undermine all opportunities for autonomy and impacted adversely on internal motivation. One way in which coaches did this was by controlling the participation of involvement in rowing:

Well to start off with what actually happened was my dad had an interview with one of the senior coaches and [teacher in charge] and what they basically said to my dad is that I might not have a place in a boat, cause other guys I had been rowing with had dropped out already. So then I kept on going for a short while cause I just love the sport so much but what happened was I wasn't selected for the boat race, so it was quite real, cause I had this illusion that I could keep going and things but my parents had a talk to me and were like come on you've got your school work to focus on, you've got senior exams coming up, and I was like yeah ok true I do so I just pulled out right there and right then. – Nathan

Injuries discussed by the participants demonstrated another way in which controlling behaviours were used by the coach. Injuries are a common problem in sport, however, the way it is dealt with can have different consequences. In this particular case we see controlling behaviour from the coach:

He wouldn't really take anybody's thoughts or feelings into consideration. He often made people cry um, one girl [...] she hurt her foot so she couldn't row for quite a while and then this [coach], he basically came up to her and was like 'can you row?' and she was explaining to him that no she couldn't, and he was like 'yeah that's what the doctor said but can you row?' and it was just, I was there, I was watching as they were having this conversation and then she just started crying because he was forcing her to row and she obviously couldn't, um yeah it was awful because he would just want you to do anything to be able to get a medal for him – Sarah

In sum, when coaches enhanced the athletes' sense of autonomy their motivation increased. When engaging in an athlete-centred approach by involving the athletes in decision making the outcomes proved more positive.

### **The importance of communication**

Having positive lines of communication and being open and honest was an important quality for a coach to have from the participants' perspective. This included communication around technique, feedback at training and after racing, crew selection and one participant also mentioned communication between the coaches was important to "avoid getting mixed messages".

Many of the participants referred to communication as being one of the most valued coaching aspects. Communication referred to by these athletes mostly came in relation to feedback. Feedback is important in providing the rower with information

about their performance which can promote or reduce feelings of competence (Mageau & Vallerand, 2003).

The way in which feedback was provided proved to be important to the athletes as they all mentioned it in their interviews. Some rowers felt they did not receive enough feedback to let them know how they were doing and what to work on. Crew selections were a competence determining event. The crew the participants were selected in let them learn something about themselves, such as how ‘good’ they were, yet the participants show that there was a lack of suitable outcome information, as in why they were in a particular boat:

He would just make these brash decisions that no-one would have any clue where they were coming from about crews and who was being in what crew and, yeah I think things would be a lot better if coaches just talked to the rowers about why they were putting the rowers in this configuration or why they weren’t putting this crew into this regatta, cause we were just left in the dark about a lot of things, yeah I think communication is probably the best – Sarah

Feedback following performances allows for learning and development. The athletes appreciated honest feedback which included receiving feedback when they had a bad performance. Although the athletes received formative feedback when they did well, the only feedback offered when they did not do well was the clear message that the coach was displeased with them:

Usually when we did well in regattas they would come and talk to us and be really happy and they would also give us a few things that we could do better but then when we would do badly they would just not even talk to us really they would just be kind of distant and then if they did talk to us they would just say oh what happened and they wouldn’t be very happy about it they would just not want to talk to us – Jen

Having an ability to communicate with multiple athletes in one session and provide feedback was highlighted by some of the athletes. A coach who worked with multiple crews often focused his/her attention on one crew.



Sometimes if coaching staff were short some crews wouldn't even get a coach, they'd just be told to row up the river and [laughs] back again um so that wasn't good because then they got no coaching at all, or if one coach had to separate themselves between different crews then quite often they would spend all their time on one particular crew rather than both crews evenly. I think some coaches are better at communicating on water to the crew to like improve their technique or something like that um yeah but other coaches were not as apt at being able to do that. - Sarah

The series of quotes above show that more often than not coaches will provide feedback for the top athletes and crews and best performances, yet when athletes need feedback the most, i.e. after a poor performance or understanding their current level of ability the coach is not there to support them.

### *Summary*

The data revealed the significance of the influence of the coach, and their impact on the athletes' basic psychological needs. This effect was a strong indicator of the athletes' enjoyment, or lack thereof and discontinued involvement in rowing. Enabling the perception of a gap in ability level between peers and focussing on competition within the team, impacted upon these athletes' sense of belonging and feelings of competence.

## **Adolescents and weight loss**

The final key theme to emerge from the data was that of adolescent body image and weight. This theme made itself visible in several ways. Firstly, through inappropriate comments made by the coach towards their athlete's weight. Secondly, athlete perceptions of body image (for both males and female). Finally, the way in which athletes achieve the weight required for lightweight rowing. Issues related to light-weight rowing strongly emerged. This section is again broken down into three sub-themes related to SDT. The sub-themes are: team segregation; who decides to be a lightweight rower; and dieting to win.

### **Team segregation**

The division of lightweight rowing created within a squad was referred to on multiple occasions by the female athletes. This disruption to their sense of belonging (relatedness) was developed from the lightweight rowers being required to: follow special diets and therefore have separate meals at regattas; complete extra training; and

the emphasis coaches put on these rowers as potential medallists. The division that emerged within their squads undermined their feelings of relatedness, which up until that point had been a major source of their enjoyment in rowing.

A sense of relatedness can be undermined by external factors. Here tensions are emerging in the boat by some people having to lose weight.

I think that the friendship was probably badly influenced by the dieting of lightweight. I think there was division between all of the lightweight girls and the rest of the club. And between the four lightweight girls I think the one who was naturally lightweight was just sick of the dieting and having to be around it. – Kate

The division within the crew between ‘natural’ and ‘unnatural’ lightweights conveys a message of adolescents intentionally losing weight to be in the team. These tensions spread to the whole squad with a different perspective from those athletes who were not lightweight:

With that came a whole lot of segregation again because they had to have their own like meals at regattas and they all had like their own room and it, at regattas and it was difficult because, like they’re nice girls but to see them getting like treated with all this like attention and um they didn’t even know, like they just thought it was normal and that’s probably what irritated me the most was that they didn’t even realise how their whole crew was effecting everyone else. - Sarah

The boy’s interviewed did not discuss lightweight rowing or body image as much, however one participant did highlight the issue of weight in comparison to his peers. Despite the enjoyment factor of participating in rowing with his friends, Jack explains how his involvement in rugby has made it hard to be competitive in both:

[Rugby] had a negative effect because everyone was better than me and like to row with me they were kind of like depressed about having to do it, cause I was by far the heaviest in the team so kind of weigh the boat down a bit and yeah. - Jack

### **Who decides to be lightweight**

The athletes involved in this study had limited input in the decision to row lightweight. Their opportunities for autonomy are restricted by the influences of coaches and parents. The coach is one controlling factor in an athlete becoming a lightweight rower. The female participants shared two approaches which demonstrated coach control in this decision. Jen’s story illustrates her lack of involvement:

If I wasn't in the weight range, they would obviously make me [get into the weight range] so I wouldn't want to [become lightweight] but they would sort of, not make me do it, but I wouldn't have any decision in doing it unless say my dad got involved in saying you can't do this – Jen

Coach control can be very direct as shown above, where Jen clearly highlights that she is being “made” to do it. The second approach was more indirect as shown by Kate:

He thought that we were too small and weren't good enough to row for our age group, which is why we ended up rowing it lightweight....And then he didn't let us to race it at Maadi in the end. He pulled it out three days before. – Kate

Controlling coach behaviours can result from coaches feeling pressure to achieve results (Mageau & Vallerand, 2003). Kate later commented on the coaches making decisions based on performance outcomes:

I think the coaches made the right decisions because the aim was to get medals and that's what they got at the end of the day, they got more medals than they would have if we hadn't rowed lightweight. – Kate

To achieve these results the rowers must first be able to weigh-in prior to their race. Rowers face obstacles to remain ‘lightweight’ and evidence of practices engaged in by these girls in order to make the weight grade, particularly if the rower is not a “natural” lightweight.

A few of them just got under the bracket but that was because they were like not eating or doing sweat runs where they just run and don't eat and all that and I don't know it wasn't very healthy but they did it just so they could race in the four. - Jen

### **Dieting to win**

Lightweight rowing was expressed as an opportunity to demonstrate competence in their sport. These participants saw lightweight rowing as an opportunity to be ‘competitive’, an opportunity than perhaps would not otherwise be possible if they did not row lightweight. This was reinforced by their perception that they would not be “good enough” if they did not row lightweight.

The lightweight rower's competence is reinforced through experiencing success in this category.

Well they did win medals, for them they would think it was worth it because they got a medal from it but what you're doing to your body I wouldn't want to do that to just get a medal - Jen

Feelings of competence through achieving success emerged here, but there are also health related misgivings. Kate supports this idea when she considers the concept of success coupled with issues related to body image:

I think whatever weight you set it at there will be girls who lose weight to do it and it's hard not to and you see, you know you get skinny and you get a medal and that's all you really see initially. – Kate

Coaches' interactions with the rowers may contribute toward athlete perceptions of body image. Here we see an example of a coach commenting on athlete weight:

A lot of them border on offensive a lot of the time. Not even with the lightweight girls but the heavy ones especially about power to weight ratio, [...] about weight, they sort of say "thighs that create thunder" is my favourite line [laughs], just sort of hints that aren't really hinting, very straight up - Kate

Another component of lightweight rowing is the athletes' perceptions of competence towards rowing in an open age group. To be able to feel successful is an important component to feelings of competence. When being a lightweight rower is no longer an option they start to question their level of ability.

