

A COMPARATIVE STUDY: PERFECTIONISM IN ELITE BALLET DANCERS AND
ARTISTIC GYMNASTS

by

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ABSTRACT

This research investigated perfectionism in elite ballet dancers and artistic gymnasts. Adaptive and maladaptive perfectionism were examined with an interest in pre-performance anxiety as this can aid or hinder performance. Coping methods applied to alleviate symptoms of pre-performance anxiety were noted. Ballet and gymnastics were of interest because previous research recorded that adaptive and maladaptive perfectionism existed in these careers as performers strive to attain high standards. A mixed-method approach was utilized to investigate the research aims.

Results demonstrated that dancers scored on two maladaptive dimensions. Higher ranked dancers and lower ranked gymnasts experienced increased levels of anxiety. Two of four dancers interviewed perceived pre-performance anxiety as facilitative, while all gymnasts interviewed perceived anxiety as facilitative. Both groups applied pre-performance anxiety coping methods. Only gymnasts mentioned that others influenced the application of coping strategies with pre-performance anxiety and mistakes made in competition. Future research should continue to investigate, coping strategies with pre-performance anxiety and mistakes during performance, maladaptive perfectionism symptoms as performance enhancers, and the effects of nutrition on the mental and physical functions of performers.

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1. INTRODUCTION

The main research focus of the study was a comparison of perfectionism as experienced by elite ballet dancers and artistic gymnasts. Perfectionism can be defined as striving for flawlessness and setting exceedingly high standards of performance accompanied by tendencies to engage in overly critical self-evaluations (Frost et al., 1990; Flett and Hewitt 2002). Perfectionism is a common characteristic in aesthetic athletes including elite ballet dancers and artistic gymnasts and is evident in one of two forms (Krasnow et al., 1999). Adaptive perfectionists are involved in positive efforts to achieve, whereas maladaptive perfectionists are preoccupied with being overly critical of their mistakes (Hall et al., 2006; Gotwals et al., 2003).

Research has revealed that a positive trait of adaptive perfectionism in performers is an increased ability to accept personal performance mistakes, while some traits of maladaptive perfectionism in performers are the need to avoid mistakes and the feeling of vulnerability to public criticism (Stoeber and Becker, 2008). It is under the conditions of focusing on mistakes and social comparisons that a maladaptive perfectionist will experience elevated levels of pre-performance anxiety. Depending on the person, this anxiety experience can be interpreted positively or negatively. Pre-performance anxiety research is more common in sport than in the area of dance. This study aims to investigate adaptive and maladaptive perfectionism in dancers and gymnasts with a closer look at pre-performance anxiety and its positive and negative impacts on performance and, to consider ways of managing the negative symptoms of pre-performance anxiety and transforming any perceived negative experiences into useful tools that benefit the performer.

Frost and others (1990) studied adaptive and maladaptive perfectionism and its positive and negative traits in female undergraduates and college students. They identified five dimensions of perfectionism, namely Concern Over Mistakes (COM), Doubts About Actions (DAA), Parental Criticism (PC), Personal Standards (PS) and Parental Expectations (PE). These dimensions were further classified as adaptive (PS, PE) and maladaptive (COM, DAA, PC). More recent investigations into adaptive and maladaptive dimensions in dance and sport have outlined the presence and importance of acknowledging the multidimensional nature of perfectionism to formulate specific conclusions about the dimensions of perfectionism scored in dance and sport.

Krasnow et al. (1999) investigated perfectionism dimensions in dancers and artistic gymnasts. They discovered that each particular field scored different dimensions. Gymnasts scored high levels of PC and dancers scored high levels of DAA. These researchers recommended that future studies investigate the causes of different dimensional scores between dancers and gymnasts. They suggested that causes of different dimensional scores could relate to the nature of the careers and the varying performance and training demands in dance and gymnastics.

In 1990, Martens and colleagues investigated the two dimensions of state anxiety (A-state), cognitive A-state and somatic A-state, in male and female athletes. Cognitive anxiety is the mental component of anxiety resulting from the negative assumption of success, which causes negative self-assessment (Martens et al., 1990). These symptoms are generated as mental fears and images of the performance / competition (e.g. poor concentration). Somatic anxiety is an involuntary anxiety experience

occurring in the autonomic nervous system, including perceptions, triggering physical responses (e.g. clammy hands) (Martens et al., 1990). A performer's career environment can affect the interpretation of cognitive and somatic symptoms. Jones et al. (2002) stated that an investigation is needed regarding the effect that the performer's skill level has on the perception of anxiety, which is addressed in this present study. One important research focus is the relationship between maladaptive perfectionism and the experience of pre-performance anxiety in ballet dancers and artistic gymnasts. Research in sport (Frost and Henderson 1991; Hall et al. 1998; Martinent and Ferrand, 2007) and in dance (Nordin-Bates et al., 2011) has indicated that individuals who were maladaptive perfectionists, particularly scoring on dimension COM, were associated with anxiety. It was discovered in Koivula et al.'s (2002) research into perfectionism and anxiety involving Olympiad level athletes, that participants with high levels of maladaptive perfectionism also experienced high levels of state anxiety. More recent investigations into the relationship between perfectionism and anxiety by Nordin-Bates et al. (2011) revealed that dancers who were more maladaptive, experienced higher levels of state anxiety symptoms and interpreted somatic A-state as a negative influence on performance. It was suggested in their study and by Koivula and colleagues, that future research focus on the consequences of a difference in career environment and performance demands on the recorded perfectionism and state anxiety dimensional scores. Research results by Walker and Nordin-Bates (2010) revealed that the pre-performance anxiety experience differed as a result of various factors such as age and rank. The present research will include age, rank, and years of elite training as factors that could affect the experience of pre-performance anxiety.

An important study was done by Krasnow and colleagues (1999) that compared perfectionism between ballet dancers and artistic gymnasts. Not much research work was done in the past on the effects of perfectionism and state anxiety dimensions on ballet dancers and artistic gymnasts, as such studies were focused more on sports. This presents the opportunity for much productive work, in the largely unexplored areas of dance and gymnastics, in studying the effects of perfectionism and state anxiety on performers in these areas. These careers are seen as suitable for a comparative study because of the nature of their similarities and differences. They are similar in training intensities, aesthetic requirements and the setting of high goals in performance. They are different in that while ballet dancers aim to please an audience, artistic gymnasts aim mostly to impress judges (Burke, 2007). These elements are factored into appropriate models of measurement and assessment in arriving at structured results.

This study focuses on three research questions. They will be addressed quantitatively, qualitatively or with a mixed-method approach. The research questions are, (1) 'Do elite ballet dancers and artistic gymnasts differ in the five dimensions of perfectionism?', (2) 'What is the prevalence of maladaptive perfectionism dimensions and anxiety dimensions in elite ballet dancers and artistic gymnasts?' and, (3) 'How do elite ballet dancers and artistic gymnasts perceive the effects of perfectionism and pre-performance anxiety in their performing careers?' Based on previous research by Krasnow et al. (1999), it is predicted for question one that dancers will score higher on DAA and gymnasts will score higher on PC. Questionnaires will be utilized to

address dimensional scores of perfectionism. Interviews will interpretively assess dimensions of perfectionism and the participant's perceptions of these dimensions. Based on previous research by Krasnow et al. (1999), it is hypothesized for research question two that maladaptive dimension COM will be a highly scored dimension in both groups. Dancers will score on maladaptive dimension DAA and gymnasts will score on maladaptive dimension PC. From previous research by Walker and Nordin-Bates (2010) and Jastrjemskaia and Titov (1999), it is predicted that dancers of a higher rank and gymnasts of a lower level will score high levels of state anxiety, therefore having an increased chance of experiencing maladaptive dimensions of perfectionism, and as age increases, dancers will experience more anxiety and gymnasts will experience less. Questionnaires will investigate the maladaptive perfectionism dimensions and anxiety dimensions that are scored in both groups and conversations in interviews will enable an understanding of the perceptions of maladaptive perfectionism and pre-performance anxiety. Research question three will only be addressed by interview. Inquiries into the perceptions of adaptive and maladaptive perfectionism and cognitive and somatic anxiety will be made, interpretations of pre-performance anxiety will be understood, and coping strategies applied to manage with pre-performance anxiety will be recorded. All quantitative results will be analyzed with the Statistical Package for the Social Sciences, and all qualitative data will be subject to directed content analysis. A comparison of perfectionism and anxiety results between dancers and gymnasts will be made, in the areas of perfectionism and anxiety.

Professional ballet dancers based in Birmingham, United Kingdom and elite artistic gymnasts from the United Kingdom and Canada were involved in this research. The benefits of this research include: the development of knowledge and understanding of the lives of elite performers who experience adaptive and maladaptive perfectionism, and pre-performance anxiety; the advancement on previous research regarding the relationships between maladaptive perfectionism and pre-performance anxiety; the generation of conclusions regarding the perceptions and interpretations of perfectionism and pre-performance anxiety in dancers and gymnasts; and the collection of recorded coping strategies that were applied to pre-performance anxiety, which could also possibly aid others, including non-elite dancers and gymnasts, who are faced with pre-performance anxiety.

The following chapters of this dissertation outline key facts about perfectionism and anxiety, review past literature focusing on the areas of perfectionism and pre-performance anxiety, outline areas extended in the current research, and describe the professional careers of ballet dancers and artistic gymnasts in Section 2 (Literature Review). A detailed description of the methodology and research design is made, the measures utilized to address research questions are introduced, participant numbers are given, and a detailed description of the selection, access and process of the investigations are outlined in Section 3 (Methods). In Section 4 (Results and Analysis of Data), reference is made to specific statistical tables that display the results of quantitative data analysis. Results of qualitative data analysis are examined for relationships, trends, and differences and referenced to participant quotes. In Section 5 (Discussion), ways in which the qualitative data substantiated or contradicted

quantitative results are described, possible causes of important patterns and observations are outlined, previous research findings are compared to results, and it is noted whether research questions were sufficiently answered. A critical analysis of research methods and the general research process is made and future research ideas are outlined. Lastly a summary of research discoveries is made, and new areas of study are suggested in Section 6 (Conclusion).

2. LITERATURE REVIEW

The effects of perfectionism upon athletes of aesthetic sports have held the interest of researchers in the past. The benefits of perfectionism are real, and so is the research for more effective ways to at least manage its adverse effects. Perfectionism is defined as striving for flawlessness and setting exceedingly high standards for performance accompanied by tendencies to engage in overly critical self-evaluations (Frost et al., 1990; Flett and Hewitt, 2002). Two types of perfectionism, adaptive and maladaptive, are further investigated in this study. Adaptive perfectionists accept their personal and environmental limitations, whereas maladaptive perfectionists are rarely satisfied with their performance and view themselves as failures. Research has found that a positive effect of perfectionism is that performers are able to attain high standards and goals and are satisfied if standards are not fully achieved. There are negative effects at times, including pre-performance anxiety, where somatic and cognitive symptoms can have either facilitative or debilitating effects on the performance. Stoeber and Stoeber (2009) noted that most people acquire at least one

domain in their life where perfectionism is evident. Research has also shown that perfectionism is significantly higher in the domain of sport than in school or general life (Dunn et al., 2005). There is therefore a relatively higher probability that perfectionism will be found among elite athletes from aesthetic sports such as ballet and artistic gymnastics. The integral aspect of perfectionism, which is the setting of excessively high performance standards, can be important to elite ballet dancers and artistic gymnasts for their performance or competition (Frost et al., 1990; Krasnow et al., 1999). In Flett and Hewitt's (2005, p. 14) review of the perils of perfectionism in sports and exercise, it was noted that 'A perfectionism paradox exists – that is, despite the fact there are many sports in which absolute perfection is required, negative, self-defeating outcomes and unhealthy patterns of behavior are evident among those athletes who are characterized by an extreme, perfectionistic personality and who are focused cognitively on attaining perfection.' The present study investigates perfectionism and its positive and negative effects on elite ballet dancers and artistic gymnasts with an increased focus on the negative effects of pre-performance anxiety.

2.1 ADAPTIVE AND MALADAPTIVE PERFECTIONISM

It is important to understand the difference between adaptive perfectionism and maladaptive perfectionism. An adaptive perfectionist sets high personal performance standards while being capable of accepting personal limitations. They are forgiving of themselves even when performance standards are not completely met and are satisfied with their achievement-oriented efforts when a perfect performance is not

accomplished (Gotwals et al., 2003; Hall et al., 2006). Sports psychologists propose that this form of perfectionism is a characteristic of high-performing athletes and correlates highly with positive achievement striving in sports (Frost and Henderson, 1991; Hardy et al., 1996; Henschen, 2000). It is an indicator of well-being and positive evaluations and expectancies for performance (Frost et al., 1993; Stoeber and Otto, 2006; Stoeber and Becker, 2008).

In contrast, maladaptive perfectionism is considered to be a more ‘...destructive disposition’ (Hall et al., 1998, p. 196). Such perfectionists set excessively high standards for performance, allow little space for mistakes and never feel satisfied with task related efforts (Frost et al., 1990). This form of perfectionism is associated with maladaptive effects in the area of well-being including feelings of failure, guilt, procrastination, shame, and low self-esteem, which lead to a state of performance anxiety (Burns, 1980; Flett et al., 1989; Frost and Marten, 1990; Hewitt and Flett, 1991; Nordin-Bates et al., 2011). Some theorists believe that maladaptive perfectionism is a characteristic that undermines athletic performance and causes athletes to lose focus of important task related thoughts soon after an error is made in performance (Gotwals et al., 2003; Flett and Hewitt, 2005; Hall, 2006). Since athletic performance is rarely flawless, maladaptive perfectionists tend to view themselves as failures (Gotwals et al., 2003). They feel it a responsibility rather than a challenge to perform at an ideal self-imposed standard (Frost and Marten, 1990). This predisposition towards being overly self-critical is associated with a sense of doubting performance quality and believing that tasks will never be adequately accomplished (Hewitt and Flett, 1991). Maladaptive perfectionism includes perfectionistic concerns,

related to Concern Over Mistakes, Doubts About Actions and negative reactions towards mistakes in performance (Stoeber and Becker, 2008).

2.2 PERFECTIONISM DIMENSIONS

The most controversial issue is whether perfectionism is a multidimensional construct consisting of definite adaptive and maladaptive dimensions (Flett and Hewitt, 2005; Stoeber, 2011). Researchers have distinguished that certain dimensions of perfectionism can contribute to positive outcomes and others to negative outcomes (Hall et al., 1998; Slaney et al., 2002; Dunn et al., 2005). It is important to understand the dimensional roles of perfectionism in dance and sport.

Frost and colleagues (1990) identified the dimensions of perfectionism and investigated the multidimensional nature of perfectionism and its negative effects. They argued that the existing measures of perfectionism at the time including the Burns Perfectionism Scale (Burns, 1980), the Eating Disorders Inventory (Garner et al., 1983), and the Irrational Beliefs Test (Jones, 1968) were sections of scales measuring more general constructs rather than the specific dimensions of perfectionism. Drawing on early literature from Hamachek (1978), Burns (1980), and Pacht (1984), Frost and others (1990) identified five central overly critical evaluative tendencies of perfectionists. These include Personal Standards (an obsession with the importance of setting high standards for self-evaluation), Concern Over Mistakes (a

negative response and interpretation of mistakes, and the belief that there will be a loss of respect because of mistakes), Doubts About Actions (the feeling that tasks are not satisfactorily completed), Parental Expectations (the belief that parents set goals / standards, and are highly critical) and Organization (the desire for and importance of order).

Frost et al. (1990) investigated the dimensions of perfectionism when developing a measure of this construct. Sixty-seven items, including several from perfectionism measures of Burns (1980) and Garner et al. (1983), were generated to represent the five dimensions. Organization lacked inter-correlations with other perfectionism dimensions and had the weakest correlation with other perfectionism measures. This dimension was removed and replaced with Parental Criticism (the belief that one's parents are overly critical of one's achievement). The five revised dimensions included Personal Standards (PS), Parental Expectations (PE), Concern Over Mistakes (COM), Doubts About Actions (DAA), and Parental Criticism (PC). It was also documented that the adaptive dimensions of perfectionism were PE and PS, and the maladaptive dimensions included COM, DAA, and PC.

2.3 PRE-PERFORMANCE ANXIETY

Pre-performance anxiety (competitive anxiety) is defined as being a negative emotional state experienced in competitive situations, characterized by feelings of

apprehension, tension, and activation and occurs when there is a source of threat or the possibility of failure and disapproval by significant others evaluating their performance in relation to perfection (Martens et al., 1990; Smith, 1996).

State anxiety (A-state) develops in events that are perceived as being threatening but rapidly dissipates after the experience (Cox, 2002; Walker and Nordin-Bates, 2010). In the case of pre-performance anxiety, competitive situations are perceived as threatening and are responded to with A-state. The state anxiety dimensions investigated in this research are cognitive anxiety (cognitive A-state) and somatic anxiety (somatic A-state). They were discovered by Davidson and Schwartz (1976), and Borkovec (1976). Cognitive A-state is the mental element of anxiety caused by a negative presumption towards success, which triggers negative self-assessment (Martens et al., 1990). This thought process involves indecision, poor concentration, inability to accept and apply corrections, loss of confidence and images of failure. In sport, cognitive A-state is related to disturbing images and negative self-evaluation (Martens et al., 1990). Somatic A-state is an involuntary anxiety experience occurring in the autonomic nervous system involving perceptions, triggering physical responses such as adrenaline surge, 'butterflies' in the stomach, increased blood pressure and respiration rates, clammy hands, tense muscles and shortness of breath (Martens et al., 1990).

Pre-performance anxiety can be perceived as either debilitating where the performer may be so concerned about the upcoming performance or competition that worry

develops into a panicked debilitating state, or facilitative where the performer craves the presence of anxiety to initiate performance / competitive mode, focus, and motivation (Jones, 1991). In a pre-performance state, individuals may respond to or interpret cognitive and somatic A-states differently, which can have varied impacts on performance. This is classified as directional perceptions, defined as the extent to which individuals interpret anxiety as facilitative or debilitating (Jones, 1991).

Furthermore, a performer's personal meaning of anxiety can be interpreted differently depending on the performance / competition environment of their profession (Moran, 2004; Mahoney and Meyers, 1989). Sport research by Neil et al. (2006) and Mellalieu et al. (2004) implies that anxiety is interpreted as more facilitative whereas research findings on this topic in dance have been varied (Helin, 1989; Nordin and Cumming, 2006; Walker and Nordin-Bates, 2010; Nordin-Bates et al., 2011). Possible reasons for this, explained by Walker and Nordin-Bates, are differences in the function of the activity type, motor skills and, task and role requirements between sport and dance.

