Achievement goal profiles in young horse riders and their parents:

A Pilot study

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ABSTRACT

This pilot study assesses the goal orientations of 20 young female riders and their parents. The aim of the study was to test run the research instruments used and the research procedure. Goal orientations were identified by means of the Achievement Goal Questionnaire for Sport (AGQ-S). From these goal orientations, goal profiles were created using cluster analysis. Further measuring instruments were tested: (i) A goal orientation dominance test, (ii) the Parent-Initiated Motivation Climate (PIMC) test, (iii) the Sport Anxiety Scale-2 (SAS-2) and (iv) specific tests to measure the rider's perception of self-efficacy of both horse and rider in three different disciplines of riding. Findings indicate that two of the instruments, the goal orientation dominance test and the self-efficacy questionnaire require revision. The research procedure was followed smoothly but some small changes are recommended. Preliminary statistical analyses indicated that four goal orientation profile clusters emerged from the data. Within the riders themselves one cluster showed distinctly higher levels of approach orientation that avoidant orientation in both mastery and performance. Thus, validating the 2x2 goal orientation model. Further findings from the PIMC test, indicated that fathers are significantly more likely to induce worry and emphasize success without effort than are mothers.

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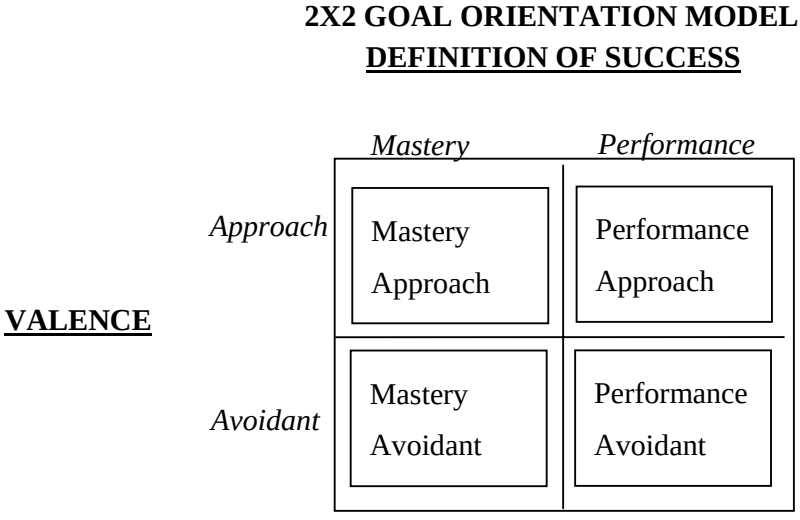
Parents play a significant role in how their children learn about and perceive the world. According to social cognitive theorists, observational learning is the most important form of learning although the role of reinforcement and self-regulation is also acknowledged. However, there is very little research on what happens if these forces act in opposite directions. This applies to many, if not all domains; physical, cognitive, psychological et cetera.

Achievement goal theory has been shown to be an appropriate model for research into motivational processes in education, work and sport (e.g., Duda & Nicholls, 1992; Nicholls, 1984; Roberts, 1992). The basic tenet of achievement goal theory is that the primary motivating force, in an achievement environment (e.g. sport), is the need to demonstrate success or competence. The most recent form of the achievement goal orientation model is the two dimensional (2x2) model proposed by Elliot and McGregor (2001). The first dimension of this model is the definition of success and consists of mastery and performance orientations. The second dimension of the model is valence and consists of approach and avoidant orientations. The terms mastery and performance are not used consistently in the literature; other terms used for mastery are task or learning and an alternative term used for performance is ego. Since this study follows on the work of Elliot and McGregor (2001), the terms mastery and performance will be used.

Figure 1. Diagrammatic representation of the 2x2 achievement goal model.



Mastery goals are those goals in which a person perceives success as a skill learned or improved. Success is self-referenced in that the individual compares herself to her own previous performance. Performance goals are those goals where success is perceived as being achieved by being better than others or achieving things that others cannot. Success is norm-referenced in that the individual judges her success by comparison with others (Duda & Nicholls 1992; Elliot & McGregor, 2001; Nicholls, 1984). In terms of valence, an individual views her goals in an approach or an avoidant fashion. When an individual adopts an approach style, achieving success is the dominant aim. When individuals adopt an avoidant style, they expend more effort on avoiding failure (Elliot & McGregor, 2001).

According to Duda, Fox, Biddle and Armstrong (1992), mastery orientation is associated with a number of adaptive achievement behaviors, such as: (i) choosing appropriately difficult tasks, (ii) exerting full effort, (iii) maintaining intrinsic interest in the activity, (iv) improving and/or sustaining levels of performance, (v) persistence in the face of adversity and (vi) positive association with high levels of intrinsic motivation. These findings have been confirmed by other research (Duda, Chi, Newton, Walling & Catley, 1995; Elliot, 1999; Tank & White, 1996). On the other hand, high levels of performance orientation have been found to be associated with a number of maladaptive achievement behaviors such as: (i) choosing tasks that are unreasonably easy or difficult, (ii) devaluation of the task, (iii) dropping out of the activity, (iv) holding back in terms of effort expended and (v) feelings of incompetence.

Although research shows that the results are consistent for mastery orientation, they are rather less so for performance orientation. However, in the original model proposed by Nicholls (1984), it was pointed out that predicted behaviors would differ depending on whether an individual had high or low levels of self-efficacy. For example, individuals with high performance orientation and high levels of self-efficacy are likely to choose appropriately demanding tasks to demonstrate their skill against others. However, when individuals with high performance orientation have low levels of self-efficacy, they are likely to show maladaptive behavior in selecting inappropriately difficult tasks. In such situations, the individual is likely to choose tasks that are either very difficult (they will not get shown up as others will also fail) or which are insufficiently challenging (they are sure of doing better than others) (Elliot, 1999).

In order to account for these differences in behavior within performance-orientated individuals, the incorporation of an additional dimension of valence to indicate the approach- and avoidance-motivation has been suggested (Elliot, 1999; Elliot, et al, 2000; Elliot & McGregor, 2001). In the approach orientation, behavior is instigated by a positive event whilst in the avoidance orientation, behavior is instigated by an unpleasant event. This refers back to the intentional framework of Dennet (1978) where behavior is driven by the need to attain success (approach) on the one hand yet avoid failure on the other hand (avoidant). In Elliot's (1999) model, there are four possible combinations of goal orientation: (i) mastery-approach, (ii) mastery-avoidant, (iii) performance-approach and (iv) performance-avoidant. The type of people who might fit into the mastery-avoidant category are perfectionists and people who perceive their abilities to be dwindling. The person who spends endless hours practicing at home but never feels good enough to compete exemplifies the mastery-avoidant orientation. These people will differ from mastery-approach in that, instead of thinking about how to attain success, they will focus on trying to avoid failure (Elliot & McGregor, 2001). Where a person has a strong performance-approach orientation they may be driven to cheat if they do not see their way to winning through other means. On the other hand, the performance avoidant personality will show the maladaptive choice in tasks demonstrated in other research (Duda et al., 1995; Elliot, 1999; White, 1998).

There are further findings from Elliot and McGregor (2001) with regard to parental socialization for the different goal orientations. Firstly, for the mastery-approach orientation, no particular effects of parent socialization were found. Thus, it was concluded that mastery-approach aims are an inherent part of human nature (Elliot & McGregor, 2001). Secondly, antecedents of the mastery-avoidant orientation were shown to be grounded in fear of failure, low self-determination, negative and personal feedback from parents, and parent-induced worry. The performance-approach goal orientation was shown to be associated with conditional approval from both parents and person-based positive feedback from fathers. The adoption of performance-approach goals appears to be an attempt to gain approval from parents and that expression of approval from the parent is dependent on success in the achievement environment. Therefore, we would expect the performance-approach orientation to be shown to be associated with certain negative consequences. Finally, the performance-avoidant goal orientation was associated with person-focused negative feedback from both parents and worry-induction from mothers. It was concluded that the pursuit of such goals is probably an attempt to avoid devaluation by one's parents. The outward manifestation of this

devaluation would be a decrease in self-worth on failure to perform. It is therefore, not surprising that the performance-avoidant orientation would be associated with a number of maladaptive consequences (Elliot & McGregor, 2001).

A performance-avoidant goal orientation appears to be the most vulnerable orientation in the achievement environment. However, this does not mean that avoidance in itself is necessarily maladaptive. The mastery-avoidant orientation is associated with the same social antecedents as the performance-avoidant orientation but it does not lead to the same array of negative consequences. In particular, the adoption of a mastery-avoidance orientation can facilitate the subsequent adoption of mastery-approach and performance-approach goals which the performance-avoidant approach does not. (Elliot, 1999; Elliot et al., 2000; Elliot & McGregor, 2001). It is possible that there are contexts in which a mastery-avoidant orientation is adaptive behavior.

The work of Elliot and McGregor (2001), demonstrates the complexity of the relationship between parental influence and a child's achievement goals. Subsequent research indicates a significant correlation between the child's mastery/performance-orientation and the child's perceived parent orientation (Collins & Barber, 2005) as well as the child's beliefs about causes of success and the child's perception of the parents beliefs about causes of success (White, Kavassanu, Tank and Wingate, 2004). However, in their research with young male ice-hockey players, Bergin and Habusta (2004) found that, although the sons' goal orientations correlated positively with their perceptions of their parent's goal orientations, there was not necessarily correlation between the son's goal orientation and the parents' stated goal orientation for their son. In particular, sons reported higher performance orientation than the parents reported wanting to see in their sons and sons reported less mastery orientation than parents reported wanting to see. I have not found any documented studies showing associations between the child's goal orientations and perceived parents' goal orientations or parent's goal orientations for the child using the 2x2 model. There also do not appear to be any studies which examine the relationship between the child's goal orientations and the parent's goal orientations. Since, according to social cognitive theory, children learn primarily from observation, we would expect a higher correlation between the parent's goal profiles and the child's goal profiles than we would between the parent's reported goal orientations for their children and the child' goal orientation.