I wanted to do rowing again for my last season, but my mum and my doctor wouldn't let me row lightweight because it was too unhealthy to do it again, and I didn't want to row and get worse results, so I didn't want to get like a medal one year and then go back and not go to Maadi and not get any medals, so just sort of waste my time. ....and there were no other under 18 girls doing it and so I would've just rowed in an under 18 single and done badly. - Kate

### *Summary*

The female rowers interviewed in this study had all experienced lightweight rowing in some context. Through these interviews, weight-loss and body image for adolescents emerge as a central theme in relation to the impact it had on drop-out. Gender differences emerged, for example, team segregation was discussed with all the

participants but was more frequently mentioned by the females, particularly in relation to lightweight rowing. Disruption of their perceived feeling of relatedness can influence drop-out. The controlling factors influencing lightweight rowing became visible through the participants' accounts of coach and parent behaviour which provided little or no opportunities for input from the rower themselves. Finally, athletes' feelings of competence were influenced through competitive opportunities presented to them as a lightweight rower. These, in-turn, appeared to influence their perceptions of competence when compared to their perceived chances of success if they rowed in open grade with their age group.

### **Summary**

Participants' reasons for dropping out of rowing were consistent with SDT and unfulfilled psychological needs. The need for feelings of competence, autonomy and relatedness were important for continued involvement in rowing for the adolescent athlete. Competence was impacted through coach feedback, perceived lack of appreciation of the rowers' efforts and a focus on outcomes rather than effort and athlete goals and values. Autonomy was impaired through limited involvement in the decision making processes particularly around options at training, discussions around crew entries and being a lightweight rower. While relatedness appeared to remain mostly positive throughout their involvement, in the end it was not enough to keep them involved. Divisions are formed and those on the outer no longer feel part of the social environment. This negatively influences relatedness and involvement in the sport as the need to feel connected to our environment enables us to achieve optimal psychological functioning (Mageau & Vallerand, 2003).

## **Chapter 5: Discussion**

The findings of this study reinforce previous research which draws upon self-determination theory (SDT) and highlights the significance of a need for athletes to feel competent and to have some autonomy in their sporting experiences. However, the participants' need for relatedness was the dominant need which consistently emerged from the analysis. The main themes which arose from the study were reasons as to why these participants rowed, the influence of the coach, and issues related to adolescents and weight loss. Each of these themes is discussed in more detail in this chapter with the discussion drawing upon previous research in relation to the findings.

### **Why we row**

'Why we row' was the first theme to emerge and identified the positive aspects of what adolescents enjoy about the sport of rowing. Having a sense of family, the love of the sport, being in the boat and the participants' personal goals, were the main components of this first theme. Although elements of the effects around autonomy, and feelings of competence are presented, having a sense of relatedness is the dominant need that emerged in relation to this theme.

The participants in the present study spoke of their peers and the experience of camaraderie as relating to a sense of family. The association to feeling a sense of relatedness was enhanced through the unique aspects that rowing offers, such as training with older and younger rowers and the involvement of parents which added to the family 'feel'. A sense of camaraderie was developed through spending a lot of time together at training, regattas, and camps, providing the rowers with the opportunity to become close. The participants spoke of supporting one another and developing friendships which demonstrates a positive aspect in the rowing environment.

I enjoyed making new friends there because it was kind of like a big family that everyone just got along and stuff. – Jen

These findings are in line with previous research with adolescents and sport participation. Being with, and making new friends has been found to be important to young athletes in numerous studies, highlighting the importance of social interaction as a motivating factor (Bailey et al., 2013; Keegan et al., 2009). Feeling connected and part of a family has also been described by adolescents in previous research (Fraser-Thomas et al., 2008b; Keegan et al., 2010). The present study was able to reinforce the

importance of these attributes, such as social affiliation which is to feel a sense of belonging, the key component to relatedness (Keegan et al., 2010).

In the past the importance of relatedness would appear to have been overshadowed, potentially in part due to the psychological factor of team cohesion. Team cohesion research reflects the strength of the social and task related bonds among members of the group (Carron & Eys, 2012). Social cohesion explains the way members are concerned with personal relationships as well as the togetherness, closeness, and affiliation within the team as a unit. On the other hand, task cohesion on sports teams, is when members are concerned with personal performance issues and team performance issues (Carron & Eys, 2012). What the participants discussed in their interviews demonstrates both task and social cohesion, as they talk not only about the closeness they have with their teammates but also the importance to them of working together towards a shared goal. Part of this cohesive environment was due to the rowers sharing a bond and friendship with rowers of other ages.

Yeah it kind of got us all working together, like even though we were all different age groups, you would always work together. And there would be times when we would go out with the younger ones instead of just sticking with our age groups and not going with anyone else we would actually mix and mingle. Yeah it was a strong bond right through-out the age groups. – Jack

The unique experience of training with older and younger athletes demonstrates social cohesion and was supported by the participants as a positive aspect of rowing and something that not all sports offer. As shown in this study, being able to train with the top team inspired the athletes and gave them someone to look up to and showed them a pathway. It also allowed the older athletes to be role-models and develop leadership skills. These findings reflect those found by Fraser-Thomas and Côté (2009) where special relationships, personal development and shared experiences with older and younger athletes contributed to the bond and positive environment within an adolescent swimming team. Being able to form friendships with older and younger rowers added to the enjoyment of rowing for participants in the present study. It was an aspect of rowing which made them a tighter unit and added to their sense of relatedness.

Task cohesion was also demonstrated through experiences of the participants:

Well, because we accomplished something, we did well. You feel good accomplishing in anything really and the fact that you put in the effort and you and seven other people were working together to do well. I think that's what made it better is that you knew you were all working towards a common goal. - Sarah

Here Sarah demonstrates elements of task cohesion through setting group goals which has been found to enhance team cohesion. However, team cohesion research has perhaps hidden the importance of the psychological need for relatedness when compared to the needs of competence and autonomy. With the SDT framework, acceptance from peers is an important part of having a sense of relatedness. What consistently emerges from this study is how important a sense of relatedness is to rowers who have chosen to withdraw from their sport. The participants expressed that during challenging times it was their peers that kept them involved due to the fact that they enjoyed the social aspect so much. If we are to consider how to keep youth involved in sport then it would seem logical that recognising the importance of being with friends needs to have more consideration in adolescent sport.

I just really liked the atmosphere of being down there with everyone, everyone was really happy. No matter how hard it got everyone got on really well. - Matthew

There were times when these friendships and relationships were tested by the rowing environment created by coaches. When coaches focused more on certain athletes and created an environment which emphasised performance of the top crew, the other athletes were left feeling unimportant and not valued in the team. The segregation between top crews and second crews created a tension and detracted from the positive aspect of being involved in the sport. Studies investigating adolescents in sport, has shown that undermining athlete autonomy leads to drop out (Gillet et al., 2010; Sarrazin et al., 2002); here we see coaches undermining athlete relatedness, something which contributed towards rowers drop out.

I think a few of the girls got a lot more training and time and effort put in by the coaches because they were seen as the ones that could possibly get medals or place well. It's not a nice feeling when you know you're second best and you don't get the good boats or the good equipment and, yeah it's not good, it segregated like our two sections between the good people and then like this, the other people, yeah it was definitely a struggle getting through that last season. - Sarah



Aside from feelings of segregation the friendships remained the most positive aspect of being involved in rowing, however, it was not enough to keep them involved. To have a balance of all three psychological needs are key to truly self-determined motivation. Having a sense of relatedness was not strong enough to maintain their participation when the other two needs were not being met.

Like peers, parent involvement was an important component in the rowing family. The participants were aware of how much parents put in to rowing and spoke highly of the support the parents provided. The supportive roles were consistent with other research in which parents provide diverse support, ranging from encouragement, paying for fees, equipment, attending practices and games to providing transportation (Humbert et al., 2006; Keegan et al., 2010). However, at times the participants did discuss ways in which parents can become over-involved.

The level at which parents are involved in their child's sport has been researched in relation to impact on sport involvement. Under-involved parents who show little interest in the sport can decrease their child's motivation to participate. On the other hand over involved parents can be equally detrimental by putting too much pressure on their child making the sport less enjoyable (Bailey et al., 2013). How parental involvement is perceived by the child is an important aspect of the sport experience. The participants in the present study were able to share ways in which parents supported them at rowing, and show that having their parents around is important to them.