Jones and Hanton (2001) investigated differences in perceptions of anxiety by performers. Those who experienced anxiety as facilitative also reported having positive feelings, and participants who viewed anxiety as debilitating frequently labeled their emotional state as being highly anxious. Likewise, in Mellalieu et al.'s (2004) investigations into anxiety interpretations in competitive athletes, it was recorded that participants who were facilitated by pre-performance anxiety and positively interpreted the somatic and cognitive symptoms also experienced greater positive emotional states and feelings than subjects who viewed anxiety as debilitating. Jones et al. (2002) examined cognitive and somatic anxiety intensity in elite and non-elite sports performers. Findings demonstrated that elite athletes interpreted both anxiety dimensions as facilitative, whereas the non-elite had

debilitative interpretations. No major variations were recorded regarding anxiety levels amongst elite athletes. The researchers noted that future examinations be made concerning skill level, altering the response to pre-performance anxiety. The effect that years of elite training has on pre-performance anxiety is investigated in the present study.

Walker and Nordin-Bates (2010) discovered that there were various interpretations of anxiety between the elite ballet dancers that were interviewed in their study. The subjects, of varied ranks, mostly interpreted somatic anxiety as facilitative when they felt in control of the anxiety symptoms. Cognitive anxiety was the higher scored dimension and was interpreted as debilitating. Negative interpretations of anxiety were mostly recorded from Principal dancers, the top rank in a ballet company, because of increased pressure from demanding roles. These higher ranked ballet dancers also experienced maladaptive perfectionism dimension Concern Over Mistakes. Further investigations into the rank / level and its impact on the experience of perfectionism will be made in the current research. Factors that affected the ballet dancer's interpretations of anxiety were positive and negative feedback from teachers, colleagues and other external sources. Nordin and Cumming (2006) revealed that the participants from 25 dance forms from beginner to elite, mostly interpreted anxiety as debilitating. Nordin-Bates and colleagues discovered in 2011 that ballet and contemporary dancers from conservatories, vocational schools and universities who were recorded as having experienced perfectionism, had increased levels of cognitive and somatic anxiety and perceived anxiety as debilitating whilst those who had no perfectionistic tendencies experienced anxiety as facilitative. The researchers

concluded that future investigations be made to discover strategies that allow performers to cope with perfectionism's negative symptom of anxiety. This is addressed in the current research. Overall, interpretations of anxiety are varied resulting from the various dance styles involved in these studies, the rank of performers, and also their elite or non-elite status.

Many empirical studies have discovered a relationship between maladaptive perfectionism and pre-performance anxiety, which has received constant attention in sport psychology (Frost and Henderson 1991; Hall et al., 1998; Koivula et al., 2002; Martinent and Ferrand, 2007; Stoeber et al., 2007; Gotwals et al., 2010; Martinent et al., 2010; Stoeber, 2011). Hall et al. (1998) reported that when an individual compared his / her ability with others and began to doubt their quality of performance, maladaptive perfectionist performance cognitions occurred. The maladaptive perfectionist then entertained perceptions of an inadequate performance therefore elevating the experience of state anxiety as the performance or competition approached. Research by Kawamura et al. (2001) into the relationship between adaptive and maladaptive perfectionism and anxiety showed that the maladaptive dimensions of perfectionism were associated with increased levels of anxiety. The most startling discovery was that adaptive perfectionism had minor relations to Post-Traumatic Stress Disorder (PTSD) and it was unclear why this relationship occurred. The PTSD factor had a significant relationship to perfectionism in the way that it related to both adaptive and maladaptive perfectionism. Adaptive perfectionism was also related to the adaptive component of depression, which was related to positive achievement striving and effect. However, the relationship between depression and

maladaptive perfectionism was stronger than the relationship between depression and adaptive perfectionism.

Past investigations have suggested possible coping strategies with somatic and cognitive anxiety in ballet and sports. Walker and Nordin-Bates (2010) investigated anxiety experiences in elite ballet dancers ($n = 15$) and recorded that the participants utilized somatic and cognitive coping strategies. Somatic strategies included a thorough warm-up before the performance, a complete rehearsal of steps in the choreography, and the application of breathing techniques. Cognitive strategies included 'thought stopping' to decrease the amount of negative thoughts that were entertained in the mind. Some ballet dancers used self-talk for encouragement and, imagery to decrease negative thoughts of failure regarding the performance. Other strategies included watching and reviewing videos of previous performances, and superstitions. Neil et al. (2006) investigated competitive anxiety in elite ($n = 65$) and non-elite ($n = 50$) rugby players. Elite athletes interpreted anxiety as facilitative and non-elite athletes interpreted anxiety as debilitating. Elite athletes utilized cognitive coping strategies such as imagery and positive self-talk more than non-elite athletes. A combination of these cognitive coping methods helped the elite athletes manage and alter their pre-performance cognition of doubt from a negative to a positive outlook towards performance. Non-elite athletes utilized relaxation-based techniques to manage somatic symptoms of anxiety. In the present research, cognitive and somatic anxiety coping strategies are recorded and compared between ballet dancers and artistic gymnasts, and to past study findings.

Krasnow et al. (1999) compared perfectionistic tendencies between Canadian female elite dancers and artistic gymnasts ($n = 30$ gymnasts, $n = 16$ ballet dancers, $n = 19$ modern dancers) between 12 and 18 years of age. Their study reinforced the discovery by Frost et al. (1990) that perfectionism acquires multidimensional qualities and consists of five main dimensions. The researchers hypothesized that general perfectionism scores would show relationships between perfectionism, injury, and psychological stress. Analysis of data revealed that adaptive and maladaptive perfectionism dimensions demonstrated the relationship of perfectionism dimensions with injury and psychological stress rather than hypothesized total perfectionism scores. Ballet and modern dancers experienced higher levels of Doubts About Actions (DAA) whereas artistic gymnasts experienced higher levels of Parental Criticism (PC). High levels of Concern Over Mistakes (COM) were recorded for ballet dancers and artistic gymnasts. These adaptive and maladaptive dimensional results of dancers and gymnasts are noted and compared to the present study findings. Krasnow and colleagues mentioned the complexity in understanding whether dimensional differences amongst groups originated from the nature or varying demands of dance (ballet, modern) and artistic gymnastics.

Frost and Henderson (1991) conducted initial investigations in sport regarding the dimensions of perfectionism and an athlete's response to competition. Participants were forty women in Division III varsity athletics, which included the five spring sports of softball, tennis, lacrosse, crew, and track, and also five coaches from an arts college. They were administered a perfectionism measure, along with measures of

sport confidence, sport orientation, reactions to mistakes, thoughts before competition, and pre-competitive anxiety. Results confirmed that maladaptive perfectionism dimensions COM and DAA were linked to the negative emotional state of anxiety in competition and also to various reactions such as a loss of focus when mistakes were made during performance. Athletes who scored high levels of maladaptive perfectionism were more likely to harbor thoughts about how others would react to their mistakes in performance, focus cognitively on mistakes and visualize themselves making the same mistake. Maladaptive perfectionism dimension DAA was correlated to images of mistakes and concern with the audience's reactions. These individuals found it difficult to forget about mistakes, as images of their imperfections were replayed in their minds.

Hall et al. (1998) investigated the correlation between perfectionism and precompetitive anxiety in student athletes (74 female, 45 male) with a mean age of 14 years. Participants were registered to compete in an intra-school cross-country meet. Questionnaires measuring perfectionism and state anxiety were administered prior to the competition, at intervals of one week, two days, one day and thirty minutes before the event. Results demonstrated that specific adaptive and maladaptive dimensions of perfectionism predicted the dimensions of anxiety. State anxiety (cognitive and somatic) was elevated over the seven-day period prior to the meet. An analysis of perfectionism identified maladaptive perfectionism dimensions COM and DAA as being the dimensions that mainly contributed to the prediction of state anxiety prior to performance. Not all ballet dancers and artistic gymnasts experienced maladaptive perfectionism. COM and DAA caused participants to be preoccupied with self-

evaluation, which contributed to negative thoughts concerning performance, increased levels of cognitive anxiety, and decreased levels of confidence. Maladaptive dimensions were central to the athletes' cognitive anxiety (e.g. COM) and consistently predicted somatic anxiety (e.g. DAA). In addition, cognitive anxiety levels intensified as competition approached and the interpretation of cognitive A-state as being either positive or negative depended on the individual. The personal meaning of the athlete's achievement environment differed prior to performance because of their meaning of success and state of mind at the onset of the competition.

Koivula et al. (2002) distributed perfectionism and state anxiety measures to Swedish Olympiad level athletes (109 male, 69 female). One research aim was to target perfectionism dimensional differences. Participants were split into four groups: high in adaptive perfectionism, low in adaptive perfectionism, high in maladaptive perfectionism and low in maladaptive perfectionism. Results demonstrated that perfectionists high in maladaptive perfectionism had high levels of state anxiety (cognitive and somatic).

Stoeber et al. (2007) focused investigations on the relationship of perfectionism to competitive anxiety in four different samples. Sample one included university student athletes (53 male, 62 female), sample two included 74 female soccer players, sample three included high school athletes (131 male, 73 female), and sample four included university students (90 male, 57 female). Measures of perfectionism and of state anxiety were distributed during athlete training and for the duration of student lectures. Their results were similar to research conducted by Koivula et al. (2002). All individuals who scored high levels of perfectionistic concerns (maladaptive

perfectionism), which promoted negative reactions to imperfect performance, also scored on competitive anxiety and experienced cognitive and somatic symptoms. The data concerning maladaptive dimensions in relation to the presence of state anxiety was collected from athletes in general and did not relate specifically to ballet dancers and artistic gymnasts, which is addressed in this study.

Nordin-Bates et al. (2011) investigated perfectionism prevalence and its relationship to performance anxiety. Participants ($n = 250$) were studying classical ballet or contemporary dance in England, Canada, and Australia. They completed questionnaires assessing imagery, perfectionism, and competitive anxiety. Questionnaires were either distributed before, during or after the athlete's practice sessions. Analysis was carried out to determine differences in state anxiety dimensions. Results demonstrated that individuals with greater maladaptive perfectionistic tendencies were more likely to experience state anxiety symptoms and perceived somatic anxiety as debilitating. Results supported the claim by theorists that elite dancers tend to be perfectionists (Sharp, 2005).

Krasnow et al. (1999) and Koivula et al. (2002) both suggested that future research investigate the nature and varying demands of a dancer and athlete's career as contributing factors of perfectionism dimensional differences. The first research question of the present study is 'Do elite ballet dancers and artistic gymnasts differ in the five dimensions of perfectionism?' Based on research findings by Krasnow and colleagues, it is expected that ballet dancers will score higher levels on DAA and artistic gymnasts will score higher levels on PC.

The second research question is ‘What is the prevalence of maladaptive perfectionism dimensions and anxiety dimensions in elite ballet dancers and artistic gymnasts?’

Based on past studies, it is hypothesized: that maladaptive perfectionism dimension COM will be a central dimension in both groups; that the maladaptive dimension DAA will be highly scored by ballet dancers; that artistic gymnasts will score higher on PC; that ballet dancers of a higher rank and artistic gymnasts of a lower rank will experience more state anxiety and therefore have an increased chance of experiencing maladaptive dimensions of perfectionism; that as years of elite training and age increase ballet dancers will experience more state anxiety and artistic gymnasts will experience less state anxiety. Varying career demands of a dancer and gymnast will be assessed as grounds for differences in maladaptive dimensional scores and anxiety dimensional scores.

Nordin-Bates et al. (2011) noted that dancers perceived perfectionism and anxiety as either facilitative or debilitating, and Hall et al. (1998) noted that the personal meaning of the athlete’s achievement environment differed prior to performance.

Nordin-Bates and colleagues suggested that further research investigate why dimensional differences can occur between different dance styles and whether differences in the dancing environment can promote this. Also, further research concerning perfectionism and anxiety should involve sport and dance (Nordin-Bates et al., 2011). A comparison between ballet dancers and artistic gymnasts was not investigated in the research by Nordin-Bates and colleagues. This leads to the third

research question, ‘How do elite ballet dancers and artistic gymnasts perceive the effects of perfectionism and pre-performance anxiety in their performing careers?’ Understanding their perspectives of perfectionism and pre-performance anxiety and investigating whether anxiety was facilitative or debilitating to their performance will assist in formulating conclusions of perceptions of pre-performance anxiety in their performing / competing careers. Differences in the nature of ballet and gymnastics were investigated as factors that could cause differences in perceptions and experiences of perfectionism and pre-performance anxiety. Ballet dancers aim to please an audience and perform the steps and movements as precisely as possible incorporating the often required acting skills, while artistic gymnasts aim to impress judges by executing perfect routines in the hope that high scores will be awarded (Burke, 2007). An inquiry was made regarding ways in which pre-performance anxiety was managed and utilized to benefit the performance / competition.

2.4 PERFECTIONISM IN BALLET DANCERS AND ARTISTIC GYMNASTS

Perfectionism is a relevant construct in the disciplines of dance and sport, however, very few researchers have examined the role of perfectionism in the careers of individual ballet dancers and artistic gymnasts. This study aims to investigate and explore the presence of perfectionism and the negative effects it may have on the careers of both professions (Krasnow et al., 1999). Elite ballet dancers and artistic gymnasts are best suited for a comparison in this research because of specific similar and also different career related aspects. Both professions have high levels of

commitment to perform / compete in an activity, they have an increased tendency to acquire perfectionist personalities and have elevated exposure levels to a pre-performance state (Frost and DiBartolo, 2002). The highly demanding training schedule of ballet dancers is quite similar to professional athletes where it commences at a very early age and exceeds 18 hours of training per week (Krasnow et al., 1999; Pickard, 2007; Burke, 2007). Aesthetic requirements for both professions emphasize the importance of thinness and linearity of muscles occurring in the later stages of maturation as sine qua non, for the achievement of elite status (Malina et al., 2004). The strictness and intensity of training and maintenance of aesthetic standards, demands that ballet dancers and artistic gymnasts acquire and internalize a perfectionist work ethic of 'No Pain, No Gain, reflecting their conviction that significant gains in strength and endurance occur only when athletes push themselves beyond their natural limits' (Burns, 1980 p.34). The drive to maintain high standards for training and aesthetic beauty may result in the development of adaptive and maladaptive perfectionist personalities. The age at which ballet dancers and gymnasts peak may be important to note for classifying an age restriction for further involvement of subjects in this research. It has been recorded that the peak age of female gymnasts is when they reach mid-to-late teens, whilst males peak in their teens to early 20s (Burke, 2007). Professional dancers may peak in their early to mid-twenties but a significant percentage continue dancing until in their thirties (Clearman, 2005).

However, there are differences in the competitive nature of ballet dancers and artistic gymnasts, which are outlined by Burke (2007). The author mentions that 'In the case of competitive sports – for example rhythmic and artistic gymnastics... – a panel of

judges award points for the performance of each competitor according to their perception of technical or artistic merit. Although participants in activities such as dancing... share common issues and challenges as these “aesthetic” athletes, the former compete for selection in a company or show rather than for medals’ (Burke, 2007 p.313). This statement suggests that the highly competitive nature of ballet and gymnastics are similar because of the self-inflicted (e.g. personal pressure and demands on performance / competition to avoid negative public criticism) and other-inflicted (e.g. pressure and demands from teacher / coach for perfect execution of steps / routines) demands for high performance standards. Since high performance standards and drive to excel are major aspects of perfectionism, the possibility of this trait being a characteristic of both groups is increased (Frost et al., 1990; Gotwals et al., 2003). However, the competitive aim differs because dancers strive to achieve the self-satisfaction of accomplishment that follows a successful show or placement into a prestigious professional company, whereas gymnasts strive to score high points on their routines and be selected for top international competitions (Burke, 2007). These differences in career related aims might be important when a comparison of the current research results is conducted.

Anxiety experiences can vary according to the ballet dancer and artistic gymnast’s rank / level in the company / team. Walker and Nordin-Bates (2010) conducted state anxiety research in ballet dancers. Difference in rank was identified as a factor that affected anxiety experiences. The Principal rank, being the highest possible level in a ballet company, was more prone to experience state anxiety. This was because Principals were involved in more challenging solo roles than dancers of a lower rank

(e.g. Artist) who performed in a group, executed less challenging steps, and were less exposed to the audience whilst performing onstage. In contrast, it was discovered that gymnasts who were of a lower rank and in their early years of elite training and competitions experienced higher levels of pre-performance anxiety than gymnasts of a higher rank who were training and competing at an elite level for a longer period (Jastrjemskaia and Titov, 1999; Walker and Nordin-Bates, 2010). The relationship between rank / level and perfectionism and anxiety dimensions will be investigated in this study.

In addition, age can affect the level of anxiety experienced by ballet dancers and artistic gymnasts. Walker and Nordin-Bates' (2010) research results demonstrated that ballet dancers enjoyed anxiety when younger and perceived it as more facilitative excitement towards the performance. The dancers recorded that when they became adolescents, self-consciousness and concern over external judgments and expectations increased, which promoted experiences of pre-performance anxiety. Artistic gymnasts were noted to have higher levels of anxiety when younger because they were fairly new to the competitive atmosphere. Jastrjemskaia and Titov (1999) mentioned that the constant participation of young gymnasts in competitions develops their anxiety management skills and causes them to have strong pre-performance mental states, which results in less anxiety experiences as they mature in their careers. The effect of age on anxiety is further examined in this study.

2.5 SUMMARY

In summary, the rationale of this study is to investigate the dimensions of perfectionism and the relationships of maladaptive dimensions of perfectionism to pre-performance anxiety in elite ballet dancers and artistic gymnasts. Adaptive and maladaptive perfectionism have been investigated. The maladaptive effects of pre-performance anxiety in dance and sport have been focused on. Personal experiences with perfectionism and pre-performance anxiety in the profession of ballet and artistic gymnastics have been integrated with various psychological theories about perfectionism that have led to assumptions about similarities and differences between both performance areas.

Perfectionism and anxiety research thrives in the area of sport but lacks in the specific areas of ballet and artistic gymnastics (Krasnow et al., 1999; Walker and Nordin-Bates, 2010). Knowledge was gathered to reflect on the experiences of conducting fieldwork with ballet dancers and artistic gymnasts. As a researcher within the world of ballet, fellow dancers were inclined to openly discuss experiences and perceptions of perfectionism and pre-performance anxiety in their performing career. As an outsider to the world of artistic gymnastics, unique knowledge and understandings were gained. It is hoped that this research will provide further knowledge into the concept of perfectionism and pre-performance anxiety in ballet dancers and artistic gymnasts and assist with methods to manage pre-performance anxiety in their careers.