Most of the abovementioned research examines each goal orientation in isolation. However, the elements of the definition of success dimension (i.e. mastery and performance) have been found to be consistently orthogonal. This means that goal orientations may take on different combinations i.e., high-mastery/high-performance, high-mastery/low-performance, high-performance/low-mastery and low-performance/low-mastery. These combinations of functioning are referred to as goal profiles in the literature (Chi & Duda 1995; Cumming & Hall, 2004; Roberts, Treasure and Kavassanu, 1996). Notwithstanding the fact that it is not clear whether approach and avoidance are orthogonal, it seems more appropriate to research goal orientation by examining goal profiles rather than simply defining an individual as performance or mastery dominant.

Different strategies have been used to examine achievement goal profiles. The mean- or median-split method was the first method to be used (e.g. Roberts et al., 1996; White, 1998). In this procedure, four goal profiles were created: high-mastery/high-performance, high-mastery/low-performance, high-performance/low-mastery and low-performance/low-mastery. The criterion used to decide whether a score belonged in the high or low group was either the mean or the median of the sample as specified by the researcher (Smith, Balaguer & Duda, 2006). Hodge and Petlichkoff (2000) propose the use of cluster analysis as a more appropriate method to identify goal orientation profiles. Cluster analysis creates groups which minimize within-group variance and maximize between-group variance. Thus, the researcher can examine the naturally occurring clusters rather than creating groups from arbitrarily decided upon conditions Ainley (1993); Hair et al. (1995) (as cited in Hodge & Petlichkoff, 2000). See Hodge and Petlichkoff (2000) for an in depth discussion on goal profiling.

In their study on rugby players, Hodge and Petlichkoff (2000) identified four clusters; low-performance/high-mastery, high-performance/low-mastery, high-performance/moderate mastery and low-performance/moderate mastery. No extreme group profiles (high-performance/high-mastery, low-performance/low-mastery) emerged. The main factor contributing to the difference between groups was perceived rugby ability/competence and the importance of perceived rugby ability/competence. In the study by Smith et al. (2006) on soccer players, similar clusters emerged. Where mastery orientation was relatively lower, less adaptive responses to motivational climate, enjoyment and satisfaction with sport were reported. However, it is noted that high performance orientation on its own is not

maladaptive. It is rather in situations where mastery orientation is low in combination with high performance orientation that maladaptive behavior occurs.

A further study by Carr (2006) looked at goal orientations using cluster analysis with the trichotomous model (mastery, performance-approach and performance-avoidant). Four clusters were identified: (i) high mastery/high performance-approach/high performance-avoidant, (ii) high mastery/high performance-approach/low performance-avoidant, (iii) low mastery/high performance-approach/high performance-avoidant and (iv) high-mastery/low performance-approach/low performance-avoidant. In Carr's (2006) study, no moderate levels emerge in the clusters. However, the method used for the cluster analysis was different from that used in previous studies making comparison with previous studies difficult. This study was interesting in that it was the only one found where both cluster analysis and a trichotomous model was used. A study done by Van Yperen (2006) identifies goal profiles and different dominant achievement goals on a group of college psychology students using the 2x2 model. Slightly more than 30% of the sample had a dominant mastery-avoidant orientation indicating that this is an important group which requires further research.

There do not, as yet, appear to be any documented studies in the physical domain using the 2x2 model. Nor does there appear to be any research on goal orientation in South Africa or on the goal orientations of horse riders. Horse riding is a unique sport in that it is composed of a competing dyad of which one partner is an animal, the horse. Horses have been used for many decades in therapy for physically disabled people and Equine Assisted Psychotherapy is now starting to be used to address self-esteem and confidence problems in children who have experienced intra-family violence (Schultz, Remick-Barlow & Robbins, 2007). It is possible that research on the interaction between self-efficacy and goal orientation in riders can add to our theoretical knowledge of this complex subject.

Furthermore, adolescent riders will serve as a meaningful population from which to study the relationship between parent and child in sport as it is a sport which requires an enormous input (time and finance) from the parents. Unlike other sports, where a lot of the time spent participating in the sport is spent with the coach, this is not necessarily the case in riding. The horses need to be worked every day whereas the child may only have contact with the coach for one or two hours a week. Participation for the rest of the time is usually overseen by the parent who often ends up having more influence on the child than the coach. This is contrary to many other sports (e.g., swimming) where the coach is considered to have the more

significant influence on the child (Givven, 2001). Thus, such research may also be of interest to development psychologists in terms of parent child interactions in specific contexts.

In the world of competitive horse riding, it is not uncommon to see acrimonious arguments between parent and child when either one of them feels that the competition has not been a success. Often, the reason for such arguments is a disagreement about what constitutes success. Sometimes the child leaves the ring weeping because she did not win but mum and dad are quite happy because they see some improvement from last time, i.e., the child has a performance orientation while the parents have a mastery orientation. On the other hand, the child may be quite content with the performance but dad is furious because he has made an extensive financial outlay and believes that his child should win i.e., the child has a mastery orientation but dad has a performance orientation. Another scenario may occur where dad has a strong performance-approach orientation and buys his child a very expensive top class horse putting strain on the child who finds excuses not to compete and may start avoiding riding entirely i.e., developing avoidant responses. Often the conflict is not so obvious; sometimes parents talk as if they are mastery-oriented but act in a performance-oriented fashion. Such conflict is usually stressful for the child and detracts from her enjoyment of the sport.

The primary area of interest for this research is the interaction between the parents' and daughter's goal orientation profiles in the sport of horse riding and the possible associations between these profiles and (i) the child's perception of self/horse efficacy and (ii) the parent initiated motivational climate (PIMC). Horse riders provide us with an opportunity to study not only the rider's self-efficacy but also the rider's evaluation of the horse's efficacy. It is possible that, where a child has a lot of confidence in her horse, it is likely that her own self-efficacy will be enhanced. Therefore, the self-efficacy of this group could be expected to be above average. The associations between the goal profiles and the child's experience of anxiety and enjoyment in her riding will also be investigated.

Previous research suggests that the rider's goal orientation will be positively correlated with her perception of her parents' goal orientations (White, 1998). However, social cognitive theory suggests that there will be a stronger association with the parent's goal profiles than the parent's stated goal aspirations for their daughter. This research will test these hypotheses and then be taken a step further in that the rider's level of trait-anxiety and other emotions (anger, happiness, excitement, dejection) in sport will be measured and compared to the goal

profiles. In accordance with previous research, it is expected that those with a higher performance orientation will experience higher levels of anxiety (White, 1998) and those with higher mastery-orientation to experience greater enjoyment. However, it is also proposed that, where there is a strong discrepancy between the parent's goal orientation and their stated goal orientation for their daughter, the daughter may experience higher levels of trait-anxiety in her riding. There does not appear to be any research, as yet, showing associations of the valence dimension with trait-anxiety or sport enjoyment. Apart from the fact that the 2x2 theoretical model still requires empirical validation in the physical domain, this study will re-emphasize the necessity for parents to act as role models for their children.

In essence, this research is a replication of the work done by White (1998) on goal orientations, the perception of the parent-initiated motivation climate and trait-anxiety. However, there are certain differences in this study. Firstly, the sample population is drawn from South African, female, horse riders rather than American, adolescents of both genders who compete in organized team sports. Secondly, the 2x2 goal orientation model is used, rather than the single dimensioned model. Thirdly, goal profiles will be created using cluster analysis rather than the mean-split method. Fourth, goal profiles will be created for: (i) rider's goal orientation, (ii) rider's perception of her parent's goal orientation, (iii) parents' reported goal orientation for their child, (iv) parents' goal orientations. Fifth, associations between goal profiles, PIMC and self-efficacy will be analyzed. Finally, associations between goal profiles and (i) trait anxiety and (iii) other emotions as measured by the Sport Emotion Scale (SES), will be analyzed.

This project is a pilot study for the larger study described above. The aim of the pilot study was threefold. Firstly, to test the overall survey and the relevance of specific questionnaires used within the survey. Lancaster, Dodd and Williamson, (2004) emphasize the importance of piloting surveys especially when, as will be the case in this research, it is a self-completion survey. Issues for consideration were: (i) Are the instructions comprehensible to the target population? (ii) How long does it take for the forms to be completed? Notwithstanding the testing of the overall survey, it is also important that the administration of the individual measuring instruments within the survey are tested (Lancaster, Dodd & Williamson, 2004). This is particularly important for this research as most of the instruments were developed with an American population. Furthermore, one instrument, the self/horse efficacy instrument

was developed on a British adult population whereas, in this research, it will be administered to South African children.

Secondly, the pilot study may be viewed as a feasibility test of the overall research process from beginning to end on a small sample. Van Teijlingen and Hundley (2001) recommend such piloting as it can give advance warning about areas where the study may fail. Finally, the pilot will have an exploratory aspect to it. Since no similar research has been carried out in South Africa or on horse riders, issues and questions may arise that had been overlooked in the original research design. Perusal of the results of the pilot should help to refine the research design and research questions for the larger study.

RESEARCH DESIGN & METHODS

DESIGN

This is a pilot study and is mainly descriptive in nature. Even though the full gamut of statistical data analyses will be carried out, this is for the purpose of testing procedure rather than for the expectation of obtaining meaningful results. Data analysis will be quantitative working off survey based empirical data.

PARTICIPANTS

Data were gathered from females between the ages of 10 and 19 years (mean age = 13 years; SD = 2.2) currently competing at horse shows affiliated to the Western Province Horse Society (WPHS) of whom there are approximately 230. Twenty participants were included in the pilot study. Due to the fact that horse riding is an expensive sport, most of the participants will come from wealthy, middle class homes. Based on the make-up of the population of riders, it is also likely that most will be white and English speaking.

MEASURES & INSTRUMENTS

Demographic Questionnaire

This is a questionnaire which aims to get general information about the child and her riding experience and expectations.

The first question asked is “How old are you? This question is required as the sample population ranges in age from 10 to 19 years and developmental differences may impact on (i) the ability of the children to understand the questions and (ii) their responses to the

questions. Next, a group of questions relating to the level at which the child rides are asked. This information is asked so that, at a later stage, we can try and rank the participating riders in terms of performance. A third type of question relates to the impact of financial issues. Two questions are asked here: "How many ponies are you competing on? Do you think your parents spend a lot of money on your riding?" Finally, some questions are asked surrounding previous provincial team experience. These question are envisaged for the main study, asked with a view to future research around children competing at provincial level.