Well my mum looks after my two nieces as well as myself so she would always be busy with them and like 'cause all the parents would always come and cook breakfast and stuff like that at camps, my mum wasn't able to do that, yeah like for me it would've been better if I saw her face around. But she did what she could. - Jack

The participants wanted their parent's involvement, showing support is important, yet they did not want the parents to be over involved. In training, parent help can be supportive by providing all the requirements to take part in sport but in competition it can be externally regulating. The athletes may feel pressure to perform in order to justify their parents' support. Research shows parents who over-emphasise winning are more likely to negatively affect motivation levels compared to those who emphasise effort team work and fun (Bailey et al., 2013). Parents who offer advice and coaching can also create an internal conflict for the athlete as they do not know who to

listen to or feel guilty for either ignoring their parents advice or ignoring their coaches advice (Knight et al., 2011). The participants expressed the frustration at when and how parents get over involved in the sport:

Ah for the parents, just to focus on the well being of the kids and not to try and coach them, because I've seen some parents, like they act as if they know more about the sport and as the person doing that sport it's annoying, they're trying to give you advice about something they don't know about so yeah as long as they don't go overboard. – Jack

Parents were also important in the decision making process to drop out of rowing and while most were supportive of the rowers' decisions there were still some controlling components which the participants had to contend with. Fraser-Thomas et al. (2008a) found that parents of engaged athletes discussed the drop-out issue with their children and provided flexible options compared to parents of drop-out athletes who put pressure on their children to continue by forcing them to go to training sessions or were made to feel guilty for wanting to drop out.

I told my mum that I had to make a decision about whether I go with rugby or rowing. She wanted me to stay with rowing because she liked the discipline that I had when I started rowing, but she said it was up to me and she gave me the freedom to choose and she always knew that rugby was my dream and even though I had already picked she still tried to get me back in to rowing [laughs] but it was already too late, I had already made my decision. – Jack

While Jack's mum clearly wanted him to stay with rowing she allowed him to make his decision. For Kate, it was her parents' involvement which ultimately led to her decision to drop out. Having discussed health issues Kate experienced with lightweight rowing it is understandable the parents became involved here in looking out for their daughter.

I was going to go back and do rowing and went to all the winter trainings, and I was going to do lightweight and mum, I don't know if she realised I was still planning on doing lightweight, and she just sort of said that's it, you can't do it, and then I just decided not to do rowing. – Kate

The sense of a rowing 'family' emerged as a dominant theme in the study; however, participating in rowing for the love of the sport was the second positive component of 'why we row'. Athletes demonstrated an understanding of the boat as well as doing the sport for the love of it and what they got out of it. Part of what they

got out of the sport was being part of a team; however they comfortably expressed their connection to the sport itself and the satisfaction it gave them regardless of on-water performance outcomes. The participants' reasons for taking part in rowing were an area of conflict between what they wanted from the sport (autonomy) and what they perceived the coach and school wanted (externally regulated). However, the theme of 'why they rowed' referred to the love of being in the boat, and the personal satisfaction the sport provided.

The love of being in the boat and how it feels was mentioned by all the participants and showed not only why they enjoy the sport but also showed they had a good understanding of when rowing the boat feels right. These feelings of doing a sport for the love of it is in line with intrinsic motivation which is defined as being motivated for the enjoyment of doing the activity itself (Deci & Ryan, 2000). This was the most positive self-determining aspect to emerge from the study as the participants spoke with such enthusiasm about how much it meant to them and the true satisfaction they got from being in the boat. Each participant spoke about the feel of the boat in a similar way, for example:

Yeah if you were doing something right then we kind of just saw it ourselves, like if we were doing the right stroke we could feel it in the boat, our boat just runs off smoothly. - Jack

Jack's awareness shows an understanding of knowing when the boat is going well, something that coaches can use for feedback about the boat movement from the rowers. Past research on boat coordination in rowing has found that rowers use the environment and boat movement information as a factor for coordination and performance feedback (Millar, Oldham, & Renshaw, 2013). This supports the present study which showed that the rowers have knowledge and understanding of their boat movement. Participants spoke about how it felt rhythmic and free when the boat was going well. Others emphasised the enjoyment they got from being in the boat:

It was sort of an energy rush I guess that positive energy rush, it felt really good to be out there on the water, it was something that I really enjoyed. – Tom

These quotes demonstrate internally regulated behaviour where they are participating for their love of the sport placing them at the intrinsic motivation end of the SDT continuum (Bailey et al., 2013). By doing an activity that is enjoyable and

pleasant, intrinsically motivated athletes will engage in sport out of a strong sense of choice and desire more than extrinsically motivated athletes (Mageau & Vallerand, 2003). In turn this may result in long term participation.

The merging of actions and awareness in an activity are consistent with feelings of 'flow'. Csikszentmihalyi (1990) talks about the optimal experience based on the concept of flow as being:

The state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at a great cost, for the sheer sake of doing it (p.4).

Not only has research on flow revealed that perceptions of competence are positively related to the experience of this psychological state, but interestingly Kowal and Fortier (1999) found that swimmers who felt most connected with teammates reported higher instances of flow. This is an intriguing finding when comparing it to rowing and the experiences shared by these participants. If participation can be impacted on by the psychological needs, then in order for continued involvement perceptions of competence and relatedness will maintain involvement and enhance experiences of flow, which in turn would increase enjoyment of being in the boat and the overall enjoyment of the sport.

The present findings show a sense of family and the joy of being in the boat as positive factors for participating in rowing. In addition results show that providing opportunities for learning skills, emphasising effort over results and demonstrating athleticism as important factors for adolescent involvement in rowing. As young athletes seem to value these positive attributes, it would seem prudent that this is the environment that should be encouraged and promoted within adolescent sport, which may assist in reducing the number of drop-outs in sport. Part of this requires making sure there is a constructive alliance between the coaching environment and motivational regulators which is important if the basic psychological needs are to be met. What is worthy of further discussion now is what influenced the athletes in the present study to drop out after they had initially had such positive experiences and such a passion for rowing.

### **Influence of the coach**

The impact of the coach came through as a central influence in the decision to drop out of rowing. This is in line with previous research as one of the most frequently cited reasons for sport withdrawal is coach conflict (Belanger et al., 2011; Fraser-Thomas et al., 2008a, 2008b; Lim et al., 2011). However, during the analysis it was important to consider what aspects of the coach behaviour influenced the athlete to drop out. The participants stated a difference in goals, feeling under-valued in the team, having limited opportunities for autonomy, and poor coach-athlete communication as the most frequent aspects to arise. The words of the participants reinforce previous research that highlights the significance of the coach in shaping athletes' experience.

The first conflict to stem from the analysis was the difference in perceived goals between the coach and the athletes, with the coach appearing to focus more on outcome, and the athletes focusing more on personal achievements and social factors. The athlete goals revealed here are reflective of similar studies citing perception of competence, fun and enjoyment, learning new skills and being with friends as being important to youth in sport participation (Bailey et al., 2013).

The participants believed that the coach's main goals were based around performance and winning:

Well [the coaches] were concerned with doing well at regattas and winning medals and that sort of thing so they were pushing results –  
Nathan

Conversely, the participants often commented on the amount of effort they put in as being the most important factor:

For me I just really wanted to improve my rowing like as a four and for it to just feel better as well and to improve. We won a few times and when we didn't we wanted to just improve and try and get back to rowing and stuff so yeah just improve - Jen

The difference in goal and race performance impacted on perceptions of competence as they often did not reach the expectations of the coach and therefore felt they were not good enough to be involved in the sport. Due to this perception the participants felt that the top athletes were the main focus often leaving the others to feel unwanted, not cared about and receiving minimal coaching input which impacted on their overall development and their sense of relatedness. These perceptions were

demonstrated through not being coached by certain coaches, sometimes being required to train without a coach, the coaches not speaking to the rowers after racing and being asked by the school not to return to rowing the following season. All of these perceptions impacted on their sense of belonging with both peers and coaches.

We weren't in the prized lot of people that would do really well. In my first two seasons, I was in crews that were doing well I think, I wasn't a terrible rower but I wasn't like amazingly good so the crews that I was in never really, they didn't really do well and the coaches didn't put as much time into them as other crews – Sarah

Here we see a segregation of athletes, leaving some feeling unimportant. Being perceived as unfair (through encouraging and focusing on only a few athletes) has previously been cited as a least favourite coach behaviour (Fraser-Thomas & Côté, 2009; Stewart & Taylor, 2000). What the present study found reflects these findings in that coaches who treated athletes differently left them feeling unvalued and were indicators of drop-out.

Even though the participants expressed a love for the sport it was not enough to keep them involved if they did not feel appreciated. The participants' perceptions of the training environment were reminiscent of an ego-involved motivational climate (where there is a segregation of ability, public evaluations and autocratic leadership style) (Keegan et al., 2010). Ego-involved environments have been shown to have negative outcomes such as anxiety and reduced enjoyment (Keegan et al., 2010). Each of these points can be linked to a quote by the participants of this study particularly around competitive tasks, autocratic leadership and segregation by ability. There was evidence to suggest that the participants were not concerned about being split into an "A" team and "B" team as this was considered a normal part of sport but were more concerned with how they were treated after this divide.

It wasn't an even playing field and for everyone to be putting in the same amount of time and money in, you're paying a lot of money to be part of this sport and then to not even get treated with the same respect or we don't get the training um, its difficult. - Sarah

In comparison a task-climate emphasises: collaborative tasks, democratic leadership, recognition for effort/improvement, mixed ability groups, private and individual evaluations, and sufficient time for everyone to learn. This correlates with positive motivational outcomes (Keegan et al., 2010). From the data analysis the results

demonstrated that there was an ego-involved motivational climate within rowing yet what the participants craved was a task-climate. We can draw this conclusion from quotes that specify what the coach's goals were and different training experiences in comparison to what the participants stated were their motives for being involved.