3. METHODS

3.1 INTRODUCTION

This study incorporated quantitative and qualitative methods to investigate research questions that were derived from reviewed literature that investigated perfectionism and pre-performance anxiety in classical ballet, artistic gymnastics, and other types of dance and sport. The following questions were addressed: (1) ‘Do elite ballet dancers and artistic gymnasts differ in the five dimensions of perfectionism?’, (2) ‘What is the prevalence of maladaptive perfectionism dimensions and anxiety dimensions in elite ballet dancers and artistic gymnasts?’, and (3) ‘How do elite ballet dancers and artistic gymnasts perceive the effects of perfectionism and pre-performance anxiety in their performing careers?’

The first two research questions were addressed using quantitative and qualitative methodologies to measure and compare levels of perfectionism and state anxiety dimensions between activity areas, and to also investigate the dimensional levels interpretively allowing greater depth of investigations and understanding of quantitative results (Gorard and Taylor, 2004). In the case of research question one, a quantitative methodology permitted perfectionism dimensions to be recorded, and a qualitative methodology permitted conclusions to be formulated regarding a dancer and gymnast’s training environment and competitive nature. In the case of research question two, a quantitative methodology allowed levels of maladaptive perfectionism

and anxiety dimensions to be recorded, and a qualitative methodology allowed for investigations into the varying career demands of a dancer and gymnast as grounds for differences in maladaptive dimensional scores and anxiety dimensional scores. Research question three was addressed using a qualitative methodology to investigate issues such as personal feelings, reactions to perfectionism and state anxiety dimensions, and coping methods applied to manage state anxiety. The investigations of research question three could not be quantified but rather investigated through conversation.

This mixed method approach assessed research questions one and two and permitted triangulation. A description of the research questions, hypotheses, data sources, and sample sizes utilized to investigate the research questions have been outlined in Figure 1.

Figure 1. An Outline of How the Research Questions were Investigated.

Research Question	Hypothesis	Data Source	Sample Size
1) 'Do elite ballet dancers and artistic gymnasts differ in the five dimensions of perfectionism?'	Based on research findings by Krasnow et al. (1999), ballet dancers will score higher on Doubts About Actions and artistic gymnasts will score higher on Parental Criticism.	Frost Multidimensional Perfectionism Scale (FMPS) (Frost et al., 1990) and Interview.	Thirty ballet dancers and thirty artistic gymnasts.
2) 'What is the prevalence of maladaptive perfectionism dimensions and anxiety dimensions in elite ballet dancers and artistic gymnasts?'	Based on research findings by Krasnow et al. (1999), ballet dancers will score higher on Doubts About Actions whereas gymnasts will score higher on Parental Criticism. Dancers of a higher rank and gymnasts of a lower rank will be more likely to experience state anxiety, therefore having an increased chance of experiencing maladaptive dimensions of perfectionism. Also, as years of elite training and age increase ballet dancers will experience more state anxiety and artistic gymnasts will experience less state anxiety (Jastrjemskaia and Titov, 1999; Walker and Nordin-Bates, 2010).	FMPS, Cognitive State Anxiety Inventory (CSAI-2) (Martens, 1990) and Interview.	Thirty ballet dancers and thirty artistic gymnasts.
3) 'How do elite ballet dancers and artistic gymnasts perceive the effects of perfectionism and pre-performance anxiety in their performing careers?'	N / A	Interview	A random selection of two males and two females from each profession.

3.2 METHODOLOGY AND RESEARCH DESIGN

This research was based on a positivist (scientific) paradigm, which acknowledges human behavior as being measurable, causally derived, predictable and controllable (Schempp and Choi, 1994). This knowledge was formalized and / or quantified where

relationships between measurable variables exist (e.g. maladaptive dimensions of perfectionism promoting the experience of state anxiety). The paradigm was based on a realist and critical realist ontology and relied on the quantitative method of questionnaire to provide a reliable scientific report that involved counts and measures (Gorard and Taylor, 2004). This choice was appropriate for quantitatively exploring research questions one and two with use of questionnaires that specifically measured perfectionism and anxiety prior to performance / competition. Perfectionism and pre-performance anxiety were numerically tested and measured to improve knowledge and understanding of the recorded dimensions of perfectionism and anxiety in ballet dancers and artistic gymnasts.

In order to facilitate the research process, a mixed-method approach was adopted to assess research questions one and two. Research question three, which was addressed through an interpretive technique, provided greater depth to quantitative data (Gorard and Taylor, 2004). Benefits of utilizing a numerical and interpretive presentation of results included: a minimized risk of making incorrect conclusions; an enhanced interpretability of analyzed data; a more integrated picture of the investigated phenomena; an increased attention to the importance of different factors that consisted of the wider picture of perfectionism and pre-performance anxiety; and an allowance for the process of triangulation, which was an especially important issue when qualitative data was analyzed because the trustworthiness of results could occasionally be questionable or biased (Robson, 1993).

The research design was a case study. The study was constructed as a comparative research that was a non-experimental, relational fixed design, which involved two groups that were focused on establishing similarities and differences between themselves. Hantrais (2009) noted the benefits of combining comparative research and method, which included: the display of empirical grounds for theory; identification; explanation and interpretation of laws relative to the phenomena; presentation of data that is supportive or unsupportive of relationships between variables which enable predictions and explanations to be made; and validation from the comparison of units of analysis.

3.3 MEASURES

3.3.I Frost Multidimensional Perfectionism Scale

The Frost Multidimensional Perfectionism Scale (FMPS) (Frost et al., 1990) was utilized to measure levels of perfectionism. It investigated ‘the intrapersonal nature of perfectionism based on Hamachek’s construct of perfectionism’ (Schuler, 1999 p.10). The FMPS was chosen for this study because of the measure’s previous successful investigations of perfectionism in classical ballet, modern dance, and sport (Frost and Henderson, 1991; Hall et al., 1998; Krasnow et al., 1999; Koivula et al., 2002; Stoeber et al., 2007; Nordin-Bates et al., 2011).

The FMPS consisted of 29 items using a 5-point Likert scale ranging from 1 (*Strongly Agree*) = more perfectionism / lower scores, to 5 (*Strongly Disagree*) = less perfectionism / higher scores. Participants were instructed to circle the number that best corresponded with their agreement of each statement. Item scores were averaged for each dimension. The five dimensions of perfectionism, with example items, are: Concern Over Mistakes (COM) ('I should be upset if I make a mistake'); Doubts About Actions (DAA) ('It takes me a long time to decide what is "right"'); Parental Expectations (PE) ('My parents set very high standards for me'); Parental Criticism (PC) ('My parents never tried to understand my mistakes'); and Personal Standards (PS) ('I have extremely high goals') (Hamachek, 1978; Burns, 1980; Frost et al., 1990). COM had nine items, PS had seven items, PE had five items, PC had four items, and DAA had four items. This measure was utilized to directly investigate research question number one where adaptive and maladaptive dimensions were identified for ballet dancers and artistic gymnasts, and research question two, where maladaptive dimensions of perfectionism were recorded and compared between the sampled groups.

Initial reliability tests of this measure were conducted by Frost et al. (1990) who concluded that the FMPS had adequate to excellent internal consistency with alphas that ranged from 0.77 to 0.93 for the dimensions. There was also good concurrent validity significantly correlating with three other perfectionism scales, the Burns Perfectionism Scale (Burns, 1980), the Eating Disorders Inventory (Garner et al. 1983), and the Irrational Beliefs Test (Jones, 1968). Overall, the FMPS and its five

dimensions had good construct validity that correlated with measures of psychopathology, compulsivity, and procrastination (Fischer and Corcoran, 2007).

3.3.II Cognitive State Anxiety Inventory-2

The Cognitive State Anxiety Inventory-2 (CSAI-2) (Martens et al., 1990) was utilized to measure levels of pre-performance anxiety. The CSAI-2 has been successfully utilized to examine pre-performance anxiety in dance (e.g., Nordin-Bates et al., 2011) and sport (e.g., Frost and Henderson, 1991; Hall et al., 1998; Koivula et al., 2002; Stoeber et al., 2007).

The CSAI-2 is an 18-item self-report, measured on a four-point Likert scale from 1 (*Not at all*) = lower levels of anxiety to 4 (*Very much so*) = higher levels of anxiety. Participants were instructed to circle the appropriate number of each statement to indicate how they would feel prior to performance or competition. The two dimensions of state anxiety (cognitive A-state and somatic A-state) consisted of nine items each. 'I have self-doubts' was one item of cognitive A-state and 'I feel nervous' was one item of somatic A-state. Initial scoring of the CSAI-2 was achieved by totalling scores of the nine items assigned to each dimension, which ranged from a low score of 9 to a high score of 36. The Statistical Package for the Social Sciences was utilized to analyze data collected with the FMPS and the CSAI-2.

Martens and colleagues initially conducted reliability tests for the CSAI-2 in 1990. It was recorded that the measure had an alpha of 0.90. Reliability tests also showed a high degree of internal consistency for each subscale with alpha coefficients ranging from 0.79 to 0.90. Cronbach's alpha coefficients were 0.87 for cognitive and somatic A-states across eleven samples (Jones and Hanton, 1996). The CSAI-2 was congruent with eight selected A-state and A-trait (trait anxiety) inventories including Sport Competition Anxiety Test (Martens, 1977), Trait Anxiety Inventory (Spielberger et al., 1970), Achievement Anxiety Test (Alpert and Haber, 1960), Internal-External Control Scale (Rotter, 1966), Worry-Emotionality Inventory (Morris et al., 1981), Cognitive-Somatic Anxiety Questionnaire (Shwartz et al., 1978), State Anxiety Inventory (Spielberger et al., 1970), and the Affect Adjective Checklist (Zuckerman, 1960). Concurrent validity verified coefficients of A-trait and A-state scales to be highly congruent with relationships amongst CSAI-2 subscales and scales of related constructs (Martens et al., 1990).

3.3.III Interview

Interviews were aimed at investigating research questions one, two, and three by focusing on individual experiences, perspectives, and interpretations of perfectionism and pre-performance anxiety in the careers of ballet dancers and gymnasts.

Questionnaires could not have sufficiently addressed research question three because investigations required the process of gathering information from participants that could not be measured numerically. This information was better investigated through

semi-structured questions, which promoted conversation, allowed greater freedom to alter the wording of questions to suit the career of the ballet dancer and artistic gymnast, and also permitted the flexibility of time spent on each question (Robson, 1993). These interview questions were formulated prior to interviews and provided in depth personal accounts to questions regarding the dimensions of perfectionism and A-state in the performing careers of dancers and gymnasts. This qualitative approach of interview was a situated activity where ballet and gymnastics were investigated and represented through interpretive practices of conversation and recording using a dictaphone, to better interpret and understand the research area (Fontana and Frey, 2005). Participants were randomly selected for this section to understand their reactions concerning the topic of perfectionism and pre-performance anxiety in their careers. This selection method provided an unbiased view of the population that was investigated. Certain participants were not available for interviews, which meant that inclusion depended on participant availability. Interviews were either conducted in person, over the telephone, by audio-visual or by email.

Interview questions were relevant to perfectionism themes including, the setting of high performance standards (PS), failures in pursuing performance goals (COM), the role of parents in their child's career (PC, PE), and confidence while performing (DAA). Questions also investigated state anxiety themes including, pre-performance anxiety experiences (cognitive and somatic), promoters, symptoms, and coping methods of cognitive and somatic anxiety, and pre-performance anxiety experiences in relation to performance quality. For example, question number four from the 'Interview Schedule' (see Appendix B) inquired, '*How do you feel about failures in*

pursuing your goals?' This question addressed the subject of goal setting and personal reactions towards failure and was specifically linked to the maladaptive perfectionism dimension COM. Once the interviewed participant replied to this question, the FMPS scores of COM were checked in order to discover whether interviews substantiated or contradicted quantitative results. Interview questions included scripted probes prepared prior to the interview and were utilized to expand on questions that were either particularly important or in cases where the participant struggled to find a response to questions. Depending on the participant, probes were or were not needed. Interviewees were encouraged to honestly express their views, be specific with responses and draw only upon personal experience.

Analysis of interviews was consistent with the positivist perspective and was subject to directed content analysis. This process, as explained by Hsieh and Shannon (2005), was structured and used existing theory concerning perfectionism and anxiety to create categories and sub-categories. Categories were initially developed as Adaptive Perfectionism, Maladaptive Perfectionism and Pre-Performance Anxiety. Specific characteristics relating to each category were bullet pointed under their relative headings as sub-categories. Portions of sentences or specific phrases from interview responses were assigned to the characteristics given for adaptive and maladaptive perfectionism, and pre-performance anxiety. For purposes of clarity and flow of ideas, more categories were created which totalled to seven main categories that included subcategories of important existing characteristics of adaptive and maladaptive perfectionism and pre-performance anxiety as described by Hall et al. (1998) and Gotwals et al. (2003) (see Appendices G and H). Participant codes that were assigned

to questionnaires were also assigned to transcribed interviews and saved on a password secure computer. The participant code and line number of the quote was used for purposes of reference to interview material.

Conducting pilot interviews prior to this research enhanced interview reliability. Questions were carefully formulated and it was made sure that they were clearly understood by interviewees. Validity of interview results was confirmed because questions were designed to explore dimensions of perfectionism and pre-performance anxiety, to investigate perceptions of perfectionism and anxiety, and to understand the dancer and gymnast's personal meaning of anxiety. To increase interview validity, the possibility of bias was reduced by not forcing attitudes or opinions when the interviewee was responding, and by clearing any misunderstandings to questions that were asked.

3.4 PARTICIPANTS

3.4.I Number

Thirty ballet dancers ($M_{male} = 15$, $F_{female} = 15$) were randomly sampled prior to performance when levels of pre-performance anxiety were at their peak. Access to dancers was immediate as I am a professional ballet dancer with the Birmingham Royal Ballet (BRB). Questionnaires were completed on average 1.1 hours (66 minutes with a range of 145 minutes) prior to performance. Participants were 18 – 28

years of age. The company's ranks were as follows (lowest to highest): Artist, First Artist, Soloist, First Soloist, and Principal. Participant numbers were comprised of 18 Artists, 6 First Artists, 1 Soloist, 3 First Soloists, and 2 Principals. For analysis purposes, these levels were grouped into Lower Rank = 1 (Artist, First Artist) and Higher Rank = 2 (Soloist, First Soloist, Principal). Dancers were international and British citizens. The mean age was 24 and the mean years of elite training was 10.7 years.

Thirty artistic gymnasts were randomly sampled prior to competition. Access to elite level gymnasts prior to competition was more complex than for dancers because of being an outsider to the sport. A total of 16 ($M_{male} = 9$, $F_{female} = 7$) British artistic gymnasts involved in competitions in Stoke, U.K (The Men's British Artistic Gymnastics Championships) and Leeds, U.K (The Women's British Artistic Gymnastics Championships) were sampled. The target sample size was not achieved for British gymnasts because of the voluntary nature of the task, the importance of pre-Olympic year competitions, and the fact that a small group of elite gymnasts were ordinarily used in research. The inclusion of international subjects from Delta, British Columbia, Canada was needed to attain the sample target. A total of 14 ($M_{male} = 6$, $F_{female} = 8$) artistic gymnasts involved in the British Columbia, Men's and Women's Artistic Gymnastics Competition (Delta, British Columbia, Canada) were sampled. Average questionnaire completion time prior to competition was one hour (60 minutes) with a range of 60 minutes. Participants were 16 – 27 years of age including Lower Rank = 1 (National) and Higher Rank = 2 (International). The mean age was 19 and the mean years of elite training was 8.6 years.

3.4.II Selection, Access and Process

A pilot of this study was conducted with a small sample from Birmingham Royal Ballet and Delta Gymnastics. The successful process of accessing ballet dancers and artistic gymnasts for the pilot research was utilized in this study. After reviewing results, necessary modifications were made to the demographics section of the questionnaire and to specific interview questions. Alterations promoted more precise answers to demographics questions and avoided one-word answers in interviews.

For clarity of comparisons made in this research, a required age range of 16 – 28 was included for dancers and gymnasts. This age range was generally recognized as the period in which most dancers and gymnasts reached the highest / elite level in their profession (Clearman, 2005; Burke, 2007). All participants were required to be training five to six days a week. Dancers needed to have a performing contract with a professional ballet company, and gymnasts were required to be in training with a selected national squad for gymnastics competitions (National / International).

In order to gain access to dancers and gymnasts, directors of institutions were contacted in various ways. Direct access was granted to participants of BRB because of being a professional ballet dancer with this company. Consent forms and questionnaires were distributed and obtained from participants with a return rate of 100%. The Olympic Performance Director at British Gymnastics (BG) was contacted by a letter which included the 'Dancer and Gymnast Self-Evaluation Questionnaire' (see Appendix A), the 'Interview Schedule' (see Appendix B), the 'Research Opportunity' (see Appendix C) to inform artistic gymnasts about the study, the 'Participant Information / Consent' (see Appendix D), and the 'Parental Consent' (see Appendix E). A meeting was arranged to discuss the possible involvement of male and female artistic gymnasts in the research. The director emailed possible participants who later replied to confirm involvement in the research. 'Participant Information / Consent' and 'Parental Consent' forms were submitted with questionnaires prior to the Men's and Women's British Artistic Gymnastics Championships. Questionnaires, once completed, were either collected, received in the mail, or by email. Access to the director of Delta Gymnastics (DG), British Columbia, Canada was simple because of previous contact concerning the pilot study. The director was emailed the same forms that were sent to BG regarding access to participants for the study. The head DG coach distributed questionnaires, and appropriate consent forms prior to competition. The coach collected them from participants and they were returned by mail. The directors of BG and DG confirmed that a Criminal Records Bureau check was not needed for the required age group, but 'Parental Consent' forms were required for participants under 18 years of age. All directors and participants were informed of the research benefits, which included the addition of knowledge rarely accessible to researchers concerning the careers of elite

ballet dancers and artistic gymnasts, the understanding of relationships between perfectionism and state anxiety, and discovering coping methods applied to pre-performance anxiety in these elite performers. The approximate completion time of questionnaires for all institutions was 10 minutes and no troubling issues were raised.

Dancers from BRB were contacted in person to confirm their involvement in the qualitative part of the research. Interviews were conducted in a quiet room at the institution. Gymnasts from BG and DG were contacted via email concerning their selection for interviews. Since the chosen gymnasts were not based at BG and were on a very busy training and competition schedule, interviews were conducted by speakerphone or by audio-visual means and were recorded. Interviews with Canadian participants were conducted by email. The approximate duration of interviews with dancers and gymnasts was 15-20 minutes.