Although some of this data may not be used in the current research it has been collected with the aim of providing input for future research and helping to answer questions stimulated by this research.

Achievement Goals Questionnaire for Sport (AGQ-S)

This questionnaire measures achievement goal orientation on the 2x2 achievement goal model. The questionnaire has four sub-scales which measure the mastery-approach, mastery-avoidant, performance-approach, and performance-avoidant goal orientations. Each subscale consists of three questions. The questions are assessed on a 7-point Likert scale ranging from 1="not at all like me" to 7 "completely like me".

Although this is a relatively recently created questionnaire, acceptable levels of reliability and validity have been established by the creators (Conroy, Elliot & Hofer, 2003). Internal consistency is reported as being above 0.7 for all four subscales (mastery-approach $\alpha = 0.7$; mastery-avoidant $\alpha = 0.82$; performance-approach $\alpha = 0.88$; performance-avoidant $\alpha = 0.87$). Test-retest reliability is reported as follows: mastery-approach $r = 0.59$; mastery-avoidant $r = 0.66$; performance-approach $r = 0.74$; performance-avoidant $r = 0.79$) on a 19 day retest basis (Conroy, Elliot & Hofer, 2003). On average, this is within the 0.68 – 0.8 range recommended for achievement goal instruments by Duda and Whitehead (1998) (cited in Conroy et al., 2003).

Goal Orientation Dominance (GDQ)

This is a six-item, forced choice measure used by van Yperen (2006) to measure achievement goal dominance based on the 2x2 framework. Each goal in the 2x2 model is compared in a pair-wise fashion with the other achievement goals. If a particular goal is consistently chosen in each pair-wise comparison, the individual is deemed to have a dominant achievement goal

orientation. If there is no consistent choice then it is assumed that the participant does not have a dominant achievement goal. It is included in the question battery as a reasonability check against the reported goal orientations.

There are no measures of validity and reliability for this instrument.

Parent-Initiated Motivation Climate (PIMC)

This instrument is a measure of parent-initiated motivation climate in sport. The questionnaire has two parts, one where the subject responds to the stem "I feel that my father…" and the other where the subject responds to the stem "I feel that my mother…". There are three subscales within each section: (i) learning and enjoyment, (ii) worry-induction and (iii) success without effort. Each subscale has five questions. The questionnaire is based on a five-point Likert scale ranging from 1-"strongly disagree to 5 "strongly agree".

Acceptable levels of validity and reliability have been reported by the creators (White, Duda & Hart, 1992). Internal consistency is reported as being above 0.7 for all three subscales (learning and enjoyment $\alpha = 0.75$; worry-induction $\alpha = 0.87$; success without effort $\alpha = 0.87$). Test-retest reliability is reported as follows: learning and enjoyment r = 0.92; worry r = 0. 9; success without effort r = 0.84).

Sport Anxiety Scale-2 (SAS-2)

This scale is a measure of multi-dimensional trait-anxiety in sport. There are three subscales: (i) somatic anxiety, (ii) worry and (iii) concentration disruption. Each subscale has five questions. It was developed with the specific intention of correcting the problems of Sport Anxiety Scale-1 (SAS-1) when used on children. The questionnaire has been extensively tested on children ranging from the age of 9 to 14. The questionnaire is based on a four point Likert scale ranging from 1-"not at all" to 4-"very much".

Although this is a relatively recently created measure, acceptable levels of validity and reliability have been reported by the creators (Smith, Smoll, Cumming & Grossbeard, 2006). Internal consistency is reported as being above 0.7 for all three subscales (somatic $\alpha = 0.84$; worry $\alpha = 0.89$; concentration disruption $\alpha = 0.84$; whole scale $\alpha = 0.91$). Test-retest reliability is reported as follows: somatic r = 0.76; worry r = 0. 9; concentration disruption r = 0.87; whole scale r = 0.87) on a one week retest basis. Construct validity was tested against SAS-1 (r = 0.9).

Sport Emotion Questionnaire (SES)

This scale is a measure of emotion in sport. There are five subscales: (i) anxiety, (ii) dejection, (iii) anger, (iv) excitement and (v) happiness. The anxiety and dejection subscales have 5 items each and the other three subscales have four items each. The scale was developed on an undergraduate population. The questionnaire is based on a four point Likert scale ranging from 0-"not at all" to 4- "a lot".

Although this is a relatively recently created measure, acceptable levels of validity have been reported by the creators (Jones, Lane, Bray, Uphill & Catlin, 2005). Internal consistency is reported as being above 0.7 for all three subscales (anxiety $\alpha = 0.87$; dejection $\alpha = 0.82$; anger $\alpha = 0.84$; excitement $\alpha = 0.81$; happiness $\alpha = 0.88$). Test-retest reliability was not reported as emotion is not a stable trait. Construct validity was tested against the Brunel Mood Scale with statistically significant results confirming the construct validity of the SES.

Perception of Self and Horse Efficacy

This instrument measures the rider's domain specific self-efficacy and their perception of their horse's efficacy. It was created by Beauchamp and Whinton (2005) in accordance with Bandura's (1997, 2001) (cited in Beauchamp & Whinton, 2005) recommendations for assessing domain specific self-efficacy. There are three subscales, the first assesses dressage self-efficacy, the second addresses show-jumping self-efficacy and the third, cross-country self-efficacy. For each item on the test, subjects will rate their confidence in their abilities "for the level of competition at which you are currently competing…", on an 11 point Likert scale anchored by 0-"cannot do at all", 5-"moderately certain can do" and 10-"certain can do".

The creators of the test reported acceptable internal consistency on both the self and other scales (self: dressage $\alpha = 0.95$; show-jumping $\alpha = 0.95$; cross-country $\alpha = 0.96$; Horse: dressage $\alpha = 0.91$; show-jumping $\alpha = 0.92$; cross-country $\alpha = 0.95$). No test retest reliability has been reported on this instrument (Beauchamp & Whinton, 2005).

PROCEDURE

The question battery was distributed in a number of ways:

A letter was placed in the "NewsReview" (the WPHS's monthly news letter) describing and motivating the research. A mailing list of all families of competing females between the ages of 10 and 19 was obtained from the WPHS and the questionnaires e-mailed to those families (200 questionnaires) with e-mail addresses. Only riders in the Western Cape were contacted. Males were excluded from the study since there are not sufficient competing males to make up a meaningful sample.

Due to the low expected response of this method, tables were set up at a number of shows to encourage people to participate. Permission was obtained from a number of show holding bodies to set up a desk with the questionnaires where people could come and discuss the research and fill in the questionnaires. The questionnaires took about 45 minutes to complete so it was possible for competitors to complete the survey between classes.

Finally, riding instructors were approached and the nature of the research explained. They were asked to encourage their pupils and parents to participate in the study. Since the total population size is limited, a fair amount of effort was required to obtain the data.

There were two test batteries, one for the child and one for the parent. The child's test battery included the following; demographic questionnaire, AGQ-S(rider's goals), AGQ-S (perception of dominant parent's goals), GDQ, PIMC, SAS-2, SES and the Self-efficacy questionnaires for rider and horse. There were no open-ended questions. All questions were answered by checking a box. The parent's test battery included the following; AGQ-S (Self) and AGQ-S (for daughter). There were no open-ended questions. All questions were answered by checking a box.

The instructions requested that the questionnaires were answered in the order presented. This was necessary in order to prevent possible priming effects of certain questionnaires. This was of particular importance in the parent questionnaire where parents needed to report their own goal orientation before reporting their goal orientation for their daughter to try and prevent priming effects.

Once all the questionnaires had been completed, the data was captured into an MS Access database specially prepared for this purpose. During the capture process, all responses were carefully perused to check for reasonability of answers and indication that the questions had been appropriately understood. Queries were created and data extracted to EXCEL for analysis in STATISTICA where preliminary statistics were calculated.

RESULTS

OVERALL SURVEY

One of the stated reasons for the pilot study was to investigate the efficiency of the survey. There were two main problems encountered: (i) the size of the survey pack and (ii) the younger children often required parental or other adult assistance in completing the questionnaires.

The overall survey pack was bulky and intimidating, 27 pages including the letter of introduction and informed consent/assent form. This led participants, especially the parents, to believe that completing the questionnaires would entail a lot of time and work. Thus, people who claimed to be willing to participate in the study, were put off completing the survey. This was a particular problem where the survey was distributed via e-mail or post. In particular, participants found the informed consent form long and complex. When the questionnaires were administered in person the bulkiness was less apparent. However, it would appear that the section for the children is at maximum length and, were it not for the enthusiasm shown by the children themselves, it might be justified to attempt shortening the overall length of the survey.

The younger children (under 13) seemed to require adult assistance in completing parts of the survey. This is a potential problem in the study as it is important that the children put forward their own opinions and not those that they think their parents wish them to put forward. The older children (13 and over) and adults seemed to have no problem understanding the survey instructions.

No further problems were encountered with the survey itself.

MEASURING INSTRUMENTS.

A further reason for the pilot study was to investigate the degree to which the measuring instruments were appropriate for the sample population. The parents, who only responded to the AGQ-S, asked why did it keep asking the same question? This indicates some awareness of the separate sub-groups within the questionnaire. Amongst the children, two measuring instruments were identified as being potentially problematic: (i) GDQ and (ii) the self/horse efficacy measuring instrument.

In GDQ, six participants either didn't attempt answering or answered in an inappropriate manner. One of these participants (11 years old) was contacted and she said that she had two problems. First, she had difficulties understanding the instructions and the nature of the forced choice questionnaire. Second, she did not always feel that an option was dominant and so left out that question. Since the scoring of this instrument requires all six options to be filled in, it cannot be scored when one question is left out. The children who left out the entire questionnaire were 13 or under. However, children as old as 15 and 16 seemed to have difficulties in filling the questions in correctly.