I think they did align to some extent because the girls did want to do well and really I think the rowers who did do well or who did get medals or get into A finals they were satisfied with themselves because their goals aligned with the coaches and they did what the coaches expected of them and then other girls who I don't know they might have had a good race here and there um, they just I don't know the coaches didn't really care as much about them so they I don't think got as much fulfilment from it. - Sarah

This is consistent with other research of autonomy-supportive behaviours. Coaches who genuinely consider their athletes opinions and feelings toward their sport promote athlete self-determined motivation and therefore enhance their sport performance (Gillet et al., 2010). What is new about this is we actually see the manifestation of it in these sorts of behaviours in adolescent athletes. By the time we research athletes in high-level performance, the people who cannot cope with this have already been weeded out. What we have here is a school context where a lot of potential is eliminated through a lack of support but also reinforced through the motivational climate. There is some evidence to suggest that the motivational climate (i.e. goals of the programme, mastery-oriented versus ability-oriented goals) may influence the athlete's perception of ability and eventually may determine whether the athlete adapts to the situation or withdraws (Petlichkoff, 1996). Coaching practice is likely to be ineffective, or even harmful if the coaching environment is not aligned to the needs of the athlete as athletes' self-determined motivation to participate in sport will be significantly influenced by the type of coaching environment created (Bailey et al., 2013).

What is of interest in the present study is how the structure of sport can impact on the type of training environment the coach creates. The competitive structure of school rowing in New Zealand impacts on the coaching context and can result in the coach creating a performance focused training environment. Performance versus development environments is an area which has perhaps been overlooked in the past as an avenue for coach conflict. Coaches are often employed by schools and sports organisations to get results, so even if they wish to promote a more task-involving

climate they run the risk of losing their coaching position if performance targets are not being met (Mageau & Vallerand, 2003). What these participants describe is a performance based programme where the school or coaches only want to focus on the best athletes who could potentially get the best results for the school.

I don't know how to describe it; he would only be there to coach the best girls, like you really knew what you were worth to him. If he saw you as not being a very good rower he wouldn't waste any of his time on you and he always wanted to be seen as like a really good coach, meaning if the girls would get on the podium at Maadi or North Islands he'd always want to be there, it was all about the medals to him. - Sarah

The evidence suggests that rowing within New Zealand schools is focused on performance rather than on developing athletes. One area to consider in this is the structure of the sport and how the coach, as a product of the environment, behaves in a way to meet the demands of employers rather than athletes. Mageau and Vallerand (2003) suggest that more often than not, coaches' jobs are directly dependent on the team's performance and achievements which can cause people to become ego-involved in their work and emit controlling behaviours. On the other hand, there is research to suggest that those who are autonomy-supportive, such as a coach who is athlete-centred, produce successful teams because their athletes are more intrinsically motivated and put in maximum effort (Mageau & Vallerand, 2003).

The organisational structure of sports programmes can at times contribute to children and adolescents being eliminated or cut from programmes. Coach behaviours in the present study could be seen to be operating within the Rowing New Zealand environment. Currently within New Zealand high school rowing there is no grading system like other sports (for example, football 1st XI, 2nd XI, Senior A etc). There is only one level of racing (within the age groups), meaning the "C" crews race alongside "A" crews. Such a competitive structure may contribute to promoting ego-coach behaviours and influence athlete perception of competence. Like many school sports it is prestigious in some schools to be seen as a competitive rowing school therefore coaches' behaviours are potentially being shaped within a context that focuses on getting the results. This point was not overlooked by one participant:



[The coaches] were focused on winning; they wanted us to be the best rowers we could be. High school rowing in New Zealand is very competitive so I think it is the culture of the sport in New Zealand as opposed to the coaches we have at school. – Tom

The same participants spoke of being left behind by the coaches because they focused on the top athletes at the time. They were perceived not to develop the other athletes which just allowed the gap to grow, resulting in a lack of relatedness and a decrease in feelings of competence. All youth should be given the opportunity to participate in developmentally appropriate programmes to help them become skilled and competent in a variety of fundamental movement patterns (Humbert et al., 2006). Perhaps, if we are to create change in the coach approach with adolescent athletes, what is required are new ways of measuring coach success other than the number of medals won at Maadi Cup.

[In our] Under 15 season we did kind of well results wise and under 16 at Twizel, we bombed out in rechargers and didn't make any A finals. So it was pretty disappointing. It was a good trip but no-one was that excited about keeping up rowing, they were only there for the kind of social side of it, seeing everyone everyday which was good but the actual rowing wasn't very exciting. Like it wasn't worth all the training. - Matthew

With the athletes left feeling like they were not being developed or improving, this influenced their decision to drop out of rowing. A difference in sport participation goals has been identified in previous research as an indicator for drop out, as when the cost outweighs the benefit, athletes do not value their involvement anymore and seek other opportunities in different areas of their lives (C. B. Green, 2005). It appears that the rowing programme for these athletes did not provide them with opportunities to develop. This is supportive of past research which found that if children find themselves in programmes that fail to modify games or rules, and emphasize winning rather than skill improvement, some individuals may experience a lack of success and eventually drop out of sport or look for alternative situations. The participants presented similar ideas:

It was a massive sort of time constraint, there was other things I wanted to do, other sports I wanted to get involved in, academically as well I needed to spend a bit more time studying. But to be honest if I had been a bit more successful in terms of results on the water I would've probably kept going. So there were a lot of minor factors which contributed somewhat but the most important was probably success, ah lack of success on the water. - Tom

The second coach conflict to arise in the analysis was the issue of a lack of perceived athlete autonomy. Although evidence supports the benefits of autonomy-supportive behaviours on intrinsic motivation, controlling behaviours can be emitted even by well-intentioned coaches (Mageau & Vallerand, 2003). However, controlling coach behaviours have been linked to drop out. For example, Pelletier, Fortier, Vallerand and Bri  re (2001) showed children dropped out of swimming because they perceived their coaches as less encouraging and supportive, and more controlling and autocratic.

Autonomy has been indicated as the most fundamental need in past research (Sarrazin et al., 2002) however, our research suggests that autonomy is not as important in this age group compared to the perceptions of relatedness. Though it was not the dominant feature, there was some evidence in the present study of participants wanting to be provided with more autonomy. The participants appreciated structure in their environment and the coach being in charge of the athletes, but at the same time there were elements of coach behaviours they did not like as well as comments which demonstrated a need to feel autonomous.

Firstly, being listened to was important to the participants, showing support for autonomy-supportive coaching which states acknowledging others feelings as an autonomy-supportive behaviour.

I liked the females more because they sort of understand you more and they sort of listen to you instead of just, a male just think they know the best for you and everything. – Jen

While Jen highlights the differences she experienced between male and female coaches, she was the only participant to discuss gender differences. This is a possible area to consider for future studies as coach gender was not discussed with any other participants but identifies an area that could be investigated further. However, what this extract does show is the indication towards being listened to and understood. This was not limited to the female participants with the boys also wanting to be heard.

I think the coaches didn't listen and stuff. We talked about it a lot as a team about the coaches not listening to what we're saying and what we're thinking, and it's frustrating. – Nathan

The second factor demonstrating a desire for some autonomy was the opportunity for having more input into training sessions. What was interesting was when athletes were provided with opportunities for involvement, motivation increased.

In under 16 season we were left to a lot of stuff by ourselves. I thought that was pretty good. Take the boat out or take an erg session by ourselves, or a run. We had quite a few sessions like that because our coach was quite busy. I think everyone just kept motivating each other, no-one took their seat [in the boat] for granted. – Matthew

Autonomy supportive behaviour from both parents and coaches has been reported as having a positive influence on motivation, whereas a controlling style is often reported in relation to feelings of frustration, anger, undermined motivation and even damaged relationships (Keegan et al., 2010). When the athletes felt like they were only doing something because their coach had decided that was best, the athlete motivation decreased.

I don't know I just didn't find it enjoyable. I don't think it was made to be enjoyable but I just didn't like it at all. It was just long ergs, which was all [coach] wanted to do; I just didn't want to do it to be honest. – Matthew

The final area of coach conflict stemmed from communication between the athletes and the coach. Communication in the form of feedback was an area the participants discussed as having a direct influence on their perceptions of competence. The type of feedback provided and the way in which it is interpreted can result in enhancing or undermining athletes' perceived level of ability (Deci, Vallerand, Pelletier, & Ryan, 1991). When asked how they were provided feedback on their performance, often the participants could not recall specifically how the coach provided them with feedback or if they provided feedback at all.

I mean they'd just shout at us through their megaphone [laughs] or they'd stop us rowing and then have a chat. I mean quite often, the head coach if I occasionally did get coached by him which was not often because I was not seen as one of the better rowers [laughs], what he used to do and this is for everyone is just sit in his little coach boat and just like look and then not even say anything and then let us row and go on for ages and then at the end he might say something. –Sarah

One participant also discussed how they would receive feedback following successful races but not following poor performances, meaning when the athletes most needed feedback and support they did not receive it.

Mageau and Vallerand (2003) state that feedback should be positive and needs to promote perceptions of autonomy and competence, target behaviours that are under the athletes' control, and convey high but realistic expectations. In spite of this, feedback, or lack thereof, was identified by the participants as an area which was left wanting in their coach-athlete relationship.