Several ethical issues were outlined in the forms that were sent to the institutions and distributed to participants and parents. It was made clear that subjects had the right to withdraw from the research at anytime without giving reason, and that participants would be alerted if harm were to be caused as a result of specific topics covered by the questionnaire or the follow-up interview. If any upsetting topics were raised, the questionnaire or interview would have been terminated and participants would have been advised to seek support from the sports psychologist based at their institution. All subjects of the study were also encouraged to ask for definitions of unfamiliar terminology used in this study.

In addition, some participants may not have felt it necessary for their directors to know of their involvement in the study, which is why it was made sure that questionnaires were collected in person from BRB and BG, by a tutor from BG or from the coach at DG. Participant codes were assigned to questionnaires with males being allocated even numbers and females being allocated odd numbers. For instance, the first male dancer to complete the questionnaire was coded BD2 (BD = Ballet Dancer), and the first male artistic gymnast was coded AG2 (AG = Artistic Gymnast). Although I was not a subject of the study, I was part of its context, and as such, the quantitative and qualitative sections of this research were conducted with respect for the participant's age, sex, race, religion, lifestyle and career. Participant data was treated as being highly confidential. Participant anonymity was not appropriate for this study because names and contact information of subjects were needed to complete follow-up interviews, and if needed, to clarify questionnaire and interview responses. Participants were assured that with the use of participant codes, data was confidential during and after the research was completed. Whilst in the working environment of dance, discussions were not held and will not be held with anyone regarding personal information gained during data collection. Apart from the person conducting this study and participants, access to data, including names of the participants, is restricted to those senior officials supervising the study. Participant paper documents and access / contact information were kept in their original form, and recorded information (e.g. on the dictaphone) was copied onto a hard drive. Questionnaires, appropriate consent forms, the hard drive of recorded interviews and any other material that included participant data or contact information will not be reused but stored in a locked filing cabinet for ten years as indicated by the University of Birmingham Code of Practice for Research 2010 - 2011.

3.5 SUMMARY

In conclusion, this section described the mixed method nature of this comparative case study, gave background information and described the use of the FMPS and the CSAI-2 in this research, and outlined the process of selecting, accessing, and collecting questionnaire and interview material from participants. This process was successful with minor difficulties in accessing British artistic gymnasts for questionnaires because of their busy training and competition schedule. As with all data, analysis and interpretation are required. The next chapter presents the findings from the analysis of quantitative and qualitative data where patterns of triangulation can be identified.

4. PRESENTATION AND ANALYSIS OF RESULTS

4.1 ANALYSIS OF QUANTITATIVE DATA

The results of the statistical analysis of questionnaire data is presented followed by collated narrative data obtained from interviews. Comparisons and contrasts in quantitative data structured the selection and discussion of relationships revealed by the questionnaire analysis and the interview material.

4.1.I Instrument Reliability

Reliability analyses were conducted in order to determine the internal consistency of subscales of the Frost Multidimensional Perfectionism Scale and the Cognitive State Anxiety Inventory-2. The standard method of testing the internal consistency of test

items is by computing the Cronbach's alpha. A Cronbach's alpha of 0.70 or higher is generally acceptable (Andrew et al., 2011). Results (see Table 1.) demonstrated that perfectionism and state anxiety dimensions had a reasonable Cronbach's alpha above the acceptable level of 0.70, except for perfectionism dimensions Doubts About Actions (DAA) and Parental Criticism (PC). DAA, with an alpha coefficient of 0.67, could not be improved and was not altered. If items were deleted for this dimension, the alpha would still not have been 0.70 or above. Therefore, this dimension should be used with caution. PC did not have an adequate level of consistency as the Cronbach's alpha of this 4-item dimension was found to be 0.62. Upon removal of the item '*As a child, I was punished for doing things less than perfectly*' from PC (question number 2 of the FMPS), the alpha coefficient was improved to 0.70. All subsequent analyses that involved perfectionism dimensions utilized '*PC Version 2*', which consisted of three items.

Both state anxiety dimensions demonstrate acceptable levels of internal consistency with alpha coefficients of 0.82 for cognitive anxiety and 0.90 for somatic anxiety (see Table 1.).

Table 1. Instrument Reliability

Instrument	Cronbach's alpha
Frost Multidimensional Perfectionism Scale (FMPS)	
Personal Standards (adaptive perfectionism)	0.78
Parental Expectations (adaptive perfectionism)	0.84
Concern Over Mistakes (maladaptive perfectionism)	0.88

perfectionism)	
Doubts About Actions (maladaptive perfectionism)	0.67
Parental Criticism (maladaptive perfectionism)	0.62
Parental Criticism Version 2 (maladaptive perfectionism)	0.70
Cognitive State Anxiety Inventory-2 (CSAI-2)	
Cognitive	0.82
Somatic	0.90

4.1.II Correlation between the Five Dimensions of Perfectionism and the Two Dimensions of State Anxiety

Pearson product-moment correlation coefficients, for dancers and gymnasts combined, were computed to assess the relationship between the five dimensions of perfectionism and the two dimensions of state anxiety in Table 2. Adaptive dimension Parental Expectations (PE) positively correlated with adaptive dimension Personal Standards (PS) ($r = 0.504$). They both investigate whether an individual acquires positive characteristics of perfectionism. Maladaptive dimension Concern Over Mistakes (COM) positively correlated with both adaptive dimensions PS ($r = 0.429$) and PE ($r = 0.542$). The research results revealed generally that as concern about PS and PE increased, COM also increased. Maladaptive dimension DAA positively correlated with adaptive dimensions PS and PE, and more significantly with maladaptive dimension COM. PC Version 2 positively correlated with adaptive dimensions PS and PE, and maladaptive dimensions COM and DAA. Correlations with PE and COM were more significant.

Cognitive and somatic anxieties negatively correlated with adaptive dimensions PS ($r = -0.240$ and $r = -0.111$ respectively) and PE, and maladaptive dimensions COM, DAA, and PC Version 2. Correlations with COM, DAA, and PC Version 2 were more significant. The perfectionism and anxiety scales measured different characteristics of perfectionism and anxiety and it was generally found that as anxiety increases there is the tendency to apply anxiety coping techniques which have the effect of controlling the dimensions of perfectionism. There was a strong correlation between cognitive and somatic anxieties as the scale measured aspects of pre-performance anxiety.

Table 2. Pearson Correlation: Dimensions of Perfectionism and State Anxiety

Dimension	1.	2.	3.	4.	5.	6.	7.
1. Personal Standards (Adaptive Perfectionism)	1						
2. Parental Expectations (Adaptive Perfectionism)	0.504**	1					
3. Concern Over Mistakes (Maladaptive Perfectionism)	0.429**	0.542**	1				
4. Doubts About Actions (Maladaptive Perfectionism)	0.187	0.149	0.527**	1			
5. Parental Criticism Version 2 (Maladaptive Perfectionism)	0.167	0.525**	0.528**	0.167	1		
6. Cognitive	-0.240	-0.205	-0.458**	-0.386**	-0.437**	1	
7. Somatic	-0.111	-0.181	-0.325*	-0.322*	-0.518**	0.811**	1

** . Correlation is significant at the 0.01 level (2-tailed).

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

4.1.III Research Questions One and Two: A Comparison of Perfectionism

Dimensional Scores and State Anxiety Dimensional Scores between Elite Ballet

Dancers and Artistic Gymnasts

Table 3 provides the descriptive statistics for the sub-scales of perfectionism dimensional scores and state anxiety dimensional scores for elite ballet dancers and artistic gymnasts. Mean values were calculated by dividing each dimension by the number of items it had. This allowed for an examination across dimensions rather than an examination of the dimension as a whole. Taking each of the perfectionism dimensions in turn, Table 3 shows the following:

- 1) Ballet dancers had a lower mean value (indicating higher levels of perfectionism), compared with artistic gymnasts, on maladaptive dimension COM: (Dancers $M = 3.60$, $SD = 0.80$; Gymnasts $M = 3.83$, $SD = 0.82$).
- 2) Ballet dancers had a lower mean value on maladaptive dimension DAA: (Dancers $M = 3.29$, $SD = 0.77$; Gymnasts $M = 3.62$, $SD = 0.81$).
- 3) Ballet dancers had a lower mean value on adaptive dimension PE: (Dancers $M = 3.63$, $SD = 0.95$; Gymnasts $M = 3.75$, $SD = 0.90$).
- 4) Ballet dancers had a higher mean value on PC Version 2: (Dancers $M = 4.53$, $SD = 0.68$; Gymnasts $M = 4.27$, $SD = 0.77$).
- 5) PS was the lowest scored dimension (highest level of perfectionism) in both groups (Dancers $M = 2.53$, $SD = 0.61$; Gymnasts $M = 2.50$, $SD = 0.75$).

The 't-test' is an inferential statistical test, which can be used to establish whether two sample means are significantly different (e.g. how confident we are in observed differences being due to chance). A series of t-tests were carried out, which compared dancers to gymnasts for the dimensions of perfectionism and anxiety in Table 4. It

was noted that the difference between all dimensions of perfectionism were not significant, i.e. the p value was greater than 0.05. For example, there was no significant difference in adaptive dimension PE between dancers and gymnasts, as the values for t and p were the same, while the values for df differed by 0.172.

Table 3 shows the following for the anxiety dimensions:

- 1) A higher mean value (indicating higher levels of anxiety) for gymnasts than dancers on somatic anxiety: (Gymnasts $M = 2.28$, $SD = 0.70$; Dancers $M = 1.86$, $SD = 0.69$).
- 2) A higher mean value for gymnasts than dancers on cognitive anxiety: (Gymnasts $M = 2.39$, $SD = 0.67$; Dancers $M = 2.12$, $SD = 0.53$).

As shown in Table 4, the difference in somatic anxiety between ballet dancers and gymnasts was significant. The difference in cognitive anxiety between dancers and gymnasts was not significant.

Table 3. Descriptive Statistics

Career		COM – Maladaptive Perfectionism	PS – Adaptive Perfectionism	PE – Adaptive Perfectionism	PC – Maladaptive Perfectionism (Version 2 - removing PC1 following Cronbach's Alpha)	DAA – Maladaptive Perfectionism	Cognitive - Anxiety Dimension	Somatic - Anxiety Dimension
Dancer	Mean	3.5963	2.5286	3.6267	4.5333	3.2917	2.1222	1.863
	N	30	30	30	30	30	30	30
	Std. Deviation	0.79723	0.61089	0.94939	0.6758	0.77148	0.53435	0.69339
	Range	3.33	2.29	3.8	3	3	2.22	2.89
	Minimum	1.56	1.43	1.2	2	2	1.33	1
	Maximum	4.89	3.71	5	5	5	3.56	3.89
Gymnast	Mean	3.8296	2.5048	3.7467	4.2667	3.6167	2.3889	2.2778
	N	30	30	30	30	30	30	30
	Std. Deviation	0.81844	0.74725	0.89894	0.77013	0.81403	0.66651	0.70015
	Range	2.89	3.29	3.6	3	4	2.56	2.67
	Minimum	2	1.14	1.4	2	1	1.22	1
	Maximum	4.89	4.43	5	5	5	3.78	3.67
Total	Mean	3.713	2.5167	3.6867	4.4	3.4542	2.2556	2.0704
	N	60	60	60	60	60	60	60
	Std. Deviation	0.80962	0.67678	0.91863	0.73081	0.80319	0.61382	0.72181
	Range	3.33	3.29	3.8	3	4	2.56	2.89
	Minimum	1.56	1.14	1.2	2	1	1.22	1
	Maximum	4.89	4.43	5	5	5	3.78	3.89

**Table 4. Independent Samples Test Comparing Ballet Dancers and Artistic Gymnasts:
Perfectionism Dimensions and State Anxiety Dimensions**

Dimension	t	df	Sig. (2 tailed)
COM - Maladaptive Perfectionism	-1.119	58	0.268
PS - Adaptive Perfectionism	0.135	58	0.893
PE - Adaptive Perfectionism	-0.503	58	0.617
PC - Maladaptive Perfectionism (Version 2 - removing PC1 following Cronbach's Alpha)	1.426	58	0.159
DAA - Maladaptive Perfectionism	-1.587	58	0.118
Cognitive - Anxiety Dimension	-1.71	58	0.093
Somatic - Anxiety Dimension	-2.306	58	0.025

4.1.IV Research Question Two: Relationship between Rank / Level and Dimensional Scores of Perfectionism and State Anxiety

Statistics for the dimensional scores for perfectionism and state anxiety of higher and lower ranked elite ballet dancers and artistic gymnasts are given in Table 5. Results indicated that lower ranked dancers and gymnasts had higher levels of perfectionism (i.e. lower mean scores) on all dimensions of perfectionism than higher ranked dancers and gymnasts. Lower ranked dancers and gymnasts had higher levels of anxiety (i.e. higher mean values) than higher ranked dancers and gymnasts. For example, maladaptive perfectionism dimension COM: Lower ranked dancers and

gymnasts $M = 3.46$, $SD = 0.71$; Higher ranked dancers and gymnasts $M = 4.06$, $SD = 0.82$.

The statistical significance of difference in mean values from t-tests are shown in Table 6. Significant differences were found between higher and lower ranked dancers and gymnasts for DAA and COM.

Table 5. Descriptive Statistics: Relationship between Rank / Level and Dimensional Scores of Perfectionism and State Anxiety

Rank (based upon Level/		COM - Maladaptive Perfectionism	PS - Adaptive Perfectionism	PE - Adaptive Perfectionism	PC - Maladaptive Perfectionism	DAA - Maladaptive Perfectionism	Cognitive - Anxiety Dimension	Somatic - Anxiety Dimension
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Position)					(Version 2 - removing PC1 following Cronbach's Alpha)			
Lower rank - Ballet Dancers and Artistic Gymnasts	Mean	3.4635	2.4857	3.56	4.3238	3.1643	2.3143	2.1143
	N	35	35	35	35	35	35	35
	Std. Deviation	0.71425	0.62865	0.87689	0.65423	0.7474	0.60708	0.73233
	Range	2.78	2.86	3.2	2	3.75	2.44	2.67
	Minimum	2	1.14	1.8	3	1	1.33	1
	Maximum	4.78	4	5	5	4.75	3.78	3.67
Higher rank- Ballet Dancers and Artistic Gymnasts	Mean	4.0622	2.56	3.864	4.5067	3.86	2.1733	2.0089
	N	25	25	25	25	25	25	25
	Std. Deviation	0.81906	0.75019	0.96388	0.82843	0.7074	0.62615	0.71716
	Range	3.33	3	3.8	3	2.5	2.33	2.89
	Minimum	1.56	1.43	1.2	2	2.5	1.22	1
	Maximum	4.89	4.43	5	5	5	3.56	3.89
Total - Ballet Dancers and Artistic Gymnasts	Mean	3.713	2.5167	3.6867	4.4	3.4542	2.2556	2.0704
	N	60	60	60	60	60	60	60
	Std. Deviation	0.80962	0.67678	0.91863	0.73081	0.80319	0.61382	0.72181
	Range	3.33	3.29	3.8	3	4	2.56	2.89
	Minimum	1.56	1.14	1.2	2	1	1.22	1
	Maximum	4.89	4.43	5	5	5	3.78	3.89

Table 6. Independent Samples Test Comparing Lower and Higher Ranked Ballet Dancers and Artistic Gymnasts: Perfectionism Dimensions and State Anxiety Dimensions

Dimension	t	df	Sig. (2 tailed)
COM - Maladaptive Perfectionism	-3.011	58	0.004

PS - Adaptive Perfectionism	-0.416	58	0.679
PE - Adaptive Perfectionism	-1.27	58	0.209
PC - Maladaptive Perfectionism (Version 2)	-0.955	58	0.344
DAA - Maladaptive Perfectionism	-3.634	58	0.001
Cognitive - Anxiety Dimension	0.875	58	0.385
Somatic - Anxiety Dimension	0.554	58	0.581

4.1.V Research Question Two: Correlation between State Anxiety and Age, and State Anxiety and Years of Elite Training

Table 7 presents the results of a Pearson product-moment correlation, for dancers and gymnasts combined, between the state anxiety sub-scales, age, and years of elite training. Somatic anxiety had a significant positive correlation with cognitive anxiety. Age (years) was negatively correlated with cognitive and somatic anxieties. Years of elite training was negatively correlated with cognitive and somatic anxieties. Years of elite training had a significant positive correlation with age (years).

Table 7. Pearson Correlation: Years of Elite Training, Age, Cognitive Anxiety, and Somatic Anxiety

Variable	1.	2.	3.	4.
1. Cognitive Anxiety	1			

2. Somatic Anxiety	0.811**	1		
3. Age (Years)	-0.162	-0.185	1	
4. Years of Elite Training	-0.191	-0.089	0.629**	1

** Correlation is significant at the 0.01 level (2-tailed)

4.1.VI Research Question Two: Interaction between Career Rank (Higher and Lower Ranked) and Career (Ballet Dancer and Artistic Gymnast)

Table 8 presents statistics for the performer type and rank for the perfectionism and state anxiety dimensions. This table indicates that lower ranked dancers and gymnasts had lower mean scores (indicating higher levels of perfectionism) than higher ranked dancers and gymnasts, on maladaptive dimensions COM and DAA, and on adaptive dimension PE. Also, higher ranked dancers and lower ranked gymnasts scored lower mean values than lower ranked dancers and higher ranked gymnasts on adaptive dimension PS and, following the Cronbach's alpha, on maladaptive dimension PC Version 2.

Table 8 also shows that ballet dancers of a higher rank and artistic gymnasts of a lower rank experienced more state anxiety (cognitive and somatic) than dancers of a lower rank and gymnasts of a higher rank.