In the self/horse-efficacy questionnaire, informal discussions with parents and children indicate that the younger children had difficulty in understanding some of the more technical terms used. For example, some children did not know what it meant "to display scope". Furthermore, when inputting the data, I noticed a tendency of some of the younger children to use only the values 9 and 10.

RESEARCH PROCEDURE

Response to the e-mail and postal distributed questionnaires was very low (11 responses to 230 distributed). Although low response rates are not uncommon for such distribution methods, the limited population size of the group under investigation implies that other data collection methods should be used.

Data collection at shows, where the survey was conducted as an interview, was the most effective method of data collection. Participants at shows were enthusiastic and positive about the research. Such interviews tend to take a total of one to one and a half hours spent with the child and parents.

STATISTICAL ANALYSES

The primary aim of the statistical analyses within this pilot was to ensure that the data had been collected and captured in a manner such that the required analyses could be run in STATISTICA. Although the results of the statistical analyses were observed, this was with a view to enhancing research design and refining the research questions rather than making inferences about the data. Statistical analyses were carried out on the data from all the questionnaires. The sample comprised 20 competitors, 17 mothers and 11 fathers.

Goal Orientation

Descriptive Statistics

Descriptive statistics of number of participants, mean, standard deviation, minimum value and maximum value were calculated for each group of participants filling in the goal orientation questionnaire: (i) the competitor's goal orientations (GO_S), (ii) the competitor's perception of the dominant parent's goal orientations (GO_PP), (iii) mother's goal orientations (GO_MS), (iv) mother's goal orientations for daughter (GO_MD), (vi) father's goal orientations (GO_FS) and (iv) father's goal orientations for daughter (GO_FD). These are presented in Table 1 below.

Table 1. Mean, Minimum and Maximum scores for all groups on the AGQ-S

		Map	Mav	Pap	Pav
GO_MD	Mean	6.06	3.47	3.04	2.53
	Min	2	1	1	1
	Max	7	7	7	7
GO_MS	Mean	6.06	3.90	3.47	2.94
	Min	2	1	1	1
	Max	7	7	7	7
GO_PP	Mean	5.80	3.45	2.88	2.88
	Min	1	1	1	1
	Max	7	7	7	7
GO_S	Mean	6.18	4.42	3.92	3.80
	Min	2	1	1	1
	Max	7	7	7	7
GO_DS	Mean	5.61	4.00	4.06	2.64
	Min	1	1	1	1
	Max	7	7	7	7
GO_DD	Mean	5.79	3.12	3.64	2.79
	Min	1	1	1	1
	Max	7	7	7	7

All the maximum scores are seven indicating that all groups are using the full upper range of scores in all orientations. At the lower end of the range the minimum score is one for all

groups and orientations except for both mother groups who have a minimum of two in the Map orientations and daughters who have a two in the Map orientation in GO_S. This indicates that the full range of scores is being used by respondents to the AGQ_S.

The mean values for GO_S, GO_PP, GO_MS and GO_MD are graphically illustrated in Figure 2 below.

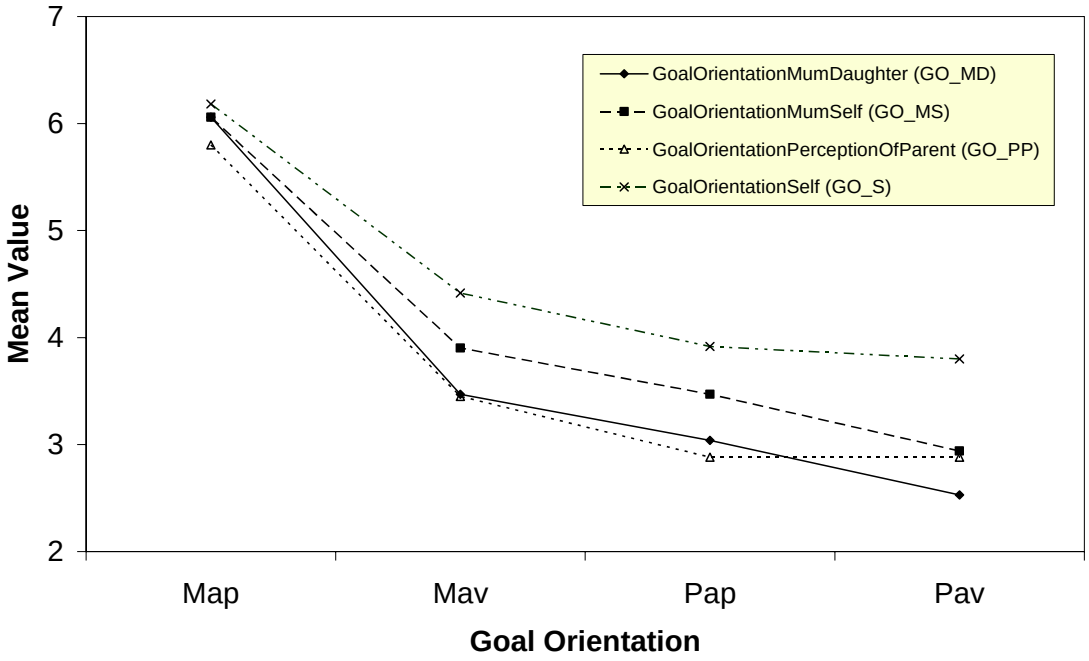


Figure 2. **Mean values of all goal orientations for the competitor and the competitor's mother.**

For all four of the illustrated groups, the Map orientation has the highest mean score with the Mav, Pap and Pav groups all having progressively lower scores. There is very little difference in the Map scores between the groups. There are bigger but similar differences between groups for the Mav, Pap and Pav scores respectively. On average, the scores for GO_S (Map = 6.183, Mav = 4.417, Pap = 3.917, Pav = 3.800) are highest and the scores for GO_MS (Map = 6.059, Mav = 3.902, Pap = 3.471, Pav = 2.941) are next highest. The scores, in all orientations, for GO_MD and GO_PP are very similar. The groups GO_S and GO_PP have a very similar shape but differing levels as do the scores resulting from the groups GO_MS and GO_MD.

The mean scores for the fathers' goal orientations are graphically illustrated in Figure 3 below.

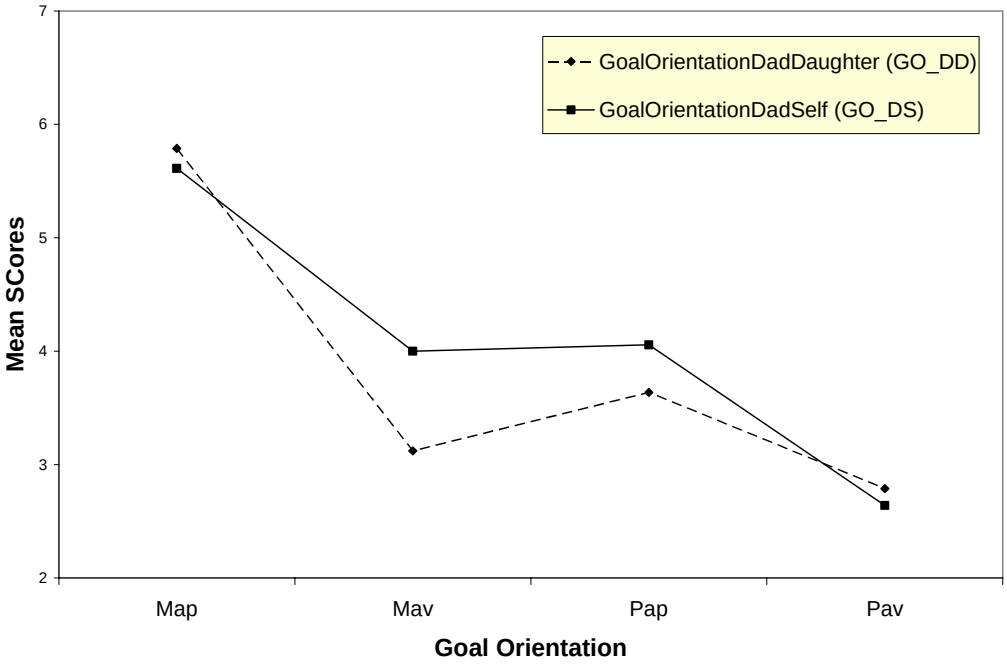


Figure 3. Mean values for the fathers' goal orientations.

These scores are illustrated separately from the mothers and daughters since they show a different shape. Rather than showing a strictly decreasing trend across the goal orientations, a decrease from Map to Mav is shown and then an increase to Pap with a decrease down to Pav. Whereas the mothers' and daughters' showed higher scores for mastery-orientation, whether approach or avoidant the father's indicate higher scores in the approach categories than in the avoidant categories. Furthermore, the shape for the father's expectations for himself and daughter have different shapes. The fathers seem to expect a lower level of mastery-avoidance from their daughters than they allow themselves as well as accepting a lower level of performance-approach than they expect of themselves. Whether these differences are significant remains a matter to be addressed in the main study.

Due to the paucity of data from the fathers, further goal-orientation analyses were only carried out on the data from the mothers and daughters.

Correlations

Zero-order correlations were successfully calculated on the GO_MD, GO_MS, GO_PP and the GO_S groups to test for orthogonality of the Map, Mav, Pap and Pav orientations. The zero-order correlations and their associated p-values are presented in Table 2.

Table 2. Zero-order correlations for Mothers' goal orientations

Pearson's r		GO_MD			GO_MS	
p-value	Map	Mav	Pap	Map	Mav	Pap
Mav	.1376			.1105		
	p=.598			p=.673		
Pap	.2338	.3068		.1682	.4308	
	p=.367	p=.231		p=.519	p=.084	
Pav	-.2241	.3277	*.5893*	-.2370	*.5790*	.3124
	p=.387	p=.199	*p=.013*	p=.360	*p=.015*	p=.222

The results from these analyses were mixed. The GO_MD group showed a significant correlation between Pap and Pav (r = 0.58.93; p = 0.013). However, this is not replicated in the GO_MS group where there was a significant result between the Mav orientation and Pav (r = 0.5790; p = 0.015).

The results were even more ambiguous for the competitor. See Table 3 below.