All of the quotes shared in the results section on feedback link to the important point about when feedback is provided. Firstly, the participants felt they were 'left in the dark' with decisions being made without explaining 'why' this had taken place. The lack of feedback could be perceived as controlling. However, the use of verbal instruction and feedback is also commonly perceived as a form of controlling behaviour which can be seen to work against an autonomy-supportive environment (Millar, Oldham, & Donovan, 2011). The participants could understand they may not always make the top crew, but they did not receive feedback on why they were in a specific crew which left them confused and unsure what they needed to work on.

You just knew from your crew selections and stuff in the weekends if you were going well, but they would actually tell you, like without being told guys just got dropped from the senior eight between training and racing and were left really gutted. I think maybe monthly meetings with each individual athlete to actually let them know where they're at, that's something that could've been extremely helpful. - Nathan

These events, such as separation into a certain crew, can be considered competence defining as they provide the athletes with information about themselves and their abilities. Once separated into their crews, a division was created which caused the participants to observe the top crew being provided with more coaching, therefore assuming they received more feedback, allowing them to develop while the participant's crew was often left without a coach. Influence on feedback is important to consider for adolescents in sport as it can be competence defining and perceived competence is strongly linked with motivation to continue in sport (M. R. Weiss, 2008).

In summary the influence of the coach was a determining factor of drop out. When the athletes were separated from their teammates and ignored by the coaches their sense of competence and relatedness was undermined. It appeared that these decisions were made without consulting the athlete first leaving them unsure how they fit in to the system. When enjoyment and opportunities for involvement rise, so too does commitment; conversely when enjoyment and opportunities for involvement fall, commitment also falls (C. B. Green, 2005). Once the participants' results started to go backwards, they began to question their involvement in rowing and instead looked for alternative sports or academic activities to be involved in. Coaches can have a strong influence on youth and have potential to direct them into a lifetime of involvement with sports and/or physical activities, or they can be the catalyst that turns them away. Therefore, it is important for coaches to be aware of the effect they might have on promoting lifelong physical activity among youth (Humbert et al., 2006) and should be ensuring our young people have positive sporting experiences so they continue living active lives.

### **Adolescents and weight loss**

Issues related to lightweight rowing was an unexpected theme to emerge from the study and brought into question the purpose and practices undertaken to be part of a lightweight rowing crew. Of the seven participants interviewed all three females and one male discussed lightweight rowing. However, it was only the girls who discussed the segregation, pressures and health concerns around being a lightweight rower.

The first issue raised with having a lightweight rowing crew was the division it created within the squad. The impact on the sense of relatedness was prevalent not only within the wider squad but also within the lightweight squad itself. Females have highlighted the importance of friends in many studies and when it is removed they can start to lose their enjoyment for the sport (Bailey et al., 2013; Burrows & McCormack, 2011; Sport New Zealand, 2012; Yungblut et al., 2012). Here, elements of division came through competition between the "A" team and "B" team but also an increase in division was evidenced based on weight. The participants discussed the special treatment the lightweight girls received with having their own meals, their own room and majority of the coaching input.

I think doing [rowing] at high school should be more fun and you shouldn't have to focus on weight loss because I think it confuses and divides the girls obviously which was part of the reason you should be doing it. – Kate

These behaviours of the coaches directed at the lightweight rowers and body image factors could potentially lead other athletes to want to be part of, or to resent, this exclusive group. Not only did this division happen within rowing but it started to intrude on normal school life as well:

So usually what you can do is go to rowing training and then go out for dinner with your friends and you can still see them and have normalcy but with rowing lightweight, well you would have to eat at home and only have fish and vegetables [laughs] and like even at school I would just sort of stay with my doubles partner because we'd have weird food. – Kate

For adolescent girls to be concerned with what they are eating and their weight and its impact on their relationships is of concern. Their sense of relatedness is a big factor here as on the one hand they are forming a close bond with their fellow lightweights through a shared diet regime, on the other hand this restriction on food is impacting on relationships with others.

Along with the affect lightweight rowing had on social factors, there is a second issue to consider, that of development. As these rowers are adolescents they are no doubt experiencing development at varying rates through puberty and into young adulthood. The types of weight-loss methods that the participants speak about can potentially contribute to physiological and psychological effects that some of the girls experienced.

My school results were awful, I wasn't focusing at all because I just wasn't eating and I was exercising so I just wasn't focusing on school and it was obviously bad for my body. There are photos of me and [my partner], it's just our bones sticking out, yeah and we just stopped, we stopped getting our periods for the entire rowing season. - Kate

These health issues can be viewed under two branches of development: the impact of dieting while developing and the impact of skill development. The first developmental issue worth discussing is the dieting effects on physical maturation. Dieting is defined as “intentional and sustained restriction of chronic intake for the purpose of weight loss or weight management” (Stice, Martinez, Presnell, & Groesz,

2006 p.274). What Kate describes is in line with research findings of health consequences of the dieting athlete. These include, but are not limited to dehydration (plasma volume reduced and blood flow and sweat rate diminished), inadequate intake of macro- and micronutrients (reduced carbohydrate and protein intake will result in fatigue, inadequate recovery and lean tissue loss), cognitive function and psychological problems (anger, fatigue, tension and anxiety), disordered eating, hormonal changes and low bone density (female athlete triad), and growth and maturation (Jorunn Sundgot-Borgen & Garthe, 2011). It is therefore important to consider this component when investigating an adolescent who is dieting to compete.

The female athlete triad is an interrelationship of menstrual dysfunction, low energy availability (with or without an eating disorder), and decreased bone mineral density; it is relatively common among young women participating in sports (Nazem & Ackerman, 2012). While the prevalence of all three components of the triad is low in female athlete populations, there is a much higher risk of having at least one of the components. Kate admitted she lost her period during her season as a lightweight rower, one component of the triad. One can argue that having just one component of the triad is a red flag that needs to be addressed to prevent the other two components (Anderson & Petrie, 2012).

Growth and maturation can be affected through inadequate energy intake during the growth period potentially resulting in delayed pubertal development and retarded growth (Jorunn Sundgot-Borgen & Garthe, 2011). The athletes eligible to row as a lightweight at school in New Zealand are aged between 13-17 years, during the developmental stages. Delayed menarche, bone growth retardation, reduced height, weight and body fat, have been reported in gymnasts (Jorunn Sundgot-Borgen & Garthe, 2011). Even short term weight loss may have marked effects on blood biochemistry and hormonal parameters (Jorunn Sundgot-Borgen & Garthe, 2011). This may constitute a special health risk for adolescent athletes with repeated weight loss during the season.

In regards to skill development one of the most important jobs of a coach is to enable the positive development and experiences of young athletes (Strachan et al., 2011). The participants from the present study imply that their development physically and socially was impacted on through the effects of lightweight rowing. The coach should ideally create an optimal learning environment for an athlete to grow. Coaches

need to consider the physical development of their athletes but also their psychological development as well as promoting life skills including team work (Strachan et al., 2011). The participants discussed the segregation and division lightweight rowing created. What was interesting was that both lightweight rowers and those who were in the squad but not lightweight felt similarly towards the effects of the segregation. However, the non-lightweights did also empathise for their lightweight counterparts. For the teammates looking in on those who were trying to be lightweight they could see problems arising:

I don't think it was all good for [the lightweights] because they did have a lot of pressure put on them to become lightweight and it's not very healthy to make teenage girls obsess over their weight, like that's sort of a recipe for disaster. – Sarah

Part of the tension within the lightweight squad itself was this division between natural (those who are already in the weight category without changing their lifestyle) and unnatural (those who need to lose weight in order to compete as a lightweight) lightweight rowers. This often led to the participants discussing “a lot of issues with the lightweight people”.

Between the four lightweight girls I think the one who was naturally lightweight was just sick of the dieting and having to be around it and the other girl, she started off at 66kilos and sort of refused to drop the weight until the last minute. –Kate

The required weight for a lightweight female competing for their school is no heavier than 59kgs. The above example shows the amount of weight some girls were required to lose in order to be a part of this team. As Kate also mentions how this rower dropped the weight at the last minute, one can only assume this must have resulted in some dramatic weight loss methods. Past research has shown that lightweight rowers are accepting of extreme weight loss methods such as laxatives and sweat runs (Karlson et al., 2001). One of the participants did discuss dieting and sweat runs but none of the rowers in the present study discussed the use of laxatives.

The issues raised by these participants related to lightweight rowing do give some cause for concern. As none of the boys discussed lightweight rowing it is hard to assume that they may experience the same issues. From anecdotal evidence in rowing in New Zealand, there is an ‘unspoken rule’ and widespread view of the desired height and weight for athletes in order to get the best crews and one of the male rowers, Jack, did



touch on this when he felt he was too heavy so the other boys did not like rowing with him. As a rugby player he needed that weight but in the rowing environment he felt out of place.

Going by the limited research on lightweight rowing, thus far it appears that lightweight rowers do tend to have highly controlled eating habits (a risk factor for disordered eating) and are accepting of extreme weight loss methods such as laxatives and sweat runs, but are less likely to develop eating problems than runners or other lean body sports (Karlson et al., 2001; Pietrowsky & Straub, 2008; Reinking & Alexander, 2005). It has been suggested that this is because rowers are less concerned about their body aesthetics and more concerned about competing at optimal level for their weight (Karlson et al., 2001). They also are trying to reach a certain weight for competitive reasons and have no reason for their weight to go lower than necessary (Karlson et al., 2001). These studies have been conducted on older athletes. What these findings show is for adolescents there may be an element of body image issues, as Kate discusses ‘getting skinny’. Is weight-loss really something adolescent girls and boys should have to contend with? This is an area which requires further investigation particularly around some of the weight loss methods, pressure, support and choice around rowing lightweight from coach, parents and peers in adolescent lightweight rowers.