Table 8. Comparing the Relationship Between Rank / Level and the Dimensions of Perfectionism and Anxiety in Ballet Dancers and Artistic Gymnasts

Career	Rank – based upon Level/ Position		COM – Maladaptive Perfectionism	PS – Adaptive Perfectionism	PE – Adaptive Perfectionism	PC Version 2 – Maladaptive Perfectionism (Removing PC1 following Cronbach's Alpha)	DAA – Maladaptive Perfectionism	Cognitive - Anxiety Dimension	Somatic - Anxiety Dimension
Ballet Dancers	Lower rank	Mean	3.5278	2.5774	3.6	4.5694	3.1042	2.1019	1.8287
		N	24	24	24	24	24	24	24
		Std. Deviation	0.68591	0.52189	0.86074	0.5058	0.612	0.47584	0.60236
	Higher rank	Mean	3.8704	2.3333	3.7333	4.3889	4.0417	2.2037	2
		N	6	6	6	6	6	6	6
		Std. Deviation	1.18721	0.92435	1.34263	1.20031	0.94097	0.77751	1.04468
	Total	Mean	3.5963	2.5286	3.6267	4.5333	3.2917	2.1222	1.863
		N	30	30	30	30	30	30	30
		Std. Deviation	0.79723	0.61089	0.94939	0.6758	0.77148	0.53435	0.69339
Artistic Gymnasts	Lower rank	Mean	3.3232	2.2857	3.4727	3.7879	3.2955	2.7778	2.7374
		N	11	11	11	11	11	11	11
		Std. Deviation	0.78796	0.80812	0.94772	0.63723	1.0051	0.62262	0.60507
	Higher rank	Mean	4.1228	2.6316	3.9053	4.5439	3.8026	2.1637	2.0117
		N	19	19	19	19	19	19	19
		Std. Deviation	0.69773	0.70037	0.85471	0.71328	0.63781	0.59533	0.61852
	Total	Mean	3.8296	2.5048	3.7467	4.2667	3.6167	2.3889	2.2778
		N	30	30	30	30	30	30	30
		Std. Deviation	0.81844	0.74725	0.89894	0.77013	0.81403	0.66651	0.70015

4.2 ANALYSIS OF QUALITATIVE DATA

Transcripts of two interviewed ballet dancers and two interviewed artistic gymnasts are in Appendix F. Categories and sub-categories that were created from scanning interviews for themes are in Appendix G, and specific participant quotes that relate to

sub-categories are in Appendix H. Gotwals and colleagues (2003) and Hall et al. (1998) conceptualized the adaptive and maladaptive characteristics of a perfectionist. These are addressed in Appendix G as follows: Category A – Adaptive Perfectionist in Performance (APP); Category B – Maladaptive Perfectionist in Performance (MPP); and Category D – Maladaptive Dimensions of Perfectionism (MDP), with the relevant terms for adaptive and maladaptive dimensions of perfectionism from the Frost Multidimensional Perfectionism Scale. Other categories are Category C – Performance Level (PL), Category E – Pre-Performance Anxiety Symptoms (PPAS), Category F – Pre-performance Anxiety and Performance (PPAP), and Category G – Pre-Performance Anxiety and Maturity (PPAM). The comparison is based on the results derived from use of the models in the relevant categories. Appendices G and H are integral parts of the work outlined below.

4.2.I A Comparison of the Perfectionism Dimensions in Elite Ballet Dancers and Artistic Gymnasts

All interviewed gymnasts emphasized the importance of maintaining a flexible approach towards the evaluation of standards. They appear to be attentive to setting standards that are realistic and achievable, and to review for reasons for failure in

order to address results that are disappointing. This was found to be the case with dancers. One gymnast mentioned *'I always set myself quite high standards but I always make sure that they are achievable.'* Artistic Gymnast 1 (AG1 / Line 3).

Another gymnast mentioned:

I would like to think that I respond positively. At our facility, we strive to create an atmosphere where mistakes are totally acceptable, and feedback is always constructive. So I never feel the need to react negatively (AG2 / Line 32 – 34).

Only one dancer agreed to have a flexible evaluation of standards by saying *'I try not to be too negative because it (mistakes) puts a block on me and then I just won't get better.'* Ballet Dancer 5 (BD5 / Line 49). See Appendices G and H.

All interviewed dancers had an acceptance of limitations and expressed preparedness to deal with failure. BD7 Line 27 – 28 mentioned *'I expect a degree of failure but then to try, achieve again, and bounce back.'* Only two gymnasts commented on the acceptance of limitations. One of them stated that *'At our facility, we strive to create an atmosphere where mistakes are totally acceptable, and feedback is always constructive. So I never feel the need to react negatively'* (AG2 / Line 32 – 34).

Another gymnast commented *'Yes, (expect failure) but I learn from my failures and turn it into a positive.'* (AG26 / Line 15). Both gymnasts constructively used their

limitations as tools to improve future performance, which could be the result of education at an early age by their coaches about the importance of utilizing coping strategies, something which is generally absent among dancers.

Gymnasts replied in regard to satisfaction with imperfect performance, by having the realization that they tried their hardest if a performance was imperfect. One gymnast replied '*...if it's something that's relatively new or quite hard I think well at least I tried it and I do everything to improve.*' (AG1 / Line 31 - 32). Dancers made no comments that were complementary to this adaptive characteristic of a satisfaction with imperfect performance.

Participants related to the positive involvement of parents in their careers. In regard to parental expectations, participants made comments about their parents being supportive. BD5 Line 58 – 59 mentioned:

'They are definitely just support. They weren't dancers themselves so they never been pushy parents. They very much just enjoy what I do.'

AG2 / Line 38 – 41 mentioned '*My parents have been quite positively involved in my sports career...when I need positive involvement, my parents are always there.*' They appeared to be in agreement with this sub-category / dimension.

Maladaptive characteristics of perfectionists were also assessed. All interviewed dancers agreed to have high personal standards, which was not the case with the gymnasts interviewed. BD2 / Line 3 mentioned '*I think I set quite high standards.*' Of the two gymnasts who agreed to this characteristic, one mentioned '*I guess I set myself quite high standards.*' (AG13 / Line 4), implying a slight uncertainty in the response.

All interviewed participants were motivated by fears about implications of failure with complementary statements such as '*So far, every time I make a mistake in performance I come back stronger.*' (BD4 / Line 45), and '*So if I fell out on a particular move or something wasn't quite working I would always go back into the gym and work on that so that I can fix it and get better.*' (AG1 / Line 25 – 27). To some degree, making mistakes made these participants fearful of repeating the errors again, which in turn motivated them to perform at a higher standard every time.

Self-imposed standards and goals were highly supported by many statements from all interviewed dancers and gymnasts including '*Yes, so it's all internal goals that I set for myself and it's my own pride.*' (BD4 / Line 76) and '*You've worked all those hours and you want to perform to your best...*' (AG13 / Line 71 – 72).

Three dancers and three gymnasts replied in relation to the sub-category Threatening Performance Domain (TPD). One dancer commented '*It's always feeling the*

pressure. I always feel the pressure, whatever you do you still feel the pressure.'

(BD5 / Line 84 – 85) and a gymnast stated that a threatening performance domain was experienced as a result of pre-performance anxiety, *'The type of competition it is, how much pressure I've got on myself, what the competition is, and what it means to me (regarding what influences pre-performance anxiety).'* (AG13 / Line 81 – 83). Both groups appeared to experience pressure, stress, nervous reactions, and anxiety.

Three dancers interviewed experienced a loss of focus, which led to a loss of confidence, when mistakes were made in performance. For example, participant BD5 (Line 62 – 63) stated that *'A lot of the time on stage I will be halfway through a performance or a solo and be negative and it will instantly change my performance.'*

None of the gymnasts interviewed experienced a loss of focus in competition.

Maladaptive dimensions Concern Over Mistakes (COM) and Doubts About Actions (DAA) were made mention of by all interviewed dancers. Two gymnasts interviewed agreed to having experienced COM and three gymnasts interviewed agreed to having experienced DAA. This shows that the dimensions are less common among gymnasts when compared with dancers. A dancer who was overly concerned about her mistakes responded *'...but I feel like 'that's it, it's all over'. I dwell (on mistakes) far too much.'* (BD7 / Line 49). A gymnast who experienced COM mentioned *'...if it's something that I can do I get mad at myself and I'm like 'oh I shouldn't have made that mistake'* (AG1 / Line 30 – 31). In regard to dimension DAA, a dancer commented *'...if it's a role I haven't done before, even if I've successfully done it in*

the studio and haven't done it in performance, it's the thought that I'm not capable of doing it.' (BD4 / Line 72 - 74). A gymnast who experienced this maladaptive dimension noted *'I think that it comes a time in every athlete's career where they feel as if though they will never be quite good enough to compete at the next level...'* (AG2 / Line 45 – 46).

4.2.II A Comparison of State Anxiety Dimensions in Elite Ballet Dancers and Artistic Gymnasts

All interviewed participants confessed to having experienced cognitive symptoms of anxiety prior to performance and described their personal experiences of cognitive and somatic A-state. Gymnasts experienced negative mental images. One gymnast mentioned experiencing *'...some mental ones regarding what if this happens, or what if I fall...'* (AG2 / Line 63 - 64). Dancers experienced thoughts of uncertainty and doubt. One dancer stated that *'They (pre-performance anxiety symptoms) are more mental. Just start questioning things and wondering whether you are accurate.'* (BD2 / Line 65 – 66). A gymnast also commented on this symptom and stated *'...I get mental blocks and I feel like I can't do certain moves and it makes me scared of that one move.'* (AG1 / Line 59 – 60). In addition, a dancer noted that *'I think lack of sleep, a lack of concentration you know 'what are my objectives for this show, what have I got to think about' and you just keep on getting distracted by issues that are not important.'* (BD7 / Line 88 – 90). Therefore, both professions experienced mental distractions. Somatic symptoms were experienced in the form of nerves (dancers and

gymnasts) '*...nervousness, which could be seen as a mild form of anxiety. I believe slight nervousness is to be expected, not everyone is comfortable with performance*' (BD2 / Line 51 – 52), a tense / cold body (gymnast) '*When I get really bad pre-anxiety my lower back gets really tense, I feel like I can't do anything because my back just gets really sore*' (AG1 / Line 58 – 59), an ill feeling (dancer), and increased thirst (gymnast).

4.2.III Relationship Between Rank / Level and Dimensions of Perfectionism and State Anxiety

The rank of each interviewee was investigated to discover which characteristics of perfectionism and anxiety were supported. Three ballet dancers were of a higher rank and one was of a lower rank. Two artistic gymnasts were of a higher rank and two were of a lower rank. Higher and lower ranked dancers made mention of most of the adaptive characteristics of perfectionism. However, none indicated satisfaction with an imperfect performance and only one lower ranked dancer (BD5) replied in regard to having a flexible evaluation of performance and personal standards. Only one gymnast (AG2) of a higher rank revealed all characteristics of adaptive perfectionism, whereas the other gymnasts' responses were more varied concerning this category.

All interviewed participants made mention of maladaptive characteristics of perfectionism. The lower ranked dancer BD5 and the higher ranked dancers BD7 and

BD4 (except for Threatening Performance Domain), made comments in each sub-category regarding the characteristics of maladaptive perfectionism. However, higher ranked participant BD2 did not agree with all sub-categories, as he did not experience a loss of focus when performing. Responses from lower and higher ranked gymnasts were more varied, and none responded to having a loss of focus whilst competing. All dancers experienced maladaptive dimensions COM and DAA. Lower ranked AG26 did not experience COM. Higher ranked gymnast AG13 and AG2 and lower ranked AG26 experienced DAA.

The relationship between rank / level and experiences of state anxiety were also investigated in participant responses. Cognitive symptoms of anxiety were experienced by higher ranked dancers (BD2, BD4, BD7) and by higher and lower ranked gymnasts. Somatic symptoms of anxiety were experienced by higher ranked BD4 and lower ranked BD5, and by higher ranked AG13, and lower ranked AG1 and AG26. It was discovered that the only participant who made mention of the negative effect of anxiety on performance was a dancer of a higher rank (BD7). One higher ranked ballet dancer (BD5) and one lower ranked artistic gymnast (AG26) mentioned that anxiety would stay the same throughout their careers.

4.2.IV Relationship between State Anxiety and Age, and State Anxiety and Years of Elite Training

Ways in which pre-performance anxiety may change when ballet dancers and artistic gymnasts mature in their careers was investigated. The majority of gymnasts believed that they would be able to better manage their pre-performance anxiety as they matured, with one claiming that pre-performance anxiety would still exist caused by the pressure to prove their status, saying, *'I still get nervous, because the competitions mean more and I feel that I have a reputation to live up to.'* (AG26 / Line 50 – 51). Comments from dancers were mixed where three participants stated they would be able to control anxiety with maturity and one stated it would stay the same. No other specific comparisons could be made regarding the effect that age had on anxiety.

Relationships between anxiety and years of elite training were investigated in interview responses. Amongst the randomly selected interviewees, a comparison was made between the dancer and gymnast who had the most years of elite training. These two subjects were also the eldest amongst the interviewed participants. The dancer was the only participant to mention that anxiety would stay the same throughout the dancing career (*'I think (it) probably stayed the same (referring to pre-performance anxiety experiences) BD7 / Line 80.'*) This participant was also the only individual to admit that anxiety had debilitating effects on performance and mentioned *'I think (it) decreases (referring to performance)'* (BD7 / Line 93). However, the interviewed gymnast with the most years of elite training thought that pre-performance anxiety was very beneficial to performance and was worried if anxiety was not experienced prior to a competition. This gymnast also expected pre-performance anxiety experiences to decrease with maturity. Interviews encouraged thorough conversations

that investigated topics of interest and made it possible to further explore the relationship between anxiety and years of elite training and derive possible answers.

4.2.V Perceptions of Perfectionism and Pre-performance Anxiety, and Coping Strategies Applied to Manage Pre-Performance Anxiety in the Performing Careers of Elite Ballet Dancers and Artistic Gymnasts

Perceptions of adaptive perfectionism are outlined and recorded in Appendices G and H, Category A. Only one dancer related to a flexible evaluation of performance and all participants were in agreement to acceptance of limitations and parental expectations. Dancers were not satisfied when an imperfect performance was given. It was concluded that being highly unsatisfied with an imperfect performance leaned more towards an important trait of a maladaptive perfectionist, which substantiates the fact that dancers scored two out of three maladaptive dimensions. Comments from gymnasts regarding adaptive perfectionism inclined more to the ability of accepting failure or imperfections in performance and using it constructively and positively.

One male gymnast commented that mistakes in competition were perceived as *'Negative at first, but then use it as positive learning. Calm down and focus on what's next, in the same competition or another competition.'* (AG26 / Line 27 – 28).

Investigations were conducted into the perceptions of maladaptive perfectionism characteristics. It was noticed that participants felt they would continue setting high personal standards and even increase these standards once they matured. One

participant stated that now being at the highest rank it was even more important to set high personal standards as the subject mentioned that:

...now I'm there (Principal position), it's harder that those goals are not so open ended and because you don't have that reward of a promotion at the end of the season as a mark against 'right well I've done that and achieved that', I feel it's almost harder because it's personal benchmarks that you set and they are not so quantifiable (BD7 / Line 5 – 9).

This dancer felt that even though the top rank was achieved, there was an increased pressure to prove that she was worthy of her high position. It was also mentioned that '*...now as principal you sort of expect more from yourself but I think it's strange as well because you beat yourself up because you think you should be at that certain level and when you don't it could be detrimental.*' (BD7 / Line 12 – 14). This individual perceived the setting of high personal standards as necessary in being able to prove that she was capable of accomplishing every task at hand. Another participant mentioned:

Probably when I was younger I didn't have as high standards. It was only when I kind of reached my first European final and got a medal that I realized that I needed to improve a bit further to be able to get medals on world stages so my training changed after that competition (AG13 / Line 6 – 9).

This comment was similar to the principal ballet dancer's reflections in the sense that once a very high level was achieved, there was an instant drive to excel.

Reactions to the effects that pre-performance anxiety had on performance and ways in which anxiety could be managed and transformed into a tool that would enhance performance are noted in Appendix H, Category F. Only two out of the four interviewed dancers agreed that pre-performance anxiety facilitated their performance. Three gymnasts agreed that pre-performance anxiety enhanced performance with comments like *'I think it (pre-performance anxiety) increases it (performance)...'* (AG1 / Line 63). One ballet dancer and one artistic gymnast agreed that pre-performance anxiety had the tendency to either increase or decrease levels of performance. The dancer mentioned *'It's done both before, it just depends on the role and the demands it has on your body...how hard it is.'* (BD5 / Line 94 – 95) and the gymnast stated:

Increases (performance): Experiencing a positive feeling of being 'psyched up' with adrenaline. Excitement leading to a drive to perform / compete. Feel the adrenaline and have more power on some apparatus. Decreases (performance): Negative physical and mental symptoms affecting the individual's focus on the performance / competition, which affects the standard of performance / competition. Loss of focus allowing for intrusive

thinking centered on worry, causing low self-esteem and a weak performance / competition. Tighten up on apparatus such as pommel which causes loss of balance (AG26 / Line 63 – 69).

There was only one participant who interpreted anxiety as debilitating. This was also the dancer who had previously been recorded stating that levels of anxiety would stay the same with maturity and also emphasized on the importance of setting high personal standards.

Ballet dancers and artistic gymnasts managed anxiety symptoms and utilized it to their benefit. One dancer managed anxiety *'By practicing things that I find hard before I go on and being calm in the wing, some quiet time.'* (BD5 / Line 73 – 74). A gymnast stated *'...you've got to try and keep relaxed so that you don't mess it up for the competition.'* (AG13 / Line 74 – 75). The idea of controlling pre-performance anxiety was equally evident in both groups.

One gymnast mentioned in regard to coping with mistakes made in performance by stating:

...if it's (mistakes in) competition, I just take myself off for a few minutes sort my head out and then focus on the next thing. That's kind of what my coaches

taught me to do since I was sort of twelve, thirteen. It took a while obviously to be able to do it and some mistakes are harder to take than others (AG13 / Line 44 – 47).

This participant also stated that:

I have learnt to just move on with it. I get very frustrated with myself but within a few minutes because sometimes that is all we have before the next performance I have to put it behind me. We are taught to do this from a young age (AG13 / Line 40 – 42).

At a young age AG13, and possibly also teammates – as the plural ‘*We are taught...*’ was used – were instructed to utilize specific methods to cope with feelings that could distract away from the performance.

4.3 SUMMARY

Results showed that ballet dancers scored lower mean values (experiencing higher levels of perfectionism) on maladaptive perfectionism dimensions DAA, COM and adaptive dimension PE whereas artistic gymnasts scored lower on maladaptive

dimensions PC and PC Version 2, and adaptive dimension PS. Mean scores for cognitive and somatic A-state were higher in gymnasts meaning they experienced more pre-performance anxiety. Ballet dancers of a higher rank and gymnasts of a lower rank experienced increased levels of anxiety and also experienced maladaptive dimensions of perfectionism.

Interviews, analyzed with the directed content analysis approach, provided detailed information regarding the specific topics of interest. It was discovered that all gymnasts had a positive outlook towards the adaptive characteristic of failure in performance and in achieving personal standards. Dancers were in more agreement to the maladaptive characteristic of setting high personal standards. Comments concerning COM and DAA were recorded for dancers and gymnasts. Interviewees from both professions experienced cognitive and somatic symptoms. The only dancer who replied in regard to being able to flexibly evaluate performance and personal standards was of a lower rank. The only participant that was negatively affected by anxiety was a higher ranked ballet dancer who also was the only participant to perceive pre-performance anxiety as debilitating. Coping strategies to manage pre-performance anxiety were applied by both groups. Gymnasts, however, also applied coping strategies to manage mistakes made in performance.