Table 3. Zero-order correlations for competitors' goal orientations.

Pearson's r		GO_PP			GO_S	
p-value	Map	Mav	Pap	Map	Mav	Pap
Mav	.2658			.4267		
	p=.257			p=.061		
Pap	.1416	*.5843*		.4926	.4386	
	p=.552	*p=.007*		p=.027	p=.053	
Pav	.2079	*.4923*	*.7499*	*.4890*	.4300	*.6812*
	p=.379	*p=.027*	*p=.0001*	*p=.029*	p=.058	*p=.001*

In the GO_PP group the only orientation which shows no significant correlation with other orientation is the Map orientation. All the other orientation show significant correlations (Mav:Pap, r = 0.5843, p=0.007; Mav:Pav, r = 0.4923, p = 0.027; Pap:Pav, r = 0.7499, p = 0.0001). In the GO_S group, we again see mixed results with the Pav orientation showing

significant correlations with both the Map and Pap orientations (Pav:Map, r = 0.4890, p = 0.029; Pav:Pap, r = 0,6812, p = 0.001).

Although it was difficult to interpret the zero-order correlations, this was not the main aim of this pilot study. The main result of interest is that the data was collected and captured in such a way that the analysis could be carried out in STATISTICA. This was successfully carried out with no procedural problems.

Cluster Analysis

Cluster analyses were successfully carried out on the data from the daughter's and the mother's goal orientation questionnaires. Due to paucity of the data from the fathers (n = 11), cluster analyses were not attempted on this data. Clusters were created on both standardized and non-standardized data. Given that the attributes used for the cluster analyses were measured on the same scale, it was reasonable to carry out a cluster analysis on non-standardized data. Such a cluster analysis gives additional information about the absolute levels of goal-orientation within the clusters (Romesburg, 1984). For example, on the data in this study, in clusters obtained from non-standardized data, the high levels of Map orientation are immediately obvious without having to refer to the non-standardized mean of the cluster. However, within clusters developed from the standardized data, the Map levels will tend to indicate moderate levels as the range of values selected was smaller than for the other orientations.

An initial cluster analysis, using the hierarchical method, was used to give a starting estimate of the number of clusters. It was decided that four clusters was optimum for this data. It is possible that, on a bigger data set, as many as six clusters may emerge. In the GO_MS group there is an outlier, one participant marked the option 7 for all the questions. The case should probably have been excluded but there was no justification to add an extra cluster and the single case was put into a cluster on its own. Once the number of clusters had been selected, clusters were developed using the k-means method with squared Euclidean distance (Romesburg, 1984). Initial cluster centers were chosen so that the distance between clusters would be maximized.

Clusters were labeled Hi, Med or Lo depending on the mean value for each orientation within the cluster. For example, in a cluster where Mav is Hi, Map is Med, Pap is Lo and Pav is Hi, the cluster was labeled HiMedLoHi. The cutoff points chosen in the non-standardized data

were 2.333 and 4.666. In the standardized data these points were -0.5 and 0.5 as recommended by Hodge and Petlichkoff (2000).

Non-Standardized

The four clusters obtained for the group GO_S on the non-standardized data were: (i) HiHiHiHi, (ii) HiMedHiMed, (iii) HiHiMedMed and (iv) HiLoLoLo. Map orientation for all four clusters was Hi. This means that the Map orientation had little or no impact on the selection of the clusters.

The means, standard deviations and number in each cluster are illustrated in Table 4 below.

Table 4.Goal orientation clusters on the non-standardized data for GO_S

	Cluster 1 HiHiHiHi N = 5		Cluster 2 HiMedHiMed N = 7		Cluster 3 HiHiMedMed N = 4		Cluster 4 HiLoLoLo N = 4	
Goal Orientation	M	SD	M	SD	M	SD	M	SD
Map	5.800	1.043	6.476	0.378	7.000	0.000	5.333	1.277
Mav	4.900	1.479	4.524	1.526	6.250	0.419	1.792	0.459
Pap	2.333	1.291	6.000	1.018	4.917	2.044	1.250	0.319
Pav	2.533	0.989	4.762	1.272	6.333	0.903	1.167	0.333

On examination of the meaning of these clusters, distinct patterns of functioning emerge. The first cluster indicates Hi values in all dimensions. The second cluster, HiMedHiMed is particularly interesting in terms of use of the 2x2 model in that a Hi approach orientation and a medium avoidant orientation is indicated. In cluster 3, HiHiMedMed, a high mastery orientation and a medium performance orientation is indicated. In the final cluster, HiLoLoLo, only Map is high with all other orientations being low.

Standardized Data

The data was standardized using the formula: $z = (x - \mu) / \sigma$. This reduced the scaling and spread of the scores so that they had a mean of zero and a standard deviation of one. The cluster analysis was carried out on the z-scores. Thus, each variable will have equal impact in the cluster analysis, unlike in the non-standardized analysis where variables with a narrow spread of responses, for example the Map orientation, do not contribute to the cluster selection. When the data has been standardized in this way, the labels Hi, Lo and Med are now relative to the mean value of the orientations *for the group*. This then poses a limitation

on the degree to which the study can be used to compare goal orientation profiles of different groups.

The four clusters emerging from this analysis were: (i) MedLoHiHi, (ii) HiHiHiHi, (iii) LoLoLoLo and (iv) MedMedLoLo. When the standardized data is used, the Map orientation starts to play a more significant role in cluster determination and we see a wider range of Map orientation. For example, Cluster_1 has a medium Mav orientation with a mean non-standardized score of 6.583 and Cluster 3 has a low Mav orientation with a non-standardized score of 4.583.

The patterns of functioning which emerge from the clusters on the standardized are not identical with those emerging on the non-standardized data. High scores for all orientations are indicated in cluster 2 and low levels in all orientations in cluster 3. In cluster 1, medium to low functioning on the mastery orientation and high performance orientation is indicated. In cluster 4, medium functioning on the mastery orientation and low functioning on the performance orientation is indicated.

The non-standardized mean, the z-score and the standard deviation for each cluster are presented in Table 5 below. Similar cluster analyses were carried out for the GO_PP, GO_MS and GO_MD groups but no additional issues of concern to the full study were observed.

Table 5. Goal orientation clusters on the non-standardized data for GO_S

	Cluster_1 MedLoHiHi N = 5			Cluster_2 HiHiHiHi N = 7			Cluster_3 LoLoLoLo N = 4			Cluster_4 MedMedLoLo N = 4		
	M	z	SD	M	z	SD	M	z	SD	M	z	SD
Map	6.583	0.423	0.443	6.714	0.561	0.428	4.583	-1.692	0.782	6.400	0.229	0.460
Map	3.417	-0.536	0.396	6.143	0.925	0.270	2.333	-1.117	0.526	4.467	0.027	1.132
Pap	5.500	0.686	0.449	5.667	0.759	0.760	1.500	-1.048	0.187	2.133	-0.773	0.618
Pav	5.167	0.649	0.204	5.429	0.773	0.816	1.833	-0.934	0.599	2.000	-0.854	0.448

PIMC

The PIMC questionnaire was completed by all competitors (n = 20) for their mothers and by 17 for their fathers. Where the questionnaires were not completed for fathers, participants indicated that the father was either dead or living outside of South Africa and had little or no

input into the child's riding activities. No problems were encountered in calculating the means, standard deviations and range of scores in STATISTICA which are presented in **Table 6** below.

Table 6. Mean, Standard Deviation and range on PIMC

Parent	Sub Scale	Mean Score	Standard Deviation	Minimum	Maximum
Father	Learning	4.055	0.632	2.625	5.000
Father	Success without effort	3.078	0.749	2.000	4.250
Father	Worry induction	2.508	0.778	1.167	3.833
Mother	Learning	4.261	0.616	3.000	5.778
Mother	Success without effort	2.371	0.698	1.000	3.750
Mother	Worry induction	1.900	0.738	1.000	3.800

Fathers appear to receive higher scores for emphasis on success and worry induction. On the other hand, mothers received a higher score for emphasis on learning. Due to the difficulties in obtaining goal orientations from fathers, it was deemed appropriate to test these differences for significance using a t-test. The three hypotheses tested were:

(i) H_0: μ(Fathers-worry induction) = μ(Mothers-worry induction);
H_1: μ(Fathers-worry induction) > μ(Mothers-worry induction)
(ii) H_0: μ(Fathers-success without effort) = μ(Mothers-worry induction);
H_1: μ(Fathers-success without effort) > μ(Mothers-success without effort) and
(iii) H: μ(Fathers-learning) = μ(Mothers-learning);
H_1: μ(Fathers-learning) < μ(Mothers-learning)

When these hypotheses were tested at the 5% level, fathers were shown to receive significantly higher scores for emphasis on success and worry induction ($t = 4,89$, $p = 0.0001$; $t = 2.34$, $p = 0.0162$) respectively. The difference between the scores on emphasis on learning was not significant.

SES and SAS-2

The sport emotion questionnaire and the trait anxiety questionnaire were administered in order that we could ascertain the associations between goal orientation and emotion in sport. The means, standard deviations and range of scores are presented in Table 7.

Table 7. Mean scores, standard deviation and range of SES and SAS-2 scores.

Scale	Sub scale	Mean	Standard Deviation	Minimum	Maximum
SES	Anger	0.988	1.028	0.000	3.250
SES	Anxiety	1.790	1.031	0.000	4.000
SES	Dejection	0.920	0.989	0.000	3.000
SES	Excitement	3.113	0.728	1.500	4.000
SES	Happy	3.163	0.808	1.250	4.000
Trait Anxiety	Disruption	1.340	0.390	1.000	2.000
Trait Anxiety	Somatic	2.110	0.752	1.000	3.800
Trait Anxiety	Worry	2.310	0.898	1.000	4.400

No problems were encountered in the administration of these tests and reasonable answers were supplied for all questions by all 20 participants. Calculation of the descriptive statistics was successfully carried out in STATISTICA.

On the SES scale, mean scores were lower for the negative emotions, anger (0.988), anxiety (1.79) and dejection (0.92), than the positive emotions, excitement (3.113) and happiness (3.163). On the trait anxiety scale, anxiety seemed more likely to arise from somatic anxiety (2.110) or worry (2.310) than from anxiety about concentration disruption (1.340).