## Chapter 6: Conclusion

The aim of this study was to begin to understand why rowing tends to experience higher rates of drop-out than other sports. It was clear that all participants initially held a love for the sport, particularly enjoying the family environment created in rowing. However, factors such as the influence of the coach, the pressures associated with being a lightweight rower, and no longer feeling a 'part of the team', are areas that may warrant further attention. Greater insight into factors that contribute to athlete drop out may enable sport providers to create environments that better meet the needs of adolescent rowers.

The use of SDT meant the results could be viewed in terms of the need for perceived competence, autonomy and relatedness. This proved to be a beneficial approach to the study as the statements made by the participants clearly related to the various needs. It needs to be acknowledged that the analysis was difficult, as the three basic needs tend to overlap. The SDT framework, however, enabled an analysis that highlighted the significance of each need to various attributes of rowing. It is interesting that perceptions of relatedness were so dominant in this study when previous research has tended to focus more on autonomy and competence (Gillet et al., 2010; Sarrazin et al., 2002). Our data suggests that relatedness is a key need that needs to be met to nurture the continued participation of adolescent athletes.

What strongly emerged from the data was the initial passion that the rowers felt for their sport, why they were there, why they participated in the sport of rowing. Their sense of belonging came through strongly here evidenced in the satisfaction they got from being part of something, meeting new friends, making relationships with parents and coaches, as well as remaining active and healthy. The concept of being part of a rowing family was a dominant theme with several components contributing to this. The first was their peers and the importance of forming friendships and sharing camaraderie. The ability to fight like siblings and then get over it emphasised that family feel. Also within their peers a number of participants mentioned the fact that all ages and ability levels train together giving them a chance to demonstrate leadership skills and to have friends of all ages. The other part of the sense of a rowing family was the considerable input and support offered by parents, and that unique side of the sport of the parents cooking breakfast and helping out with all behind the scenes work that does not happen possibly so much in some other sports.

The other positive factor to reveal itself was how participants genuinely loved being in the boat and the sort of 'high' it gave them. Interestingly for coaches, it indicates that athletes are very aware of when the boat is going well. They are the ones in the boat actually rowing, therefore they are in control and it is not simply someone else telling them it is good but an internal feeling that they know when it is good.

What is of interest is that all these participants expressed such a love for the sport and yet had still dropped out. All the participants seemed to weigh up their options as to where they saw themselves fitting in the upcoming season, making comments that clearly indicated that they did not see a place for them to fit. Many comments were competence based as they did not like the idea of performing poorly but they also talked about others dropping out which limited options. Part of this may be related to a performance based programme and shows that they can handle a small gap in performance between their peers but when the gap gets too big, they drop out. It also relates in part to a divide emerging within the squad and them getting split from their peers. They also seemed to have had negative experiences with the coaches and not being treated with the same respect as the top tier rowers so had a preconceived idea that if they returned for another season they would have another negative experience.

These negative experiences link in to the second main theme to emerge from the interviews related to the significant influence of the coach. There is no doubting that the coach plays an important role in the ongoing involvement of adolescent athletes. This has been demonstrated many times before (Bailey et al., 2013; Fraser-Thomas et al., 2008b; Petlichkoff, 1996). My study was able to identify the key areas in rowing where there is conflict within the coach-athlete relationship. Firstly was the way in which the coach treats the athletes. This is supportive of past research which has identified that a fair coach who treats athletes equally and had positive behaviours is generally highly regarded (Fraser-Thomas & Côté, 2009; Walters et al., 2012). Secondly, allowing athletes some input into their rowing and to be able to have a voice, for the coach to listen and understand the athlete. Again this is well documented in autonomy-supportive coaching studies (Mageau & Vallerand, 2003; Sarrazin et al., 2002). Finally, the participants identified the importance of feedback. What was of interest here was how the participants were unable to identify the sort of feedback they were provided with. They also indicated that the lack of feedback provided to them both during training and after poor performances, meant they were left confused with little guidance into their performance.

A major source of conflict was the focus of the coach on winning as opposed to effort. These results show in this age group sports need to think more about nurturing feelings of relatedness and competence, with less of a focus on just winning. The participants felt the effort they put in and working hard as team held more value than winning. The fact that winning was important to the coaches and the school was not lost on them. The participants made some powerful statements about what was important to them compared to what they perceived to be important to their coaches. What was interesting to note was when they were talking about winning and medals the participants always said “they” meaning coaches, not one of them said they rowed because they wanted to win, or never mentioned “I”. For example:

I think the coaches made the right decisions because **they** got, well the aim was to get medals, and that’s what **they** got at the end of the day, **they** got more medals than **they** would have if we hadn’t rowed lightweight - Sarah

The need for coaches to be more athlete-centred shows through in this data. Athlete-centred coaching is a leadership style that caters to athletes’ needs and understandings, where athletes are enabled to learn and have control of their participation in sport (Kidman & Lombardo, 2010). One of the first aspects around athlete-centred coaching is knowing what is important to the athlete. While the participants liked winning they often felt that the effort they were putting in was overlooked. Having respect for the coach and being respected were important to these participants and they wanted to be treated equally. However, they felt with the divide between the squads, the top tier rowers were provided with more input from the top coaches and a better rowing experience. Part of this was blamed on the communication from the coaches. Open and honest communication was the main feature all participants discussed in relation to the question “What are good coach behaviours?”

The final finding which was revealed from the study related to the effects of lightweight rowing. Lightweight rowing is an area worth serious consideration in the school rowing community. There were some serious health concerns raised with regards to lightweight rowing and the girls talked about poor weight loss methods, natural versus unnatural lightweights, and the effects on their bodies. For adolescent females to be undertaking these weight-loss methods to compete, highlights a dark side of rowing. During these developmental stages growing athletes should not have to be worried about their weight. This view was shared by the lightweight rower in the study who

believed that rowing at school should be about fun, friends and athleticism rather than dieting.

The participants also discussed the way in which rowers are almost forced into becoming lightweight through their coaches with limited input from the athlete. Some rowers seemed to want to do this in order to be more competitive. By the same token, some rowers were also denied this by parents removing the option of lightweight rowing for them, thereby removing all control these athletes have over their own bodies. One other interesting factor to come out of lightweight rowing was how it created a division within the squad. Having understood how important their friends are to them at this stage, lightweight rowing seemed to create a big wedge within their family environment.

In summary, in contrast to other results (Lonsdale, Hodge, & Rose, 2009) the present findings show a lack of relatedness remains an important determinant of drop out and its involvement in motivation and well-being may be developmentally driven. It would appear that the need for relatedness is the most significant need for these adolescent athletes.

### **Limitations and implications**

There were several limitations in the present study. The first limiting factor of this study was the number of participants who took part. However, the purpose of a qualitative study is not to generate findings which are generalizable to a wider population, rather the focus is more on depth of the data provided (Patton, 2002). As this was a Master's thesis, seven participants was deemed to be a sufficient number to reveal some meaningful beginning insight into the reasons for adolescent drop-out in school rowing.

Secondly, the demographic range of participants was rather narrow. This was in part due to the nature of rowing as it is a sport which is not accessible to all populations. The intention was to gain access to athletes from public, private, co-ed and single sex schools but no private schools consented to the study. The study only investigated athletes who had dropped out of school rowing programmes. There is potential for further development here with future research looking into similarities and differences between athletes who have dropped out and active athletes, and to interview parents and

coaches of rowers. It is advisable that future research in this topic area widens the knowledge base by including some of these populations.

A further potential area for future research is to look at gender differences in rowing, including any differences in behaviours by coach gender. One participant discussed the difference between male and female coaches, stating she “preferred” the females. It would be interesting to see if there are differences in female and male athletes working with female or male coaches or if it is more to do with general coaching characteristics.

Finally, an important area worth further investigation is lightweight rowing for adolescent athletes. The female participants spoke of not only health issues but how it created segregation in their squad. As females seem more socially oriented in sport, this segregation had quite a negative effect. However it was not necessarily worse than the segregation from “A” squad and “B” squad. It would have been beneficial to access male and female lightweight rowers to see whether the experiences were shared across the genders. There was only one participant in this study who had competed as a lightweight rower; however, a number of non-lightweight rowers referred to issues pertaining to lightweight rowing. More lightweight participants would strengthen research into the area of lightweight rowing.

The present findings do contrast with other research (see for example Lonsdale et al., 2009; Ryan & Deci, 2002) probably because relatedness has a developmental function which is at its most importance early in a sporting career. Ryan and Deci (2002) described relatedness as a distal need, although perhaps it is not as much distal as it is developmental.