The following chapter discusses reasons for the recorded quantitative and qualitative results, outlines evidence of triangulation between results, describes research implications, and proposes future research directions.

5. DISCUSSION

The aim of this research was to investigate perfectionism and its negative effect of pre-performance anxiety in the performing / competing lives of elite ballet dancers and artistic gymnasts. This study investigated adaptive and maladaptive dimensions of perfectionism and the dimensions of state anxiety. Qualitative results substantiated and in a few cases contrasted quantitative results. Conclusions and comparisons were made concerning the results of collected data.

5.1 A COMPARISON OF PERFECTIONISM DIMENSIONAL SCORES BETWEEN ELITE BALLET DANCERS AND ARTISTIC GYMNASTS (Research Question One)

An examination into the dimensions of perfectionism found in elite ballet dancers and artistic gymnasts was approached numerically and interpretively. It was hypothesized that dancers would score higher on Doubts About Actions (DAA) and gymnasts would score higher on Parental Criticism (PC). Quantitative results indicated that dancers scored on maladaptive dimensions Concern Over Mistakes (COM) and DAA, and on adaptive dimension Parental Expectations (PE) whereas gymnasts scored on the maladaptive dimension Parental Criticism Version 2 (PC Version 2) and adaptive dimension Personal Standards (PS). The hypothesis was therefore supported by numerical research findings. The result agreed with the research findings of Krasnow

et al. (1999), which formed the basis for the hypothesis and the research question. Krasnow and colleagues did not expect a difference in perfectionism dimensional results between the elite ballet dancers, modern dancers, and artistic gymnasts involved in their study, but they hypothesized differences in total perfectionism scores. This was not the case in their research as dimensional differences were present where DAA was scored by ballet dancers and PC was scored by gymnasts, which is similar to the present results. Results for the Pearson correlation showed that PS was negatively correlated with somatic anxiety, which was the same result discovered by Hall et al. (1998).

Qualitative results also outlined differences in perfectionism dimensions between ballet dancers and artistic gymnasts. Regarding the adaptive characteristics of perfectionism, interviewed dancers made no mention of being satisfied with an imperfect performance and did not fully support all adaptive characteristics of perfectionism. Maladaptive characteristics of perfectionism were also assessed. Dancers and gymnasts were in strong agreement with the setting of high self-imposed standards and goals. Krasnow et al. (1999) noted in their research that the setting of high standards was a common aim in elite dance and sport. High standards were also noted in their research as a central aspect of perfectionism. Their statement explains why ballet dancers and artistic gymnasts in the current investigations agreed on this characteristic of perfectionism. Although the self-imposed standards and goals of dancers and gymnasts were different in the sense that dancers set standards for their performance and gymnasts for a judged competition, there was still the strong mentality of confidence in oneself regarding the individual situations that were at

hand. There was a definite presence of pressure in both professions to perform / compete, even though the aims and focus of the performers were different. Only dancers experienced a loss of focus if mistakes were made in performance.

5.2 A COMPARISON OF THE PREVALENCE OF MALADAPTIVE PERFECTIONISM DIMENSIONS AND STATE ANXIETY DIMENSIONS BETWEEN ELITE BALLET DANCERS AND ARTISTIC GYMNASTS (Research Question Two)

Research question two investigated the prevalence of maladaptive perfectionism dimensions and state anxiety dimensions scored by dancers and gymnasts. This research question was investigated in three parts: firstly, maladaptive dimensions and state anxiety dimensions were investigated; secondly, the relationships between rank / level and perfectionism, and anxiety dimensional scores were examined; and thirdly, relationships between anxiety and age, and years of elite training were examined.

5.2.I Maladaptive Dimensional Scores and State Anxiety Dimensional Scores

Based on past research by Krasnow et al. (1999), it was hypothesized that COM would be a highly scored maladaptive dimension in both groups, dancers would score on the dimension DAA whereas gymnasts would score on the dimension PC. Results

demonstrated that maladaptive dimensional scores for dancers were DAA and COM, and for gymnasts it was PC Version 2. COM was not the highest scored dimension by dancers and gymnasts as hypothesized, but it was interpreted that PS was the highest scored in both groups. It is possible that this result did not support the hypothesis based on Krasnow et al.'s findings because their study was focused on young elite dancers and artistic gymnasts aged 12 – 18, whereas the present study was focused on older elite performers aged 18 – 28. Qualitative investigations into this research question also discovered DAA and COM to be present in dancers but not in all gymnasts. When quantitative results were checked for these interviewed dancers, their COM and DAA mean values were lower than the interviewed gymnast's dimensional scores, meaning a higher perfectionism mean. This result supports the reason why only a couple gymnasts related to interview questions that addressed these maladaptive dimensions.

PC in gymnasts was however not supported by interviews even though quantitative results indicated that gymnasts had a lower mean value on the adapted version of this dimension, meaning that their perfectionism dimensional level was higher. Therefore, qualitative results contradicted quantitative results. It was discovered that the interviewed gymnasts had scored exceptionally high for this dimension, which was interpreted in this research as being in disagreement with the perfectionism dimension. Quantitative results for all randomly selected interview participants demonstrated that they had little agreement to this maladaptive dimension, which is why no supporting comments were made during interviews regarding criticism from parents. From questionnaire results, it was concluded that the gymnasts scored higher

on maladaptive dimension PC Version 2 compared with dancers due to this dimension being highly related to a gymnast's perceptions of parental involvement (Krasnow et al., 1999). It was stated by Horn (2008) that gymnasts judged their ability to perform based on parental feedback and judgments, and placed a high value on parental evaluation of their performances.

Artistic gymnasts experienced higher levels of cognitive and somatic anxiety. Both groups of interviewed dancers and gymnasts agreed about experiencing cognitive and somatic symptoms of anxiety. It is possible that the highly competitive nature of gymnastics results in gymnasts experiencing more pre-performance anxiety than that of dancers in their performance setting.

5.2.II Relationship between Rank / Level and Dimensional Scores of Perfectionism and State Anxiety

Based on previous investigations by Walker and Nordin-Bates (2010), it was predicted that dancers of a higher company rank would experience more state anxiety, therefore having an increased chance of experiencing maladaptive dimensions of perfectionism. It was discovered in the present quantitative research results and also by Walker and Nordin-Bates, that dancers of a higher rank experienced higher levels of anxiety causing the chance of increased levels of maladaptive perfectionism.

Dancers of a higher rank experienced more cognitive and somatic anxiety and scored

increased levels on maladaptive dimension PC Version 2 and adaptive dimension PS. Lower ranked dancers experienced maladaptive dimensions such as COM and DAA and adaptive dimension PE. Interview transcripts showed that if mistakes were made in performance, higher ranked dancers experienced the maladaptive characteristic of perceiving their performance and personal standards as unacceptable. The interview of lower ranked dancer BD5 revealed a flexible approach to evaluation of performance, and adaptive perfectionist state relative to personal standards. BD5 also mentioned experiences of maladaptive dimensions, likewise experiences of anxiety being facilitative and debilitating. It is possible that adaptive and maladaptive dimensions of perfectionism can be experienced by the same individual, like participant BD5, and depending on the circumstance, experience positive and negative effects of anxiety.

Based on past investigations by Jastrjemskaia and Titov (1999), it was predicted that gymnasts of a lower level would experience increased levels of anxiety with a greater chance of experiencing maladaptive dimensions of perfectionism. This was supported by quantitative and qualitative results of the present study. Jastrjemskaia and Titov (1999) mentioned that the participation of young gymnasts in competitions developed their ability to psychologically train their minds for pre-competitive situations and overcome the negative effects of anxiety. These gymnasts therefore matured with the practiced methods of coping with anxiety and therefore experienced less anxiety when older and in a higher level, as revealed by the results of the present study. Walker and Nordin-Bates (2010) recorded similar results when an elite ballet dancer experienced decreased levels of anxiety resulting from regular involvement in ballet competitions

at a very young age. This prepared the dancer for future performances in a professional company who, like gymnasts that compete at a very young age, experienced decreased levels of anxiety as the career progressed. Quantitative findings showed that gymnasts of lower levels experienced more maladaptive and adaptive perfectionism dimensions than higher leveled gymnasts, and lower and higher leveled dancers. This presents an increased chance of an anxiety in lower ranked gymnasts. This chance was confirmed as lower ranked gymnasts experienced higher levels of cognitive and somatic anxiety. This result supports Jastrjemskaia and Titov's (1999) claim that lower leveled gymnasts experienced increased levels of anxiety.

5.2.III Relationship between State Anxiety and Age, and State Anxiety and Years of Elite Training

The research hypothesis, drawn from past research results by Walker and Nordin-Bates (2010) and Jastrjemskaia and Titov (1999), stated that as years of elite training and age increase, dancers will experience more anxiety and gymnasts will experience less anxiety. Quantitative results did support the hypothesis when dancers and gymnasts were analyzed separately, and not combined. As years of training increased for the dancer, anxiety at least remained the same or increased and became debilitating to their performance if not properly controlled. As years of elite training increased for the gymnast, anxiety was perceived as a positive tool to aid performance. Gymnasts start competing at a younger age than that of dancers, and

while the aim of the gymnast is to obtain high marks from a panel of judges, the aim of the dancer is to perform to an audience (Burke, 2007).

5.3 PERCEPTIONS OF PERFECTIONISM AND PRE-PERFORMANCE ANXIETY, AND COPING STRATEGIES APPLIED TO MANAGE PRE-PERFORMANCE ANXIETY IN THE PERFORMING CAREERS OF ELITE BALLET DANCERS AND ARTISTIC GYMNASTS (Research Question Three)

Throughout the analysis of qualitative data, it was noted that artistic gymnasts mentioned that their coach and club provided a positive working environment where the application of positive coping methods for training and competition were taught and practiced. It was also noticed that gymnasts were the only group that mentioned coping strategies were implemented to aid with the acceptance of mistakes in competition. Since gymnasts experienced more cognitive and somatic anxiety prior to performance, it is concluded that this environment promoted more anxious individuals, which is possibly why methods of coping with anxiety were taught to gymnasts from a young age. These gymnasts were trained to understand the concept of utilizing pre-performance anxiety as a tool to improve performance, which is why no gymnast agreed that anxiety decreased performance but rather depending on the circumstance either increased or decreased performance. Dancers made no comment concerning the involvement of others in the promotion of coping methods for anxiety that could be applied when mistakes were made in performance. From the gymnasts' responses, it was noted that they were taught by coaches the techniques to manage failure and mistakes made in competition and in the process of attaining personal

standards. These techniques were properly applied because gymnasts were more rational than dancers when assessing failures in performance and achieving high standards. It was concluded that of the random population of dancers selected for interviews, there may have been a lack of teaching about strategies to help them manage imperfections, mistakes, and failures made during a performance (Walker and Nordin-Bates, 2011). A gymnast mentioned that her coach taught them strategies to take their minds away from distractions caused by mistakes, and redirect their focus back to the competition and the next routine. Dancers did not mention this strategy, which could be a reason why all interviewed dancers agreed about a loss of focus on their performance if an error was made. The coping strategies of the dancers interviewed may have come internally since they mentioned different techniques to manage the negative effects of pre-performance anxiety.

A somatic strategy applied by dancers to manage pre-performance anxiety is the practicing of difficult steps before performance. This technique was also noted in Walker and Nordin-Bates' (2010) results where dancers stated that marking through certain steps of the choreography in a ballet made them feel in control and decreased the pre-performance anxiety experience. Another somatic anxiety coping method included feeling the space on the stage and mapping out where certain steps should be executed. A cognitive strategy that dancers applied to overcome anxiety involved finding a quiet space backstage to focus and not allow the mind to be overcome with negative defeating thoughts. Gymnasts apply mental techniques of controlling anxiety, and train their bodies to be relaxed in highly anxious situations. Even though the aim of performance for dancers and gymnasts was different, they both discovered

unique, individual ways to cope with somatic and cognitive anxiety. The techniques applied were best suited to the pre-performance environment they were in. Walker and Nordin-Bates also discovered that elite ballet dancers had very individual and personalized methods of coping with anxiety and along with Gallagher (1993), Satalof et al. (1999), and Buckroyd (2000), concluded that this occurrence was a result of a lack of formal psychological input from others during the training of dancers. If techniques and methods of coping with anxiety were more external and constantly promoted in the dancer's surroundings, it could possibly cause dancers to perceive anxiety as more facilitative and also decrease the level of anxiety that a dancer of a higher rank experiences. If gymnast's coping strategies were more internal, there could be a possible decrease in the amount of anxiety younger gymnasts experience. It is possible that finding an equal balance of the source (external and internal) of positive reinforcement and pre-performance anxiety coping strategies can create performers and competitors that will not be negatively affected by pre-performance anxiety.

5.4 IMPLICATIONS AND LIMITATIONS

The Frost Multidimensional Perfectionism Scale (FMPS) and Cognitive State Anxiety Inventory-2 were used to investigate dimensions of perfectionism and state anxiety in dancers and gymnasts. PC question number two of the FMPS (*'As a child, I was punished for doing things less than perfectly.'*) was deleted for reasons of internal reliability. The result of this change is Parental Criticism Version 2 of the FMPS.

Distribution of the questionnaires close to the performance / competition allowed for an enhanced perception of how anxiety levels increased / decreased or how anxiety had the possibility to aid or hinder the performance / competition, and also helped determine which environment promoted more pre-performance anxious individuals. Distribution and collection of questionnaires to participants at Delta Gymnastics (DG) Canada, were dependant on an individual mediating, disseminating and collecting questionnaires, and trust was needed that the individual understood and undertook the process as intended, in order to ensure the integrity of the exercise. British gymnasts involved were not only from England but also from other parts of Britain. All gymnasts, from British Gymnastics (BG) and Delta Gymnastics (DG) Canada, met the criteria, of being elite competitors within a particular age range required for this study. Dancers involved were of different nationalities, giving a multicultural perspective of perfectionism and its negative effects. The investigation into perfectionism and pre-performance anxiety was not limited by culture or race.

The interview process was conducted in different forms such as in person, over speakerphone, by audio-visual, and by email. Face-to-face interviews allowed investigations into certain motives. The interviewer was unable to see the participant's physical reactions in interviews conducted over the speakerphone, by audio-visual, and by email, and therefore motives of the participants could not be judged. The lack of visual cues in interviews conducted by speakerphone, audio-visual, and email, may have caused problems regarding interpretations of questions

asked. The email interviewees may have had more time to think about the questions asked, therefore allowing them to provide more detailed responses compared with subjects who were asked questions in person. If it was felt that answers could have been more detailed or were not specifically aimed at what the question was seeking to discover, individuals were contacted and encouraged to expand on ideas, which was adequate to take care of all limitations encountered. The interview questions were ideal and sufficient to investigate the dimensions of perfectionism and state anxiety and understand how the individuals perceived perfectionism and pre-performance anxiety in their performing careers.

5.5 FUTURE RESEARCH DIRECTIONS

Future research ideas were formulated as questions and statements that can be used to build on this work and go beyond the scope of this study. It is hoped that investigations will be made into these unanswered areas to broaden the understanding of perfectionism and pre-performance anxiety. Future research should focus on the possible uniqueness and peculiarities of the application of coping strategies to manage pre-performance anxiety. It was evident that dancers and gymnasts applied a number of coping methods and techniques to control anxiety. Although the idea of controlling pre-performance anxiety was similar in both groups, the application of coping methods may be different. For example, the gymnast's coach may have taught that the application of techniques should be practiced at a certain period before competition. If the dancer had applied the same technique, at the identical time before performance,

would it be as effective as it was for the gymnast? It is possible that dancers and gymnasts could benefit from each other's application of methods to overcome the negative effects of pre-performance anxiety on performance / competition. There may be the need for adjustments to the application of coping methods when used interchangeably between dancers and gymnasts.

The perception of pre-performance anxiety was noted to be either facilitative or debilitating. The source of positive reinforcement and promotion of coping with anxiety is crucial. Institutions of elite performers should provide environments that constantly promote the use of pre-performance anxiety in positive ways. Their psychologists, teachers or coaches should train individuals to acquire a positive mindset that will continuously encourage them to overcome the debilitating symptoms of state anxiety and transform these to increase performance level. By having positive external and internal influencers that constantly allow the individual to perceive anxiety as facilitative, it is hoped that there will be a natural instinct to positively treat with anxious situations.

Another research direction is the maladaptive nature of perfectionism. Since maladaptive symptoms of pre-performance anxiety were noted in this study as being interpreted positively and negatively, Can individuals perceive maladaptive perfectionism symptoms as positive enhancements to their performance with facilitative outcomes? Research tends to focus on the negative symptoms that maladaptive perfectionism has on individuals but lack stating whether depending on

interpretation, negative symptoms can be viewed as positive tools to aid performance, which is true in the case of pre-performance anxiety. Is there a way that maladaptive perfectionism can be transformed to benefit the elite individual? Similar techniques utilized to transform the debilitating symptoms of anxiety could be applied to maladaptive symptoms. The perfectionism construct would therefore have the potential to become a more positive trait depending on the positive interpretation by the individual.

Another topic of interest is the effect of the performer's diet on coping with pre-performance anxiety and a loss of focus, when mistakes are made in performance or competition. Meltzer and Hopkins (2011) outlined that several nutritional strategies affect anxiety and noted that caffeine intake in doses as small as 2 – 3 mg / kg can improve performance, whereas high doses of caffeine could have adverse effects on an athlete's nervous system and increase anxiety. These researchers also stated that low levels of carbohydrates have negative effects on performance causing fatigue and a decreased work standard. Meltzer and Hopkins noted that there are certain vitamins, minerals, and herbs that have calming mental effects on performers and also aid athletes who participate in more technical and skill-based sports. There may be certain foods and supplements beneficial to the dancer and gymnast in treating with pre-performance anxiety and imperfections.

6. CONCLUSION

Building and extending on previous research, this study of male and female elite ballet dancers and artistic gymnasts explored:

- 1) The nature of the differing career demands of training and performance environments and their impact on perfectionism and state anxiety dimensions;
- 2) The relationship between rank / level and perfectionism and state anxiety dimensions;
- 3) The relationship between state anxiety and age, and state anxiety and years of elite training;
- 4) A comparison of perceptions and interpretations of perfectionism and state anxiety symptoms;
- 5) A comparison of the coping strategies applied to manage pre-performance anxiety.