Self-Efficacy

Descriptive statistics were calculated for all three sections of the self-efficacy scale (jumping, dressage and cross-country). The full results are presented in Table 8.

In all three groups, the scores for horse efficacy are marginally higher than those for rider. Whether these differences are significant was not tested as there appear to be some problems with the questionnaire.

The self-efficacy questionnaire was originally designed for use with adult competitors. There is some indication that the children do not fully understand some of the technical terms used in the questionnaires and also that the range of marks is not being used consistently. The maximum score for all categories except Cross Country Rider is 10. Examination of the detailed data indicated that some participants answered all the questions with a 10.

Table 8. Descriptive statistics for self-efficacy questionnaire

Scale	N	Mean	Standard Deviation	Minimum	Maximum
Efficacy Horse Jumping	20	8.120	1.222	5.900	10.000
Efficacy Self Jumping	20	7.659	1.367	5.300	10.000
Efficacy Horse Dressage	16	7.667	1.703	4.444	10.000
Efficacy Self Dressage	16	7.448	1.416	5.200	10.000
Efficacy Horse Cross Country	11	8.189	0.848	6.923	10.000
Efficacy Self Cross Country	11	8.053	0.976	5.917	9.667

DISCUSSION

This pilot aimed to achieve three goals: (i) To test the survey pack and the measuring instruments, (ii) to dry run the research procedure and (iii) to gain further insights so that the research design and research questions can be refined. With this in mind, the entire procedure, envisaged for the main study, was carried out on a sample of 20 participants and their parents. Although the full procedure was carried out, where there was repetition of the same activity, for example the repetition of the cluster analysis on each group, results are only reported in this report write up for one such group.

The first aspect of the study addressed was the acceptability and understandability of the survey pack to participants. The first problem encountered was the physical size of the pack (27 pages) which parents found off putting. This was found to be a particular problem where surveys were distributed via post or e-mail. The recommendation for the main study is to administer the survey in person to individuals and small groups. This will also resolve the further problem that many of the younger children required adult assistance to complete the

questions. Unfortunately, this method of distribution loses the element of anonymity for the participants.

A further reduction of the survey pack may be achieved by reducing the length of the letter of informed consent. This is five pages long and unnecessarily detailed for the nature of the study. Although part of the population being investigated is a vulnerable population (i.e. children), the nature of the research is non-invasive and it may be appropriate to simplify the informed consent form. This letter could be reduced to a simple one page document. The ethics committee should be consulted to investigate whether they would be happy with this alteration.

In completing the AGQ-S, many parents commented that the same questions were being asked over and again. This indicates a possibility that participants were aware of the groupings and may be tempted to respond in a socially desirable manner. There are no particular recommendations in how to deal with this but simply to maintain awareness of this potential problem.

The assessment of the questionnaires indicated that all, except two, of the instruments were problem free. This assessment was not a test of validity and reliability but an attempt to see whether the questions were understood and appropriately answered. The two problem instruments were the GDQ and the Self/Horse Efficacy questionnaire, both of which appear to be set at slightly too high a level for the younger children. For both these questionnaires, a further pilot study is recommended in which the wording of these instruments should be reviewed to be more appropriate for the target sample. For the GDQ, it is recommended that children of 14 and under are carefully taken through the instructions for completion before being asked to complete the questionnaire. Dropping the GDQ is also an option as its use is mainly in providing a reasonability check for the riders' responses in the AGQ-S.

The next question under consideration was the actual research procedure itself. The main problems encountered were those involving the survey itself which are discussed above. The only other pertinent problem encountered, was the difficulty in getting fathers to completeAGQ-S. A potential solution considered, was to reduce the study to one of mothers and daughters. However, examination of the statistical results revealed two issues which argue against this decisions. Firstly, examination of the goal orientation means indicated that, although mothers had similar goal profiles in GO_MS and GO_MD, the fathers showed

different tendencies in GO_DS and GO_DD. Since one of the questions asked in the main study revolves around the impact of conflicting goal orientations within the parent on the daughter's emotions in sport, it appears important that the input from fathers is retained.

Secondly, on examination of the results of the PIMC questionnaire, it emerged that fathers are significantly more inclined to induce worry in their daughters and emphasize success without effort. This was an unexpected finding as the "pushy mother" is a bit of a byword in competitive riding while the fathers tend to be more background figures. This finding, in conjunction with the one described above, indicates that further effort should be expended on obtaining responses from fathers on the AGQ-S. A question to be considered in further research is whether this finding is unique to horse riding, where fathers spend large amounts of money on the sport, or whether it is a more general finding in the relationship between parents and daughter. It would be interesting to carry out similar studies using girls doing ballet, music or gymnastics.

On examining the means of the goal orientations, it was apparent that the scores, in all orientations, for GO_MD and GO_PP were similar. The groups GO_S and GO_PP have a similar shape but differing levels. The same applied to the scores resulting from the groups GO_MS and GO_MD. The implication of this is that what the mother feels for herself is not too different from what she wants for her daughter. What she wants from her daughter is simply set at a lower level. However, the daughter shows higher levels in each dimension. It also appears that there is a similarity between what the mother wants for her daughter and what the daughter perceives that her mother expects. On the other hand, examination of the means of the fathers' goal orientations revealed that The fathers seem to expect a lower level of mastery-avoidance from their daughters than they allow themselves as well as accepting a lower level of performance-approach than they expect of themselves. These observations give rise to a number of possible research questions, Such questions could be rigorously investigated with more advanced statistical methods which can not be usefully applied to a dataset of this size.

Cluster analysis on the sample data indicated that four separate goal profiles emerged. However, it is quite possible that, on a larger data set, six clusters will emerge. Within the clusters obtained from the riders' themselves (non-standardized data), one of the clusters emerging indicated high levels of approach orientation and moderate levels of avoidant orientation, regardless of the levels mastery or performance orientation. This is suggestive of

further evidence in support of the 2x2 achievement goal model. Although this pattern was quite marked in the non-standardized data it was not so clear in the standardized data. Also emerging, was a cluster indicating high mastery orientation and low performance orientation regardless of the approach/avoidant orientation. The reverse of these profiles (i.e. low approach, high avoidant and low mastery, high performance) did not emerge. Whether this is due to the very small and homogeneous data sample or will be replicated with a larger sample remains to be demonstrated in the larger study.

When the goal orientation clusters were created, it was apparent that the clusters emerging on standardized data were quite different from those emerging from the non-standardized data. The reason for this was the narrow spread of high scores in the Map orientation. Due to this characteristic of the data, the clusters from the standardized data can be quite difficult to interpret and compare to other similar studies. Since the primary aim of this project is as a pilot study this detail will not be discussed further. However, it is recommend that, in the main study, clusters are obtained from both standardized and non-standardized data.

A further question to be asked is whether the narrow response in the Map orientation is related to the close contact with the horse or whether it is a function of the small and rather homogeneous sample. A study which would clarify this point would be to analyse the goal orientations of a population of girls from similar schools to those which the girls in study attended but who do not ride. The sort of schools which would be appropriate to approach for such populations would be Reddam College, Springfield College, Herschel et cetera.

A final use to which the cluster analysis can be put is to use the number of clusters and the distribution of participants within the clusters as an estimate for a required sample size for the main study. Using an assumption of six clusters with the smallest cluster containing 8% of the total participants and the smallest cluster containing at least 20 participants, the minimum sample size for the main study is n = 250. Since this covers the entire Western Province competitive riding community, it will be necessary for data to be obtained country wide for the main study.

CONCLUSION

Based on the findings of this pilot study, it appears as if the research procedure is quite feasible and, subject to some small changes, the research can continue. Firstly, a further pilot study should be initiated in which the wordings of the goal dominance questionnaire and the

self/horse efficacy questionnaire are rendered more appropriate for the age-group of the sample populations to used in the study. Secondly, the informed consent form should be reviewed and reduced to a single page subject to approval by the ethics committee. Thirdly, in the main project, data collection should be carried out using personal meetings with individuals or small groups. The final recommendation is that clusters are obtained from both standardized and non-standardized data to facilitate comparison of the research findings to findings from other sports.

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APPENDIX 1: ETHICS FORM

University of Cape Town

Psychology Department

STUDENT STATEMENT ON RESEARCH ETHICS

Name:Caroline Duff-Riddell

Name of supervisor: Professor Johan Louw

Please answer the questions written in **bold** in each box. The additional questions in italics are intended help you identify information that may be important to include.

1. Briefly outline the nature of your intended research?

The research is a quantitative analysis of achievement goal orientations of young riders between the ages of 10 and 19. It will be a quantitative analysis on survey based data. It is anticipated that the survey should take no longer than 30 minutes for respondents to complete. Confidentiality of data will be ensured.

2. Where will you get your data?

- Sources of data will be young riders and their parents
- The girls will be between 10 and 19. I hope to access 100 families.
- UCT students are not used as participants.

- My research involves children.

3. Will you inform your participants about your research?

- Informed consent will be obtained from both child and parent.
- No information will be held back.
- Participants will have free choice about their involvement in the study.

4. How will you get your data?

- Data will be collected via surveys.
- No discomfort is anticipated in the collection process.
- Only one sensitive question is asked. It pertains to whether or not the financial outlay made on the horse is extensive.

5. Will you offer confidentiality to participants?

- Confidentiality is offered insofar only I will have access to the data. I do not want the data to be anonymous as this would preclude its use for further longitudinal type research.
- No.

6. Will your research benefit or harm participants?

- There are no possible risks of physical, psychological or social harm for participants as a result of their involvement in the research that I can see.
- I believe there are potential benefits in the research in the form of possible interventions in competition to minimize anxiety and maximize enjoyment for the children and the parents. This is the ultimate aim of this research but it will not happen in the honors project. The best we can hope for from an honors project is an article to raise awareness of the issues involved.

7. Will the research benefit or harm any institution

- I do not think UCT's image will affected by my research.
- I do not think any institution (e.g. a school or business) be compromised by my research?

8. Are there any other ethical issues you think might arise during your research?

No.