As rowing is a sport which only begins in high school, these athletes are inexperienced in the sport. In the early stages of sport when athletes are inexperienced, relatedness is the more defining feature of motivation. As athletes progress and become more experienced, competence becomes more defining. This is demonstrated by Nathan Cohen, a New Zealand Olympic gold medal winning rower, who in an article stated:

We had so much fun together right from the start and it carried on from there, even though we were absolutely hopeless in our first couple of years. That was such an important thing for me because sport was almost more about enjoyment than it was about results, the results started coming later because you enjoyed the sport so much. (Stuff.co.nz, 20/12/2013)

In rowing in New Zealand, many athletes have dropped out before they reach the stage where results matter. It was suggested that part of the reason coaches perhaps act in the manner they do is in part due to the structure imposed on them within rowing. It has been identified before (Mageau & Vallerand, 2003) that coaches have pressure put on them to get results, often causing them to behave in a more autocratic manner. The structure of the school rowing system is one which might cause the coaches to be narrowly focused on the performance outcomes of crews rather than long term development of adolescent athletes.

The purpose of this study developed from a passion I had for rowing and wanting to understand how that passion can be shared among adolescents to help them remain involved in rowing, or at least to remain active in sport throughout their lives. I felt that having positive sporting experiences throughout the early years of life contribute to this life-long involvement. From this study it is hoped there will be more coach education on how to provide a supportive positive environment for athletes in rowing. Rather than focusing so narrowly on trying to be the best crew or the best school in this competitive mind-set, schools should instead aim to provide adolescents with a positive sporting experience so they will remain active for their entire lives. Some coaches do not seem to understand they have a responsibility to these adolescents to enrich their sporting experience. If they choose to invest in the sport or just remain active with their friends and family, their coaches and schools have provided a positive environment to develop a love of sport and physical activity. Instead I feel that the sport of rowing creates an ego culture where coaches want to be seen to be the best, which is in part enforced on them through the structure of rowing in New Zealand. I believe it to be important for everyone to look at the big picture of long term enjoyment and health that they will then pass on to future generations, rather than being fixated on being the top school. Hopefully with this approach the results, as Nathan Cohen expressed, will come naturally as the rowers will strive to be the best they can be.

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## Appendices

**Appendix 1:** AUTECH approval for study





3 July 2013

Simon Walters  
Faculty of Health and Environmental Sciences

Dear Simon

Re Ethics Application: **13/141 The experiences of adolescents rowing in New Zealand: An insight into the influences of attrition in school rowing.**

Thank you for providing evidence as requested, which satisfies the points raised by the AUT University Ethics Committee (AUTC).

Your ethics application has been approved for three years until 3 July 2016.

As part of the ethics approval process, you are required to submit the following to AUTC:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/researchethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 3 July 2016;
- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/researchethics>. This report is to be submitted either when the approval expires on 3 July 2016 or on completion of the project.

It is a condition of approval that AUTC is notified of any adverse events or if the research does not commence. AUTC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this. If your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply there.

To enable us to provide you with efficient service, please use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz).

All the very best with your research,

A handwritten signature in black ink, which appears to read 'Kate O'Connor'.

Kate O'Connor  
Executive Secretary  
Auckland University of Technology Ethics Committee

**Appendix 2:** Communication with school Sports Director. Email of introduction from Auckland Rowing Association (ARA) and formal letter of invitation from primary researcher



**P.O. Box 300 633  
Albany  
Auckland 0632**

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**AUCKLAND ROWING ASSOCIATION INC**

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3 May 2013

To Whom It May Concern

The Auckland Rowing Association (ARA) fully supports the study of Secondary School Rowing Attrition Rates which is being conducted by Rebecca Beattie.

The Auckland Rowing Association will assist her with gaining access to the schools by providing an introduction to our rowing contact within each secondary school and we also approve the use of our letterhead on documents and information given to the participants.

We wish Rebecca luck with this study and look forward to receiving the findings.

Yours sincerely

A handwritten signature in black ink that reads "Murray Earl".

Murray Earl  
General Manager  
Auckland Rowing Association



Private Bag 92006  
Auckland 1142

[date]

Dear [Sport directors name]

Greetings. My name is Rebecca Beattie and I am currently undertaking a Master's study at AUT University in Auckland. My study with the support of the Auckland Rowing Association is looking at what influences adolescent's decisions to drop out of rowing. I am inviting 13 high schools in the Auckland Region to participate in this study. These schools have been identified as having large school rowing programmes.

This study is important because the drop-out rates across all youth sports between the ages of 15 and 18 are high and rowing in New Zealand shows above average drop-out rates based on Sport New Zealand and Rowing New Zealand statistics. There have been a large number of studies looking at attrition in other sports however, to date there has not been a study found which seeks to understand attrition rates in school rowing. The aim of this study is to capture the perspectives of those students who have invested time in rowing then removed themselves from the school rowing system.

It is hoped that the findings of this study will promote a greater awareness of youth's involvement in sport and particularly rowing and increase our understanding of both the positive and negative experiences of the sport. With this knowledge the schools, clubs and high performing areas of rowing will be able to enhance their rower's experiences.

I would like to invite your school to take part in the study. The study will be working primarily with your senior students (16-18 years) however I wish to request your permission to approach students in your school who are eligible to take part. The students will be provided with an information sheet and asked to sign a consent form if they wish to take part. They will be required to take part in one 30 minute interview with myself in a private room on the school grounds (with your permission). The identity of the schools and participants involved in the study will remain anonymous at

all times. All information will be stored on a secure database which only I will have access to, and will be destroyed in a period of six years.

Your agreement to participate in this study would be greatly appreciated. I would really welcome the opportunity to visit the school and talk to you in more detail about this study.

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Simon Walters [Simon.walters@aut.ac.nz](mailto:Simon.walters@aut.ac.nz) 09 921 9999 ext 7022. Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTECH, Dr Kate O'Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz) , 921 9999 ext 6038.

Thank you very much for your time and help in making this evaluation possible. I would be grateful if you could confirm that you are happy for this research to proceed at your school.

If you have any queries or wish to know more please do not hesitate to contact me.

Warmest regards

Rebecca Beattie



Project Supervisor  
Dr Simon Walters  
Phone: 09 921 9999 ext 7022  
Email: [Simon.walters@aut.ac.nz](mailto:Simon.walters@aut.ac.nz)

Principal Researcher  
Rebecca Beattie  
Phone: 022 062 6558  
Email: [rlock@aut.ac.nz](mailto:rlock@aut.ac.nz)

Approved by the Auckland University of Technology Ethics Committee on **03/07/2013**, AUTECH  
Reference number **13/141**.

**Appendix 3:** Ethics documentation related to participant interviews



# Participant Information Sheet

**Date Information Sheet Produced:** 21<sup>st</sup> May 2013

**Project Title:** The experiences of adolescents rowing in New Zealand: An insight into the influences of attrition in school rowing.

## An Invitation

You are invited to take part in a research project about your involvement in rowing. This project aims to understand why students drop out of school rowing.

I am Rebecca Beattie, a Master's student at AUT University, and I will be undertaking this research project.

Your participation in the project will involve a **30 minute interview** at your school with me.

Your participation is entirely voluntary at all times. This means you can choose to withdraw from the study at any stage. Your involvement in this study or withdrawal from it will not cause you any harm, and your school reputation and responsibilities will not be affected in any way.

It is important to note that no identifying factors will be used in the study. This means your name, school and any other identities will remain anonymous at all times.

## What is the purpose of this research?

I am undertaking this research to gain a better understanding of why teenagers drop out of school rowing. I hope to gain knowledge and understanding of what influenced you on your decision to stop rowing.

A report of the findings will be written up as a Masters Degree Thesis. I will also share this knowledge with the Auckland Rowing Association and other college sport organisations to assist in their future planning and responsibilities towards youth sport.

### **How was I identified and why am I being invited to participate in this research?**

You have been approached for this study because:

- You have stopped rowing for your school.
- You rowed at school for two or three seasons.
- You completed your last season in either 2012 or 2013
- You did not complete your under 18 season.

If this describes you then you are eligible to take part in this study.

### **What will happen in this research?**

If you choose to take part in this study you will be asked to:

- Sign the consent form to say you would like to be involved. Place the form in the envelope provided and pass it on to the school reception. I will collect it from there.
- I will contact you and arrange a **30 minute interview** with you.
- The interview will take place in a private room at your school at a time best suited to you.
- The interview will be recorded by a digital voice recorder.

### **What are the discomforts and risks?**

Any discomfort or risk is unlikely. However, due to the nature at which some people have chosen to leave rowing you may be required to discuss some negative experiences or recall bad memories.

### **How will these discomforts and risks be alleviated?**

You don't need to answer any questions that you don't want to and are free to withdraw from the study at any time. Upon withdrawal all information you have provided will be removed from the study. You will have the opportunity to read the transcript of our interview and change or withdraw any comments.

Contact details for Youthline will also be available if you feel you need to discuss any issues further.

### **What are the benefits?**

By taking part, your information and experiences will be used with the aim to improve rowing experiences for school rowers in the future. In addition some people find taking part in research a fun and rewarding experience.

### **How will my privacy be protected?**



Only I will know your name and school. Interview recordings and transcripts (written version of the recording) will only be accessible to me and my supervisor. In any transcripts, reports, publications, presentations or study discussions you will remain anonymous. This means your name, school and any other names or locations spoken of in the study will remain unknown. Where a name is required for written purposes I will give you a fake name and fake school name.

Staff in the sport department may be aware of your involvement but at no time will they see or hear your comments. If you wish your involvement to remain unknown within the school the Sports Director will sign a confidentiality form meaning they cannot tell anyone you are involved in this research.