Dancers and gymnasts experienced perfectionism differentially. Dancers recorded higher levels of 'Concern Over Mistakes', 'Doubts About Actions', and 'Parental Expectations'. They were also highly unsatisfied with imperfect performances, which is a significant characteristic of maladaptive perfectionism. Gymnasts revealed stronger responses to 'Parental Criticism Version 2' and 'Personal Standards' and were more forgiving and accepting of imperfections that were made in competition. This was the case because of the positive reinforcement by their coach and club when faced with difficulties in performance.

Gymnasts reported higher levels of pre-performance anxiety than dancers. The pre-performance environment of a gymnast induces more state anxiety than the pre-performance environment of a dancer. This results from a difference in performance focus where the gymnast aims to score high marks by executing routines as perfectly as possible to impress a panel of judges, whereas the dancer focuses on the perfection of rehearsed steps and choreography in order to perform to an audience.

Even though gymnasts experienced higher levels of state anxiety than dancers, they were educated at an early age by their coaches and club about the importance of utilizing coping strategies with pre-performance anxiety and mistakes made in performance. Dancers only mentioned of their motivational coping strategies with pre-performance anxiety, which were more internal rather than externally from teachers. It is suggested that there should be more involvement by the dance school

and dance teachers, to educate young professional ballet dancers about coping techniques for symptoms of pre-performance anxiety and failures in performance. It is therefore hoped that as these young professionals mature, they would be more equipped to manage the symptoms of a highly anxious pre-performance state and mistakes made whilst performing.

Higher ranked dancers and lower ranked gymnasts experienced increased levels of cognitive and somatic anxiety resulting in higher levels of maladaptive dimensions of perfectionism. Dancers did not mention being educated about coping strategies with pre-performance anxiety at an early age, but gymnasts proclaimed that their coach and club taught them when very young of these helpful coping techniques. One gymnast had stated that years of practice were needed to perfect and successfully use the management techniques of pre-performance anxiety and mistakes made in competition. Now at an elite level, coping strategies were automatically applied and produced successful results for the higher ranked gymnast, which is why artistic gymnasts of a higher level reported lower levels of state anxiety. Further research is encouraged in the areas of teaching and utilization of coping methods to transform the negative effects that maladaptive perfectionism and pre-performance anxiety have on performance.

7. APPENDICES

Appendix A

The Dancer and Gymnast Self-Evaluation Questionnaire: Part 1

Date: _____ Sex: M F Age: _____

Please circle: Ballet Dancer Artistic Gymnast

Years of training at an elite level (include pre-professional training): _____

Amount of time with current company / team: _____

What is your rank / level: _____

Amount of time at this current position / level: _____

If your profession is ballet, have you ever been trained in gymnastics?

Yes No For how long? _____ Was this at an elite level of training? Yes No

If your profession is gymnastics, have you ever been trained in ballet?

Yes No For how long? _____ Was this at an elite level of training? Yes No

Duration until performance / competition: _____

Directions: Please circle the number that best corresponds to your agreement with each statement below. Use this rating system:

- | | <u>Strongly</u>
<u>Agree</u> | | | | | <u>Strongly</u>
<u>Disagree</u> |
|---|---------------------------------|---|---|---|---|------------------------------------|
| 1. My parents set very high standards for me. | 1 | 2 | 3 | 4 | 5 | |
| 2. As a child, I was punished for doing things less than perfectly. | 1 | 2 | 3 | 4 | 5 | |

3. If I do not set high standards for my self, I am likely to end up a second-rate person.	1	2	3	4	5
4. My parents never tried to understand my mistakes.	1	2	3	4	5
5. It is important to me that I be thoroughly competent in everything I do.	1	2	3	4	5
6. If I fail at work/school, I am a failure as a person.	1	2	3	4	5
7. I should be upset if I make a mistake.	1	2	3	4	5
8. My parents wanted me to be the best at everything.	1	2	3	4	5
9. I set higher goals than most people.	1	2	3	4	5
10. If someone does a task at work/school better than I, then I feel like I failed the whole task.	1	2	3	4	5
	<u>Strongly</u>				<u>Strongly</u>
	<u>Agree</u>				<u>Disagree</u>
11. If I fail partly, it is as bad as being a complete failure.	1	2	3	4	5
12. Only outstanding performance is good enough in my family.	1	2	3	4	5
13. I am very good at focusing my efforts on attaining a goal.	1	2	3	4	5
14. Even when I do something very carefully, I often feel that it is not quite right.	1	2	3	4	5
15. I hate being less than best at anything.	1	2	3	4	5
16. I have extremely high goals.	1	2	3	4	5
17. My parents have expected excellence from me.	1	2	3	4	5
18. People will probably think less of me if I make a mistake.	1	2	3	4	5
19. I never felt like I could meet my parent's expectations.	1	2	3	4	5
20. If I do not do as well as other people, it means I am an inferior human being.	1	2	3	4	5
21. Other people seem to accept lower standards from themselves than I do.	1	2	3	4	5
22. If I do not do well all the time,	1	2	3	4	5

people will not respect me.

- | | | | | | |
|---|---|---|---|---|---|
| 23. My parents have always had higher expectations for my future than I have. | 1 | 2 | 3 | 4 | 5 |
| 24. I usually have doubts about the simple everyday things I do. | 1 | 2 | 3 | 4 | 5 |
| 25. I expect higher performance in my daily tasks than most people. | 1 | 2 | 3 | 4 | 5 |
| 26. I tend to get behind in my work because I repeat things over and over. | 1 | 2 | 3 | 4 | 5 |
| 27. It takes me a long time to do something "right". | 1 | 2 | 3 | 4 | 5 |
| 28. The fewer mistakes I make, the more people will like me. | 1 | 2 | 3 | 4 | 5 |
| 29. I never felt like I could meet my parent's standards. | 1 | 2 | 3 | 4 | 5 |

Appendix A (continued)

The Dancer and Gymnast Self-Evaluation Questionnaire: Part 2

Directions: A number of statements that athletes and performers have used to describe their feelings before competition / performance are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate *'how you would feel'* before your next scheduled competition / performance.

- | | Not At
All | Somewhat | Moderately
So | Very Much
So |
|---|---------------|----------|------------------|-----------------|
| 1. I am concerned about this competition. | 1 | 2 | 3 | 4 |
| 2. I feel nervous. | 1 | 2 | 3 | 4 |
| 3. I have self-doubts. | 1 | 2 | 3 | 4 |
| 4. I feel jittery. | 1 | 2 | 3 | 4 |
| 5. I am concerned that I may not do as well in this competition as I could. | 1 | 2 | 3 | 4 |
| 6. My body feels tense. | 1 | 2 | 3 | 4 |
| 7. I am concerned about losing. | 1 | 2 | 3 | 4 |
| 8. I feel tense in my stomach. | 1 | 2 | 3 | 4 |
| 9. I am concerned about choking under pressure. | 1 | 2 | 3 | 4 |
| 10. My body feels relaxed. | 1 | 2 | 3 | 4 |
| 11. I'm concerned about per- | 1 | 2 | 3 | 4 |

forming poorly.

12. My heart is racing.	1	2	3	4
13. I'm concerned about reaching my goal.	1	2	3	4
14. I feel my stomach sinking.	1	2	3	4
15. I'm concerned that others will be disappointed with my performance.	1	2	3	4
16. My hands are clammy.	1	2	3	4
17. I'm concerned I won't be able to concentrate.	1	2	3	4
18. My body feels tight.	1	2	3	4

Appendix B: Interview Schedule

1. In your career as a ballet dancer / artistic gymnast, how high is the standard that you set for yourself for your goals and are standards set higher or lower in different areas of your career?
 - Is it high, low, or moderate?
 - Are the goals you set realistic?
2. As you mature in your career, do you think the high standards you set for yourself will change?
 - Change positively or negatively?
3. Do you enjoy the process of pursuing your goals and do you find the process rewarding, stressful or both?
 - Do you have a positive or negative outlook towards pursuing goals?
 - Do you ever expect failure in the process of pursuing goals?

4. How do you feel about failures in pursuing your goals?
 - Unaffected by failures.
 - Negatively affected by failures.

5. Do you set specific targets and standards for your performance?

6. Can you explain how you feel when you have a successful performance / competition?

7. Can you explain how you feel when you have a poor performance / competition?

8. In general, how do you react to mistakes made in performance / competition?
 - Positively and / or negatively.
 - Emotionally and / or with coping strategies.

9. Who do you consult when setting targets for your own performance / competition?
 - You teacher / coach, your parents / family, colleagues, teammates, sports psychologist, yourself.

10. What is the role of your parents in your dancing / gymnastics career?
 - Have they been positive such as providing positive reinforcement, and encouragement?

- Have they ever been negative by exerting pressure or by having expectations of high standards?

11. Do you ever experience a loss of confidence whilst performing, which causes you to doubt your ability to perform at an elite level? If yes, please explain why this loss in confidence is experienced.

- As a result of negative pressure from yourself, coaches / teachers, parents or colleagues?

12. Have you ever experienced pre-performance anxiety prior to performance / competition?

13. Do you think your pre-performance anxiety experiences increased, decreased or remained the same as you matured or are still maturing in your career?

14. What do you think influences pre-performance anxiety in your performing / competing life?

- Pressure from teachers / coaches / parents / yourself.
- High standards.

15. What symptoms have you experienced and have perceived as being related to pre-performance anxiety?

- Physical symptoms.
- Mental symptoms.

16. Do you feel that pre-performance anxiety increases or decreases the quality of your performance / competition?

- Increases: Experiencing a positive feeling of being ‘psyched up’ with adrenaline. Excitement leading to a drive to perform / compete.
- Decreases: Negative physical and mental symptoms affecting the individual’s focus on the performance / competition, which affects the standard of performance / competition. Loss of focus allowing for intrusive thinking centered on worry, causing low self-esteem and a weak performance / competition.

Appendix C: Research Opportunity

My name is Céline Gittens. I am a professional ballet dancer with the Birmingham Royal Ballet and I am studying part-time for a Master of Philosophy degree (Research in Dance) at the University of Birmingham.

My area of research interest is centered on perfectionism, which has been defined as straining compulsively towards impossible goals. I have chosen to research this topic in elite ballet dancers and artistic gymnasts and I am asking elite ballet dancers and artistic gymnasts aged 16-28 to take part in my study by completing a questionnaire. Four willing participants of same gender match (2 males, 2 females) will be randomly selected from each institution to take part in a follow-up interview.

All personal information regarding those who take part in the study will be kept confidential and not reported in the study findings. Participants will be free to withdraw from the study until the time of submission of my thesis. My contact details are provided below. My supervisors are Professor Tansin Benn t.c.benn@bham.ac.uk and Dr. Ian Boardley i.d.boardley@bham.ac.uk.

Please contact me as soon as possible if you are interested in this study. My supervisors can also be contacted if you have further questions.

Regards,

Céline Gittens
Soloist
Birmingham Royal Ballet

Contact information

Email: celinegittens@hotmail.com

Mobile: 07726435562

Address: Birmingham Royal Ballet
Thorp Street, Birmingham
B5 4AU

Appendix D: Participant Information Sheet

My name is Céline Gittens and I am a professional ballet dancer at the Birmingham Royal Ballet and I am studying part-time for a Master of Philosophy degree at the University of Birmingham.

My area of research interest is psychological factors that affect elite aesthetic performance. I have chosen to research this topic in elite ballet dancers and artistic gymnasts and I am asking elite dancers and gymnasts aged 16 – 28 to volunteer to take part in my study. This age range is generally recognized as the period in which most dancers and gymnasts reach the highest level in their profession. Participation involves completing a questionnaire, which should take approximately ten to fifteen minutes. Eight participants will also be asked to take part in a follow-up interview. These will be one-on-one interviews between the participant and the lead researcher and will take approximately twenty to thirty minutes.

All names and personal information regarding those who take part in the study will be kept confidential and not reported in the study findings. Participants will be free to withdraw from the study until the time of submission of my thesis. My contact details are provided below. My supervisor is Dr. Ian Boardley and can be contacted on i.d.boardley@bham.ac.uk if you have any questions for him.

Phone: 0772643562

Email: celinegittens@hotmail.com

Address: Miss Céline Gittens

Birmingham Royal Ballet

Thorp St., Birmingham, B5 4AU

Participant Consent Form

I _____ agree to participate in this study, investigating perfectionism in elite ballet dancers and artistic gymnasts. I understand the nature of the study, that participation is voluntary, that I may withdraw from the study at anytime until submission of the work, and that my personal details and the data I provide will be kept confidential. Any questions I had have been answered to my satisfaction by the lead researcher.

Signed _____ Date _____

Witnessed by _____ Date _____

Appendix E: Parental Consent Form

I _____ agree for my son / daughter to participate in this study, investigating perfectionism in elite ballet dancers and artistic gymnasts. I understand the nature of the study, that my son / daughter's participation is voluntary, that he / she may withdraw from the study at anytime until submission of the work, and that my son / daughter's personal details and the data he / she provides will be kept confidential. Any questions I had have been answered to my satisfaction by the lead researcher.

Signed _____ Date _____

Witnessed by _____ Date _____

Appendix F: Transcribed Interview – Ballet Dancer 4

June 29th 2011, 13: 50pm

Interview in Person

Duration: 09: 55seconds

***CG – Interviewer**

***P – Participant**

1) CG – In your career as a ballet dancer, how high is the standard that you set for yourself for 2) your goals and are standards set higher or lower in different areas of your career?

3) P – I generally set quite high standards for myself in all walks of life really. I think I set 4)them just above what I feel is possible for me to reach only because I want to always 5)improve and always strive to be better.

6) CG – So do you set different goals for your performance rather than in class?

7) P – Yes in class I try to concentrate on the technicality of it and try to perfect my technique 8) and make sure everything is very clean and so by the time I come to

performance I can let 9) go a bit of that and try to enjoy it and be a bit more free.

Theoretically the technique is still 10) there in a performance. For to complete everything technically perfect is important for 11) performances as well as the artistry so I do bear quite an importance in performance 12) but not as much as in class.

13) CG – As you mature in your career, do you think the high standards you set for yourself 14) will change?

15) P – I think if anything it will increase. If I progress in a higher rank and do more featured 16) roles I would feel more exposed and more like I need to prove my status.

17) CG – Do you enjoy the process of pursuing your goals and do you find the process 18) rewarding, stressful or both?

19) P – I do enjoy the process. I think because I work quite hard at it sometimes, especially 20) when I was younger, found I was so critical of myself that it led to me getting quite 21) depressed and not being as good as I wanted to be, but now I'm a bit more mature and I 22) take it with a pinch of salt and a bit more relaxed and I do enjoy it.

23) CG – How do you feel about failures in pursuing your goals?

24) P – I don't really like failure. I don't think anybody does but at times I think there are 25) goals I would never reach, or I've set my goals as more like dreams where there is

26) theory if you reach for the stars you'll end up somewhere near the moon.

27) CG – Do you set specific targets and standards for your performance?

28) P – Yes I do.

29) CG – So you said about the artistry...

30) P – And the technical side of it. I always have a vision of how I want to do this specific 31) performance.

32) CG – Can you explain how you feel when you have a successful performance?

33) P – On a complete high especially if you work so hard and you put in a lot of effort to 34)struggle through the process of it. If you do a performance as well as you wanted to you do 35) get such a feeling of accomplishment.

36) CG – Do you feel like you want to do it straightaway again?

37) P – Yes definitely. I think that's the hard part, if you have a really good show is 38)replicating it.

39) CG – Can you explain to me how you feel when you have a poor performance?

40) P – Quite frustrated and usually if I have a poor performance I feel like it isn't necessarily 41) because I'm of a low standard it's just that day or that day things didn't work. I always 42) have a feeling that I want to do it again. If I have a bad performance as soon as the show 43) finishes I want to do that performance.

44) CG – In general, how do you react to mistakes made in performance?

45) P – So far, every time I make a mistake in performance I come back stronger. So if I 46)finish a solo and don't feel very well, the next step I do afterwards I try to put more into 47) making up for it.

48) CG – Who do you consult when setting targets for your own performance?

49) P – Myself or a little bit my girlfriend but more myself. I think I am my worst critic so I 50) correct myself more harshly than other people do. I set my own goals really.

51) CG – But it's good to have a different eye look at you.

52) P – Yes.

53) CG – What is the role of your parents in your dancing career?

54) P – They are always very supportive and I think they are obviously biased but they don't, 55) they're not pushy, they never have been. They just want me to enjoy it, they don't try to 56) push me to be better or achieve more. They're not like that.

57) CG – Do you ever experience a loss of confidence whilst performing, which causes you to 58) doubt your ability to perform at an elite level?

59) P – Not during the performance. It may be in the build-up, the very beginning of the 60) process of training for the role, but I've had it in the past a few times where if I'm working 61) towards a big role I doubt myself in the beginning so it gives me an extra push or an extra 62) drive.

63) CG – Have you ever experienced pre-performance anxiety prior to performance?

64) P – Yes, when I was very young I used to get very nervous but now I actually quite like 65) the nerves before hand because it brings adrenaline. As long as I can control it. I get really 66) anxious but it's not a scared anxious, it's just I want to do it and an anticipation.

67) CG – Do you think your pre-performance anxiety experiences increased, decrease or 68) remained the same as you matured or are still maturing in your career?

69) P – I guess they've decreased but in a way because I know that I'm getting nervous and I 70) know that as long as I control it, I can use it as an advantage.

71) CG – What do you think influences pre-performance anxiety in your performing career?

72) P – I don't know, I guess if it's something I've never done before, if it's a role I haven't 73) done before, even if I've successfully done it in the studio and haven't done it in 74) performance, it's the thought that I'm not capable of doing it.

75) CG – So it is yourself that influences this pre-performance anxiety?

76) P – Yes, so it's all internal goals that I set for myself and it's my own pride.

77) CG – What symptoms have you experienced and have perceived as being related to pre-78) performance anxiety?

79) P – Physical sometimes when putting on makeup, if I haven't got a lot of time I can feel 80) my hand shaking and I can feel like the blood rushing around my body quite a lot and 81) little bit shaky. Mental I think I just try and go over and visualize the performance a lot. If 82) I have some time before the performance, so if I have all day to think about it, sometimes 83) if I don't set a routine for myself, I can let it overtake me and get me more nervous.

84) CG – But you would which one is more dominant?

85) P – Physical.

86) CG – Do you think that pre-performance anxiety increases or decreases the quality of 87) your performance?

88) P – It increases it because I think I've matured and can control it and use it.

Appendix F (continued): Transcribed Interview – Ballet Dancer 7

June 29th 2011, 12:40pm

Interview in Person

Duration: 11: 37seconds

***CG – Interviewer**

***P – Participant**

1) CG – In your career as a ballet dancer how high is the standard that you set for yourself for 2) your goals and are standards set higher or lower in different areas of your career?