Have you read the UCT Code for Research involving Human Subjects (available from the UCT web-site)? **YES** ~~**NO**~~

Student Researcher:

Name: Caroline Duff-Riddell Signature:

Supervisor

Name: Professor Johan Louw Signature:

APPENDIX 2: SURVEY PACK

Caroline Duff-Riddell
Box 562
Noordhoek
7979

April 22, 2008

Dear Alexandra

I am currently doing a post graduate degree at the University of Cape Town in psychology. I am especially interested in sports psychology and riders in particular. My thesis is on the interaction between children and adolescence and their parents and how they perceive success. In order to carry out this study, I need at least 100 riders and their parents to complete the attached survey. The survey will probably take the rider about 30 minutes to complete and the parents 5 to 10 minutes to complete.

In order to make this research meaningful I need as many respondents as possible and I really would appreciate your involvement in this study. The completed surveys may be returned to me in the following ways:

e-mail : driddellc@lantic.net
Post : Box 562
Noordhoek
7979
Fax 0866787367
Tack Shops : Hack & Track
Noordhoek Village Tack

If you have any further queries about this project you may phone me on 021 7892044.

Thank you most sincerely for your time.

Yours Sincerely,

Caroline Duff-Riddell

Question Battery for Investigation into riders' and their parents goal orientations

Caroline Duff-Riddell

University of Cape Town

PLEASE VIEW THIS DOCUMENT IN PRINT LAYOUT

DEMOGRAPHIC QUESTIONS

If you are completing the questionnaire in word simply **BOLD** your choice.

Name: Alexandra

How many ponies/horses are you competing on at the moment?

1	2	3 or more

How old are you?

How much support do you think your parents give your riding?

Please mark one block for each of mum and dad.

Mum		
Little or None	A fair amount	Lots
Dad		
Little or None	A fair amount	Lots

Do you feel you get enough input from your parents?

Mum

Not enough	Just Right	Too much
Dad		
Not enough	Just right	Too much

Which Parent is more involved in your riding? MOM / DAD

What do you think about the amount of money your parents spend on your ponies/horses?

It's not much	It's about average	It's a lot of money

In which Province do you compete?

WP	KZN	EC	THS	OFS/NC

Have you ever competed in a provincial team?

Yes	No

If yes, then please complete the following table:

If you have competed in teams for more than one year please refer to the most recent time.

Discipline	**Year**	**Your age at the time**	**Did you enjoy it?**		
			No	**Not Sure**	**Yes**
Showing					
Dressage					
Eventing					
Showing					
Equitation					

Do you think you have a chance to be in a team this year?

Yes	No

Do you think that you have done well over the last year?

No not really	Quite well	Yes, very well.

Do you expect to do well in the coming year?

No not really	Quite well	Yes, very well.

What is the highest grade in which you have competed in the last year?

Please fill in for each discipline that you compete in.

Dressage	Pre-Novice	Novice	Elementary	Elementary/ Medium	Medium
Jumping	JE/CE	JD/CD	JC/CC	JB/CB	JA/CA
Eventing		Training	Novice	Intermediate	Open
Showing				Novice	Open
Equitation		Welcome	Novice	Intermediate	Open

Would you be prepared to participate in further research?

Yes	No

GOAL ORIENTATION: SELF

When I ride I feel that…	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for me to ride as well as I possibly can							
I worry than I may not perform as well as I possibly can							
It is important for me to do well compared to others							
I just want to avoid riding worse than others							
I want to ride as well as it is possible for me to ride							
Sometimes I'm afraid that I may not ride as well as I'd like							
It is important for me to ride better than others							
My goal is to avoid riding worse than everyone else							
It is important for me to master all aspects of my riding							
I am often concerned that I may not ride as well as I can.							
My goal is to do better than other riders							
It is important for me to avoid coming last in the class							

GOAL ORIENTATION: PERCEPTION OF PARENT

When I ride, my mom/dad thinks (or worries)	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for me to ride as well as I possible can							
I may not perform as well as I possibly can							
It is important for me to do well compared to others							
I should just avoid riding worse than others							
I should just ride as well as it is possible for me to ride							
I may not ride as well as he/she would like							
It is important for me to ride better than others							
My goal should be to avoid riding worse than everyone else							
It is important for me to master all aspects of my riding							
I may not ride as well as I can.							
My goal should be to do better than other riders							
It is important for me to avoid coming last in the class							

SPORT EMOTION QUESTIONNAIRE

Below you will find a list of words that describe a range of feelings that sport performers may experience. Please read each one carefully and indicate on the scale next to each item how you *usually feel about competing.* There are no right or wrong answers. Do not spend too much time on any one item, but choose the answer which best describes your feelings in general in relation to riding in competition.

	Not at all	A little	Moderately	Quite a bit	A lot
Uneasy	0	1	2	3	4
Upset	0	1	2	3	4
Exhilarated	0	1	2	3	4
Irritated	0	1	2	3	4
Pleased	0	1	2	3	4
Tense	0	1	2	3	4
Sad	0	1	2	3	4
Excited	0	1	2	3	4
Furious	0	1	2	3	4
Joyful	0	1	2	3	4
Nervous	0	1	2	3	4
Unhappy	0	1	2	3	4
Enthusiastic	0	1	2	3	4
Annoyed	0	1	2	3	4
Cheerful	0	1	2	3	4

	Not at all	A little	Moderately	Quite a bit	A lot
Apprehensive	0	1	2	3	4
Disappointed	0	1	2	3	4
Energetic	0	1	2	3	4
Angry	0	1	2	3	4
Happy	0	1	2	3	4
Anxious	0	1	2	3	4
Dejected	0	1	2	3	4

DOMINANT GOAL ORIENTATION

For each item place a cross in either A or B	
When I ride I find it more important…	
A	**B**
…to ride better than the average rider	…not to ride worse than the average rider
…to ride better than my usual level	…not to perform worse than my usual
…to ride better than the average rider	…to ride better than my usual level
…not to ride worse than my usual level	…not to ride worse than the average rider
…not to ride worse than the average rider	…to ride better than my usual level
…not to ride worse than my usual level	…to rode better than the average

PARENT INITIATED MOTIVATIONAL CLIMATE

Please read each of the statements listed below and indicate how much you personally agree with each statement by putting a cross in the appropriate block.
1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

I feel that my mother…	**Strongly**	**Disagree**	**Neutral**	**Agree**	**Strongly**
Is most satisfied when I learn something new					
Makes me worried about failing.					
Looks satisfied when I win without effort.					
Makes me worried about failing because it will appear negative in her eyes.					
Pays special attention to whether I am improving my skills					
Says it is important for me to win without trying hard.					
Makes sure that I learn one thing before teaching me another					
Thinks I should achieve a lot without much effort.					
Believes enjoyment is very important in developing new skills.					
Makes me feel badly when I can't do as well as others.					
Looks completely satisfied when I improve after hard effort					
Makes me afraid to make mistakes.					
Tells me I should be satisfied when I achieve without trying hard.					
Approves of me enjoying myself when trying to learn new skills.					
Supports my feeling of enjoyment to skill development.					
Makes me worried about performing skills that I am not good at.					
Encourages me to enjoy learning new skills.					
Tells me that making mistakes are part of learning.					

I feel that my father…	**Strongly**	**Disagree**	**Neutral**	**Agree**	**Strongly**
Is most satisfied when I learn something new					
Makes me worried about failing.					
Looks satisfied when I win without effort.					
Makes me worried about failing because it will appear negative in her eyes.					
Pays special attention to whether I am improving my skills					
Says it is important for me to win without trying hard.					
Makes sure that I learn one thing before teaching me another					
Thinks I should achieve a lot without much effort.					
Believes enjoyment is very important in developing new skills.					
Makes me feel badly when I can't do as well as others.					
Looks completely satisfied when I improve after hard effort					
Makes me afraid to make mistakes.					
Tells me I should be satisfied when I achieve without trying hard.					
Approves of me enjoying myself when trying to learn new skills.					
Supports my feeling of enjoyment to skill development.					
Makes me worried about performing skills that I am not good at.					
Encourages me to enjoy learning new skills.					
Tells me that making mistakes are part of learning.					

REACTIONS TO RIDING IN COMPETITION

Many athletes get tense or nervous before or during games, meets or matches. This happens even to pro athletes. Please read each question. Then circle the number that says how you USUALLY feel before or while you compete in sports. There are no right or wrong answers. Please be as truthful as you can.

Before or while I compete in a class:	**Not at all**	**A little bit**	**Pretty Much**	**Very Much**
It is hard to concentrate on my riding	1	2	3	4
My body feels tense	1	2	3	4
I worry that I will not ride well	1	2	3	4
It is hard for me to focus on what I am supposed to do	1	2	3	4
I worry that I will let others down	1	2	3	4
I feel tense in my stomach	1	2	3	4
I lose focus on the competition	1	2	3	4
I worry that I will not ride my best	1	2	3	4
I worry that I will ride badly	1	2	3	4
My muscles feel shaky	1	2	3	4
I worry that I will mess up during the competition	1	2	3	4
My stomach feels upset	1	2	3	4
I cannot think clearly during the class	1	2	3	4
My muscles feel tight because I am nervous	1	2	3	4
I have a hard time focusing on what my coach tells me to do	1	2	3	4

RIDING EFFICACY QUESTIONNAIRE

Please remember this questionnaire is designed to assess your confidence in your own and your horse's abilities to perform certain skills. There are no right or wrong answers, so please indicate your immediate thoughts. Your honest answers are very important to us.

Dressage

Please rate your confidence in performing each of the skills listed below, to the level required for your competition today. Section A relates to **your confidence in your capabilities** to perform various skills. Section B relates to **your confidence in your horse's capabilities** to perform various skills.