### **What are the costs of participating in this research?**

The only cost to you as a participant is your time. You will be required to attend one 30minute interview at your school.

### **What opportunity do I have to consider this invitation?**

You have three weeks to consider this invitation. If you would like more information before signing the consent form you are welcome to contact me on the details below.

### **How do I agree to participate in this research?**

If you would like to take part in this study you will need to sign the consent form attached and return it to your school reception in the envelope provided 8<sup>th</sup> July. I will collect the form and contact you about your involvement.

### **Will I receive feedback on the results of this research?**

If you would like to receive a summary of the findings of this research please tick the box on your consent form. A summary of the findings will be available within 12 months of completion of the project and copies will be made available if requested.

### **What do I do if I have concerns about this research?**

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor:

Name: Simon Walters  
 Email: [Simon.walters@aut.ac.nz](mailto:Simon.walters@aut.ac.nz)  
 Phone: 09 921 9999 ext 7022

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTECH, Dr Rosemary Godbold, [rosemary.godbold@aut.ac.nz](mailto:rosemary.godbold@aut.ac.nz) , 921 9999 ext 6902.

### **Whom do I contact for further information about this research?**

#### **Researcher contact details:**

Name: Rebecca Beattie  
 Phone: 022 062 6558  
 Email: [rlock@aut.ac.nz](mailto:rlock@aut.ac.nz)

**Primary supervisor contact details:**

Name: Simon Walters

Email: [Simon.walters@aut.ac.nz](mailto:Simon.walters@aut.ac.nz)

Phone: 09 921 9999 ext 7022

Approved by the Auckland University of Technology Ethics Committee on *type the date final ethics approval was granted*,  
AUTEC Reference number *type the reference number*.



## Consent Form

*Project title: The experiences of adolescents rowing in New Zealand: An insight into the influences of attrition in school rowing*

*Project Supervisor: Simon Walters*

*Researcher: Rebecca Beattie*

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated 10<sup>th</sup> May 2013.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ☐ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- ☐ If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- ☐ I agree to take part in this research.
- ☐ I agree to my comments being reported anonymously in the findings of this study:  
Yes ☐ No ☐
- ☐ I wish to receive a copy of the report from the research (please tick one): Yes ☐ No ☐

**Participant's signature :**.....

**Date :**.....

**Participant's name :**.....

Participant's Contact Details :

School: .....

Cell Phone: .....Form Class : .....

Email: .....

*Approved by the Auckland University of Technology Ethics Committee on 3/07/2013*

*AUTEC Reference number 13/141*

*Note: The Participant should retain a copy of this form.*

## **Drop out rowers - interview protocol & planned questions**

### **The experiences of adolescents rowing in New Zealand: An insight into the influences of attrition in school rowing**

Interviewer: \_\_\_\_\_

Interviewee: \_\_\_\_\_ Gender: \_\_\_\_\_

Date & Time: \_\_\_\_\_ Location: \_\_\_\_\_

Seasons rowed: \_\_\_\_\_

#### **PROTOCOL**

My name is Rebecca Beattie. I am working on an approved research study at AUT – University involving the understanding of the experiences of adolescents rowing in New Zealand and what influences the reasons for drop out in school rowing.

The study will involve ex-school rowers from New Zealand.

Thank you for your willingness to participate in this research project. Have you read the information provided to you, entitled “participants information”? Before we begin the interview, I would like to reassure you that this interview will be confidential and the tape and transcripts available only to my research supervisor and me.

Do you voluntarily agree to participate in this interview?

Do you mind if I record the interview?

If there is anything you don’t want me to record; just let me know and I will turn off the recorder.

Written and oral reports and other material coming out of this study will present only combined data and information from all participants. Parts of this interview may be made part of the final research report. Under no circumstances will your responses, name or identifying characteristics be included in this report. Do you have any questions I can answer for you before we begin?

Is it all right for me to turn on the recorder now?

## Interview questions

### **The experiences of adolescents rowing in New Zealand: An insight into the influences of attrition in school rowing.**

What did you enjoy about rowing?

What did you not enjoy so much about rowing?

- Affective (feelings – happy, sad, good, bad - How did that make you feel?)
- Cognitive (thinking process – why do you think that made you feel happy Why do you think you felt that way?)
- Behavioural (How did that influence what you did, what did you do about it? What effect did that have on you? What was your response to that?)

**You are taking part in this study because you decided to stop rowing. What were the main reasons you stopped? *List reasons and cover each in depth***

Coach

- Autonomy (Were you ever provided opportunities to take initiative or act independently)
- Competence (How did you coach let you know if you were doing something well or not?)
- Relatedness (What sort of relationship did you have with your coach/s? Did your coach ever acknowledge your feelings or what was important to you or the team?)

Parents

- Autonomy (Were there ever times you wish parents were more or less involved – in what way/areas)
- Competence (What do you think is important to parents at rowing)
- Relatedness (Did you talk to your parents about leaving rowing)

Peers

- Competence (Were you ever made to feel like you were in competition with your peers)
- Autonomy (Were you ever encouraged to take initiative and leadership within your peer group)
- Relatedness (What sort of relationships did you have with your teammates within rowing)

*Training*

How often did you train?

What sort of time off do you feel is appropriate?

- Affective – how did that make you feel
- Cognitive – Why do you think you felt that way
- Behavioural – How did that impact you, what effect did that have on you

Money

- How much did it cost for you to row?
  - a. Did this include Maadi cost?
  - b. Do you feel you got value for money at rowing?
- What sort of price would you be prepared to pay to stay involved in rowing?
- If money wasn't an issue, would you like to have continued with rowing?

Opening questions

So to begin with I'll just get some basic information from you so I have an understanding of you as a rower;

2. What year were you born?
3. How old are you now?
4. What year level did you start rowing at school (y9,10 etc)?
5. How old were you when you started?
6. What attracted you to rowing?

Closing Questions

Thanks for that you have given me heaps to work with. Just a couple of closing questions before you go:

7. Do you think that you would ever be involved in rowing in the future?
8. What do you think would have to change within school rowing for you to have stayed involved?
9. Would you recommend rowing to others?
10. What do you think makes your teammates continuing rowing?
11. Is there anything else about why you chose to stop rowing that you want to expand on that you have not covered yet?

**Appendix 4:** Consultation for study protocols.

- Professional consultation between the primary researcher, supervisors and experts in the field or pedagogy and teaching adolescents.
- Communication with AUT Health and Counselling to check for participant welfare.



## Research with adolescents

Adrian Farnham

Actions In response to the message from Rebecca Lock, 5/2/2013

To: Rebecca Lock; Denise Atkins

Cc: [Simon Walters](#); [Sarah Kate Millar](#)

Monday, May 13, 2013 10:52 AM

Hi Rebecca,

Just a follow up email with regard to our meeting with you on Thursday 9<sup>th</sup> May with regards to your research.

I am more than happy as I am sure Denise is as well to provide any other advice with regards to conducting research with adolescents in the secondary school space. Good luck with your study

Regards

Adrian Farnham

Senior Lecturer  
School of Sport & Recreation  
Ext 7594

## Follow up Masters Ethics Application

Kevin Baker

Tuesday, May 07, 2013 2:51 PM

I would say that this study was unlikely to activate psychological distress or potential harm to participants but would include a contact option like Youthline if they need it.

Kevin Baker

Head of Counselling  
09 921 9992

Rebecca Lock  
Sent Items

Tuesday, May 07, 2013 2:48 PM

Hi Kevin,

Sorry to bother you again but do you feel that offering counselling is a necessary step in this researcher? Just to remind you I will be conducting interviews with teenagers aged 16-18 who have withdrawn from the school rowing environment.

Kind regards,

Rebecca

Kevin Baker

Actions  
To: Rebecca Lock

Tuesday, May 07, 2013 2:43 PM

You replied on 5/7/2013 2:48 PM.

Rebecca. Sorry I have been away for several weeks and my reply message should have indicated this.

For your study it may be more appropriate to consider their own school counsellors or Youthline as options for post interview support.

AUT counselling would be unlikely to suit this group.

Kind regards

Kevin Baker

Head of Counselling  
09 921 9992

Rebecca Lock

Sent Items

Tuesday, May 07, 2013 2:39 PM

Hi Kevin,

I understand you may be really busy at the moment but a response to this email would be greatly appreciated. I would like to have everything in and ready for my Masters ethics by Friday 17th May.

Your help and information regarding AUT health and counselling will be appreciated. Also Simon just spotted an error in the last sentence. Where it says "in the likely event" but it should say "in the unlikely event"

Kind regards,

Rebecca

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**From:** Simon Walters

**Sent:** Tuesday, April 30, 2013 12:54 PM

**To:** Kevin Baker

**Cc:** Rebecca Lock; Sarah Kate Millar

**Subject:** Masters Ethics Application

Hi Kevin,

I am currently supervising a Masters student Rebecca Beattie who is conducting research into attrition rates in school rowing. She will be conducting interviews with teenagers aged 16-18 who have withdrawn from the school rowing environment. Would it be possible to clarify if it is feasible and possible to offer AUT counselling services in the likely event that these interviews could cause some distress to the participants?

I would welcome your advice in this regard?

Cheers

Simon

Simon Walters, PhD

Senior Lecturer  
School of Sport and Recreation  
AUT University  
Private Bag 92006  
Auckland, 1142  
09 921 9999 ext 7022