0 1 2 3 4 5 6 7 8 9 10

Cannot all — Moderately certain can do — Certain do at can do

A) How confident are you in your ability…	Confidence (0-10)
1. To maintain balance effectively	
2. To have the correct technical knowledge	
3. To produce effective aids for the horse	
4. To maintain concentration throughout the test	
5. To have the appropriate level of understanding of the horse	
6. To maintain a positive attitude	
7. To co-ordinate different body parts effectively	
8. To be disciplined with each movement	
9. To maintain a strong seat	
10.To produce the required movements accurately	

B) How confident are you in your horse's ability…	Confidence (0-10)
1. To display the correct temperament	
2. To maintain balance	
3. To maintain concentration throughout the test	
4. To respond to your aids	
5. To have effective conformation for the discipline	
6. To display quality paces and movement	
7. To have the appropriate degree of suppleness	
8. To have a correct rhythm	
9. To lengthen and shorten effectively	

Show Jumping

Please rate your confidence in performing each of the skills listed below, to the level required for your competition today. Section A relates to **your confidence in your capabilities** to perform various skills. Section B relates to **your confidence in your horse's capabilities** to perform various skills.

0 1 2 3 4 5 6 7 8 9 10

Cannot all — Moderately certain can do — Certain do at can do

A) How confident are you in your ability…	Confidence (0-10)
1. To maintain balance effectively	
2. To have the correct technical knowledge	
3. To produce effective aids for the horse	
4. To maintain concentration throughout the course	
5. To have the appropriate level of understanding of the horse	
6. To maintain a positive attitude	
7. To maintain an effective posture throughout the ride	
8. To maintain a rhythmic canter	
9. To respond quickly in different situations	
10. To effectively judge distances and strides	

B) How confident are you in your horse's ability…	Confidence (0-10)
1. To display the correct temperament	
2. To maintain balance	
3. To maintain concentration throughout the section	
4. To respond to your aids	
5. To have effective conformation for the discipline	
6. To display quality paces and movement	
7. To display scope	
8. To be "forward going"	
9. To be careful over fences	
10. To be able to lengthen and shorten	

Cross Country

Please rate your confidence in performing each of the skills listed below, to the level required for your competition today. Section A relates to your confidence in your capabilities to perform various skills. Section B relates to your confidence in your horse's capabilities to perform various skills.

0 1 2 3 4 5 6 7 8 9 10

Cannot do at all — Moderately certain can do — Certain do at can do

How confident are you in your ability…	Confidence
1. To maintain balance effectively	
2. To have the correct technical knowledge	
3. To produce effective aids for the horse	
4. To maintain concentration throughout the course	
5. To have the appropriate level of understanding of the horse	
6. To maintain a positive attitude	
7. To maintain an effective posture throughout the course	
8. To trust your horse throughout the ride	
9. To get the horse's trust	
10. To respond quickly to different situations	
11. To judge distances effectively	
12. To stay in the saddle no matter what happens	

B) How confident are you in your horse's ability…	Confidence (0-10)
1. To display the correct temperament	
2. To maintain balance	
3. To maintain concentration throughout the section	
4. To respond to your aids	
5. To have effective conformation for the discipline	
6. To be bold across country	
7. To display scope	
8. To be honest across country	
9. To clear difficult jumps	
10. To be agile in difficult situations	
11. To show stamina across country	
12. To trust the rider	
13. To be "forward going"	

MOTHER GOAL ORIENTATION: SELF

When I am involved in an activity important to me that…	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for me to perform as well as I possibly can							
I worry than I may not perform as well as I possibly can							
It is important for me to do well compared to others							
I just want to avoid performing worse than others							
I want to perform as well as it is possible for me to perform							
Sometimes I'm afraid that I may not perform as well as I'd like							
It is important for me to perform better than others							
My goal is to avoid performing worse than everyone else							
It is important for me to master all aspects of my performance							
I am often concerned that I may not perform as well as I can.							
My goal is to do better than others							
It is important for me to avoid being one of the worst performers in the group							

MOTHER GOAL ORIENTATION: FOR DAUGHTER

When my daughter rides, I think that…	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for her to ride as well as she possibly can							
She may not perform as well as she possibly can							
It is important for her to do well compared to others							
She should just avoid riding worse than others							
She should just ride as well as it is possible for her to ride							
She may not ride as well as she would like							
It is important for her to ride better than others							
Her goal should be to avoid riding worse than everyone else							
It is important for her to master all aspects of her riding							
She may not ride as well as she can.							
Her goal should be to do better than other riders							
It is important for her to avoid coming last in the class							

FATHER GOAL ORIENTATION: SELF

When I am involved in an activity important to me that…	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for me to perform as well as I possibly can							
I worry than I may not perform as well as I possibly can							
It is important for me to do well compared to others							
I just want to avoid performing worse than others							
I want to perform as well as it is possible for me to perform							
Sometimes I'm afraid that I may not perform as well as I'd like							
It is important for me to perform better than others							
My goal is to avoid performing worse than everyone else							
It is important for me to master all aspects of my performance							
I am often concerned that I may not perform as well as I can.							
My goal is to do better than others							
It is important for me to avoid being one of the worst performers in the group							

FATHER GOAL ORIENTATION: FOR DAUGHTER

When my daughter rides, I think that…	**Not at all like me**	**Not really like me**	**A little like me**	**Sometimes like me**	**Like me**	**Quite a lot like me**	**Completely like me**
It is important for her to ride as well as she possibly can							
She may not perform as well as she possibly can							
It is important for her to do well compared to others							
She should just avoid riding worse than others							
She should just ride as well as it is possible for her to ride							
She may not ride as well as she would like							
It is important for her to ride better than others							
Her goal should be to avoid riding worse than everyone else							
It is important for her to master all aspects of her riding							
She may not ride as well as she can.							
Her goal should be to do better than other riders							
It is important for her to avoid coming last in the class							

NOTE FOR PARENTS OR GUARDIAN

Informed Consent to Participate in Research and

Authorization for Collection, Use, and Disclosure

You are being asked to take part in a research study. This form provides you with information about the study and seeks your authorization for the collection, use and disclosure of your cognitive performance data, as well as other information necessary for the study. The Principal Investigator (the person in charge of this research) or a representative of the Principal Investigator will also describe this study to you and answer all of your questions. Your participation is entirely voluntary. Before you decide whether or not to take part, read the information below and ask questions about anything you do not understand. By participating in this study you will not be penalized or lose any benefits to which you would otherwise be entitled.

1. Title of Research Study

Goal Orientation in female riders and their parents.

2. Principal Investigator and Telephone Number(s)

   Professor Johan Louw

   Department of Psychology

   University of Cape Town

   Tel

3. Source of Funding or Other Material Support

None

4. What is the purpose of this research study?

   The purpose of this research study is to understand better how rider's and their parents define success.

5. What will be done if your child takes part in this research study?

   In this study, your child will be asked to fill in a series of questions. This should not take more than 45 minutes. This may be carried out at a venue of your choosing.

Additional Information:

1. If you have any questions now or at any time during the study, you may contact the Principal Investigator listed in #3 of this form.
2. If you choose to allow your child to participate in this study, how long will he/she be expected to participate in the research?

There is only one session involved which we anticipate will take 45 minutes.

3. How many children are expected to participate in the research?

100

4. What are the possible discomforts and risks?

There are no known risks associated with participation in this study.

5. If you wish to discuss the information above or any discomforts you or your child may experience, you may ask questions now or call the Principal Investigator listed on the front page of this form.
6. What are the possible benefits to you and your child?

   You and your child may or may not personally benefit from participating in this study.

7. What are the possible benefits to others?

   The information from this study may help improve our understanding of how riders and their parents define success. Much research has been done overseas and in other sports but very little sport psychology research has been done on riders.

8. If you choose to take part in this research study, will it cost you anything?

Participating in this study will not cost you anything.

9. Will you receive compensation for taking part in this research study?

You will receive no compensation for taking part in this study.

10. Can you withdraw your child from this study?

    You are free to withdraw your consent and to stop participating in this research study at any time. If you do withdraw your consent, there will be no penalty.

11. If you have any questions regarding your child's rights as a research participant, and your rights as the individual granting consent for research participation, you may phone the Psychology Department offices at 021-650-3430.

12. If you withdraw your child from this study, can information about you still be used and/or collected?

Information already collected may be used.

13. Once personal and performance information is collected, how will it be kept secret (confidential) in order to protect your privacy?

    Information collected will be stored in locked filing cabinets or in computers with security passwords. Only certain people have the right to review these research records. These people include the researchers for this study and certain University of Cape Town officials. Your research records will not be released without your permission unless required by law or a court order.

14. What information about your child may be collected, used and shared with others?

    The information gathered from your child will be demographic information and records of his/her performance on the tests. If you agree that your child can be in this research study, it is possible that some of the information collected might be copied into a “limited data set” to be used for other research purposes. If so, the limited data set may only include information that does not directly identify you or your child. For example, the limited data set cannot include your or your child’s name, address, telephone number, ID number, or any other photographs, numbers, codes, or so forth that link you or your child to the information in the limited data set.

    The results of the research will be presented as part of an Honours research project for the University of Cape Town. Also, the results may be submitted for publication in a peer-reviewed journal. In both instances neither you nor your child will be identified in any way.

15. What should you tell your child?

    You may wish to discuss the study with your child to find out determine whether he/she feels comfortable taking part. Your child should know that he/she can choose not to participate in the study. Your child should also know that if he/she does choose to participate, he/she can withdraw at any time during the study with no negative consequences.

16. How will the researcher(s) benefit from your being in the study?

    In general, presenting research results helps the career of a scientist. Therefore, the Principal Investigator and others attached to this research project may benefit if the results of this study are presented at scientific meetings or in scientific journals.

Signatures

As a representative of this study, I have explained to the parent/guardian of the participant the purpose, the procedures, the possible benefits, and the risks of this research study; and how the participant's performance and other data will be collected, used, and shared with others:

Signature of Person Obtaining Consent and Authorization

You have been informed about this study's purpose, procedures, possible benefits, and risks; and how your child's performance and other data will be collected, used and shared with others. You have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time.

You voluntarily consent to allow your child to participate in this study. You hereby authorize the collection, use and sharing of your child's performance and other data. By signing this form, you are not waiving any of your legal rights.

_____ _____

Signature of Participant Date

_____ _____

Signature of Person Consenting and Authorizing Date

Phone number: _____

E-mail address: _____

Mailing address: _____

_____

_____