3) P – I think you set a high benchmark and I mean I think it was quite interesting when I was 4) working my way up in the company, it was always to be principal and that was sort of an 5) easy goal to set but for over the last few years, now I'm there, it's harder that those goals 6)are not so open ended and it's not so I think because you

don't have say that reward of a 7) promotion at the end of the season as a mark against 'right well I've done that and achieved 8) that', now I feel it's almost harder because it's personal benchmarks that you set and they 9) are not so quantifiable. So I think it's been very clear my goals up until a few years ago.

10) CG – So even in class?

11) P – On a daily basis goals. In a way when I was younger I almost used to be more 12) forgiving of myself but now as principal you sort of expect more from yourself but I think 13) it's strange as well because you beat yourself up because you think you should be at that 14) certain level and when you don't it could be detrimental.

15) CG – As you mature in your career, do you think the high standards you set for yourself 16) will change?

17) P – I think, I don't know, I mean I'd imagine along the way it's going to be influenced by 18) other things in life and maybe they will have an effect, maybe ballet isn't only perspective 19) maybe there is something else that not causes ballet to be side-lined but to put it in 20) perspective almost. That's what I might imagine and maybe that's a positive way to deal 21) with it.

22) CG – Do you enjoy the process of pursuing your goals and do you find the process 23) rewarding, stressful or both?

24) P – I must enjoy it because during the summer when there's no goals to be achieved you 25) sort of after two weeks I think 'now I can sit down'. So I think yes I enjoy it and yes I do 26) get stressed but I think to some degree I enjoy that stress and it's what keeps me ticking 27) most days and keeps me focused. I expect a degree of failure but then to try, and achieve 28) again, and bounce back.

29) CG – How do you feel about failure in pursuing your goals?

30) P – Definitely affected negatively but sometimes that negativity straight after can lead to a 31) positive outcome depending on who you've got or how well you turn it around.

32) CG – Do you set specific targets and standards for your performance?

33) P – Yes, I think certainly have an idea of the perfect performance and exactly what you 34) want from it.

35) CG – Can you explain how you feel when you have a successful performance?

36) P – On top of the world.

37) CG – Do you feel like you would want to do it again straightaway?

38) P – Yes definitely get straight back on there carry on. Invincible. Certainly the next 39) morning in class you have that buzz about you.

40) CG – Can you explain how you feel when you have a poor performance?

41) P – Awful and don't sleep, can't really eat after a show and churning over. Feeling a lot of 42) disgust.

43) CG – In general, how do you react to mistakes made in performance?

44) P – I think I'm quite a negative person and will chew over it two three acts away when 45) something maybe happened in the first five minutes and I know it's a massive failure of 46) mine but it does, I find it hard to sort of let it go.

47) CG – That can actually make you better, it could be a positive thing as well.

48) P – It could but I know for myself if I could just let it go at the beginning then I could 49) have a really good show come out of it but I feel like 'that's it, it's all over'. I dwell far too 50) much.

51) CG – Who do you consult when setting targets for your own performance?

52) P – I think in terms of targets even in the past, I've got a very clear idea of what I want. I 53) mean that could be enhanced by a teacher probably and say if something

isn't working 54) maybe your colleague might help but I think the main drive, certainly in this company, is 55) ourselves.

56) CG – What is the role of your parents in your dancing career?

57) P – They have backed me since the very first day and very supportive, they'll come and 58) watch performances and I think you know my mum certainly understands me very well 59) because she's been to ballet competitions and stuff with me so she understands the 60) process of you know I think they've backed me.

61) CG – Do you ever experience a loss of confidence whilst performing which causes you to 62) doubt your ability to perform at an elite level?

63) P – Yes often.

64) CG – If yes then why is there this loss of confidence?

65) P – I think sometimes...well I am somebody who likes to have a lot of rehearsal and a lot 66) of input and I think and also I think I work best when under pressure and there's lots of 67) performances but when I've had a period off stage I think that's certainly something I've 68) found when you become principal it's not just consistent work and it's a very hot and 69) cold. Sometimes you are doing easy sometimes not. It's keeping that because I think your 70) self-reassurance comes from the performances that you do and how you feel about them 71) and if you've had a period of no shows you almost feel like you're having to prove 72) yourself all over again and that can be a massive feed for that emotion.

73) CG – Have you ever experienced pre-performance anxiety prior to performance?

74) P – Was it nerves was it anxiety I mean I think there's always an element of self-doubt 75) you know, how it's going to be but I mean not extreme extreme.

76) CG- Not extreme levels of anxiety?

77) P – No not.

78) CG – Do you think your pre-performance anxiety increased, decreased or remained the same as you matured or are still maturing in your career?

80) P – I think probably stayed the same.

81) CG – What do you think influences pre-performance anxiety in your performing career?

82) P – I think first of all rehearsal and sort of the elements. I like to have felt the stage, so not in the studio rehearsal, the stage rehearsal and the audience what type of mob it is and there's a whole week where I'm a complete write off and should I fall in that space of time, no way.

86) CG – What symptoms have you experienced and have perceived as being related to performance anxiety?

88) P – I think lack of sleep, a lack of concentration you know 'what are my objectives for this show, what have I got to think about' and you just keep on getting distracted by issues that are not important.

91) CG – Do you think that pre-performance anxiety increases or decreases the quality of your performance?

93) P – I think decreases.

94) CG – It doesn't turn over to psyching you up for the performance?

95) P – Sometimes but then I think, I often did see I did a much better rehearsal when I haven't got the emotional energy and therefore I'd quite like to do a show one day where I don't have anxiety before it but I think when I'm calmer I'm better.

Appendix F (continued): Transcribed Interview – Artistic Gymnast 13

December 12th 2011, Time: 12 : 00am

Audiovisual Interview

07 : 40seconds

***CG – Interviewer**

***P – Participant**

1) CG – In your career as an artistic gymnast, how high is the standard that you set for

2)yourself for your goals and are standards set higher or lower in different areas of
your 3)career?

4) P – I guess I set myself quite high standards. I'm quite a perfectionist so I like
everything 5) to be perfect and don't like to give up on it if it's not. Sometimes I can
get frustrated. 6)Probably when I was younger I didn't have as high standards. It was
only when I kind of 7)reached my first European final and got a medal that I realized

that I needed to improve a 8)bit further to be able to get medals on world stages so my training changed after that 9)competition.

10) CG – As you mature in your career, do you think the high standards you set for yourself 11) will change?

12) P- I don't think it's necessarily as I've matured, I think it's as I've entered competition 13) I've realized that I need to make the quality of my work better.

14) CG – Do you enjoy the process of pursuing your goals and do you find the process 15)rewarding, stressful, or both?

16) P – A bit of both. I mean obviously it's hard when you're training thirty hours a week it's 17) not an easy ride. It can be frustrating and painful and some days you don't want to get out 18) of bed but when you're stood with the medal around your neck or you've achieved 19)something in the gym that you've been trying to achieve for a while, that's when it makes 20) it all worthwhile and you don't really remember the hard bits, you only kind of remember 21) the good bits.

22) CG – How do you feel about failures in pursuing your goals?

23) P – I've been a person that if I failed on something you kind of forget about it and move 24) on. There's nothing that you can do about it except to use it to your advantage and work 25) on it for next time so there's always a silver lining in every performance whether you've 26) performed to your full potential or whether you've not quite performed to how you want 27) to.

28) CG – Do you set specific targets and standards for your performance?

29) P – When I'm going to competition it's kind of do what I've been doing in the gym, 30)nothing more and nothing less and that's the only thing that my coach ever asks of me. 31)There's no point practicing one thing and then going into competition

and trying to 32)improve it because more than likely it won't quite work, so just try and do what you 33)always do.

34) CG – Can you explain how you feel when you have a successful competition?

35) P – Just knowing that all that hard work has paid off. Knowing that those hard days when 36) in the gym you didn't really want to do it because either something was hurting or it 37)wasn't quite going to plan, it makes it all worthwhile so it just makes all that hard work 38) worth it.

39) CG – Can you explain how you feel when you have a poor competition?

40) P – I have learnt to just move on with it. I get very frustrated with myself but within a few 41) minutes because sometimes that is all we have before the next performance I have to put 42) it behind me. We are taught to do this from a young age.

43) CG – In general, how do you react to mistakes made in competition?

44) P – I get frustrated but it usually takes me, if it's competition, I just take myself off for a 45) few minutes sort my head out and then focus on the next thing. That's kind of what my 46) coaches taught me to do since I was sort of twelve, thirteen. It took a while obviously to 47) be able to do it and some mistakes are harder to take than others.

48) CG – Who do you consult when setting targets for your own competition?

49) P – Obviously the main person is my coach but we never really sit down and have a 50)formal meeting of what I want to achieve in that year it's kind of just an unwritten thing 51) that whatever she expects of me in the gym, I'll go out and do the same in competition so 52) she doesn't set at the beginning of the year 'I want you to be European champion' 'I want 53) you to be British champion', it's kind of I want

you to do the best routines you can on the 54) day and if that comes home with a medal then so be it, if it doesn't, we've got a lot more 55) to work on.

56) CG – What is the role of your parents in your gymnastics career?

57) P – The roles changed a lot. When I was younger there was obviously financial support, 58) taxis, nutritionists, everything that I could possibly need. I passed my driving test so that 59) took that part off of them, I moved out of home. So now they are just kind of that 60) supportive role. They are there to celebrate with me, they are there to cheer me up if it 61) doesn't go well, if I've had a bad day of training I can just phone them and whinge and get 62) upset about something, so they are just kind of more the supportive role.

63) CG – Do you ever experience a loss of confidence whilst competing, which causes you to 64) doubt your ability to perform at an elite level?

65) P – I think everyone has days where you probably think 'why am I doing this, training is 66) not going well', but I would never say that it lasts for more than one session. Maybe two 67) or three sessions on the run but that's not very often. My coach can usually tell if I'm not 68) happy and she'll either change my program to sort of boost my confidence or have a word 69) with me so I'd never say it carries on for more than a day.

70) CG – Have you ever experienced pre-performance anxiety prior to your competition?

71) P – I think you always get some sort of anxiety prior to competition. You've worked all 72) those hours and you want to perform to your best, it's just learning how to control it and I 73) think you learn that with time and at the end of the day you've done a lot of hard work in 74) the gym, you've got to try and keep relaxed so that you don't mess it up for the 75) competition.

76) CG – Do you think your pre-performance anxiety experiences increased, decreased or 77) remained the same as you matured or are still maturing in your career?

78) P – Probably decreased for me. You learn how to cope with it and strategies to cope with 79) it.

80) CG – What do you think influences pre-performance anxiety in your competing life?

81) P – The type of competition it is, how much pressure I've got on myself, what the 82) competition is, and what it

83) means to me.

84) CG – What symptoms have you experienced and have perceived as being related to pre-85) performance anxiety? Physical or mental?

86) P – I can't sleep, sometimes disruptive sleep. Sometimes you're dreaming about 87) competitions, sometimes it's really good and sometimes it's not so good.

Sometimes you 88) can be a bit stropky with your flat mate or friends or parents.

89) CG – Do you think that pre-performance anxiety increases or decreases the quality of 90) your performance / competition?

91) P – It depends how you take it on. Individuals sort of react differently. I think some 92) nerves or anxiety prior to is good otherwise if you don't have that then you're not really 93) bothered at all about the competition so I'd be worried if I wasn't stressed slightly prior to 94) a competition.

Appendix F (continued): Transcribed Interview – Artistic Gymnast 26

December 20th 2011

Email Interview

***CG – Interviewer**

***P - Participant**

- 1) CG - In your career as an artistic gymnast, how high is the standard that you set for
- 2) yourself for your goals and are standards set higher or lower in different areas of
- 3) your career? Is it high, low, or moderate?
- 4) P – Moderate.
- 5) CG - Are the goals you set realistic?
- 6) P – Yes.
- 7) CG - As you mature in your career, do you think the high standards you set for
- 8) yourself will change? Change positively or negatively?

9) P – Positively.

10) CG - Do you enjoy the process of pursuing your goals and do you find the process

11)rewarding, stressful or both? Do you have a positive or negative outlook towards pursuing 12) goals?

13) P – Positive.

14) CG - Do you ever expect failure in the process of pursuing goals?

15) P - Yes, but I learn from my failures and turn it into a positive

16) CG - How do you feel about failures in pursuing your goals?

17) P - Unaffected by failures. Negatively affected by failures but react to them positively

18) CG - Do you set specific targets and standards for your performance?

19) P - I set targets such as scores I want to achieve, skills I want to learn and being selected 20) for certain competitions.

21) CG - Can you explain how you feel when you have a successful competition?

22) P - Relief, and happy that the hard work has paid off.

23) CG - Can you explain how you feel when you have a poor competition?

24) P - Annoyed with myself and disappointed. Afraid of other people's reactions.

25) CG - In general, how do you react to mistakes made in competition? Positively and / or 26) negatively? Emotionally and / or with coping strategies.

27) P - Negative at first, but then use it as positive learning. Calm down and focus on what's 28) next, in the same competition or another competition.

29) CG - Who do you consult when setting targets for your own competition? Your teacher / 30) coach, your parents / family, colleagues, teammates, sports psychologist, yourself.

31) P - Coach and teammates.

32) CG - What is the role of your parents in your gymnastics career? Have they been positive 33) such as providing positive reinforcement, and encouragement?

34) P - They always try to keep me happy and encourage me to do my best.

35) CG - Have they ever been negative by exerting pressure or by having expectations of high 36) standards?

37) P - They've expected high standards but realistic and only to bring the best out of me.

38) CG - Do you ever experience a loss of confidence whilst competing, which causes you to 39) doubt your ability to perform at an elite level? If yes, please explain why this loss in 40) confidence is experienced. Is it a result of negative pressure from yourself, coaches / 41) teachers, parents or colleagues?

42) P - I feel pressure from coaches a lot, because they see you train everyday and you don't 43) want to let them down. Loss in confidence usually from thinking too much about other 44) people's reactions if you did fail.

45) CG - Have you ever experienced pre-performance anxiety prior to your competition?

46) P - All the time, but I try to use the nerves and adrenaline to do better. I remember how 47) many times I have done my routines successfully and use this as encouragement.

48) CG - Do you think your pre-performance anxiety experiences increased, decreased or 49) remained the same as you matured or are still maturing in your career?

50) P - I still get nervous, because the competitions mean more and I feel that I have a 51) reputation to live up to.

52) CG - What do you think influences pre-performance anxiety in your competing life? 53) Pressure from teachers / coaches / parents / yourself?

54) P - Coaches, but I do put a lot of pressure on myself as well because I want to do myself 55) well and reward myself for my hard work.

56) CG - High standards?

57) P - As part of the national team I'm expected to be good so I feel under pressure for that.

58) CG - What symptoms have you experienced and have perceived as being related to pre-59) performance anxiety? Physical or mental?

60) P - Physical symptoms: Feeling cold, thirsty. Mental symptoms: Lack of sleep, tiredness

61) CG - Do you feel that pre-performance anxiety increases or decreases the quality of your 62) performance / competition?

63) P – Increases (performance): Experiencing a positive feeling of being 'psyched up' with 64) adrenaline. Excitement leading to a drive to perform / compete. Feel the adrenaline and 65) have more power on some apparatus. Decreases (performance): Negative physical and 66) mental symptoms affecting the individual's focus on the performance / competition, which 67) affects the standard of performance / competition. Loss of focus allowing for intrusive 68) thinking centered on worry, causing low self-esteem and a weak performance / 69) competition. Tighten up on apparatus such as pommel, which causes loss of balance.

Appendix G: QUALITATIVE DATA ANALYSIS: Key

Category A: Adaptive Perfectionist in Performance (APP)

- Flexible Evaluation of Performance and Personal Standards (APP / FEPPS),
Personal Standards (PS)
- Acceptance of Limitations (APP / AL), Personal Standards (PS)
- Satisfaction with Imperfect Performance (APP / SIP), Personal Standards (PS)
- Parental Expectations (APP / PE), Parental Expectations (PE)

Category B: Maladaptive Perfectionist in Performance (MPP)

- High Personal Standards (MPP / HPS), Parental Criticism (PC)
- Motivation by Fears about Implications of Failure (MPP / MFIF), Parental Criticism (PC), Concern Over Mistakes (COM), Doubts About Actions (DAA)
- Self-Imposed Standards and Goals (MPP / SISG), Parental Criticism (PC)
- Threatening Performance Domain (MPP / TPD), Doubts About Actions (DAA)
- Loss of Focus (MPP / LF) Parental Criticism (PC), Concern Over Mistakes (COM), Doubts About Actions (DAA)

Category C: Performance Level (PL)

- Successful (PL / S)
- Unsuccessful (PL / U)
- Targets and Goals (PL / TG)

Category D: Maladaptive Dimensions of Perfectionism (MDP)

- Concern Over Mistakes (MDP / COM), Concern Over Mistakes (COM)
- Doubts About Quality of Performance (MDP / DAQP), Doubts About Actions (DAA)

Category E: Pre-Performance Anxiety Symptoms (PPAS)

- Cognitive (PPAS / C)
- Somatic (PPAS / S)

Category F: Pre-performance Anxiety and Performance (PPAP)

- Positive (PPAP / P)
- Negative (PPAP / N)
- Positive and Negative (PPAP / PN)

Category G: Pre-Performance Anxiety and Maturity (PPAM)

- High Personal Standards (PPAM / HPS)
- Anxiety Experience (PPAM / AE)
- Performance Targets and Goals (PPAM / PTG)
- Anxiety Management (PPAM / AM)

Appendix H: QUALITATIVE DATA ANALYSIS: Analysis of Interviews

Category A: Adaptive Perfectionist in Performance (APP)

- **Flexible Evaluation of Performance and Personal Standards (APP / FEPPS), Personal Standards (PS)**
 1. 'I try not to be too negative because it (*mistakes*) puts a block on me and then I just won't get better.' (APP / FEPPS / BD5 / Line 49)
 2. 'I always set myself quite high standards but I always make sure that they are achievable.' (APP / FEPPS / AG1 / Line 3)

3. 'I've been a person that if I failed on something you kind of forget about it and move on. There's nothing that you can do about it except to use it to your advantage and work on it for next time...' (APP / FEPPS / AG13 / Line 23 – 25)
4. 'I have learnt to just move on with it. I get very frustrated with myself but within a few minutes because sometimes that is all we have before the next performance I have to put it behind me. We are taught to do this from a young age.' (APP / FEPPS / AG13 / Line 40 – 42)
5. 'I have a positive outlook towards pursuing my own personal goals, I believe that if one does not have a positive outlook on a goal, perhaps it shouldn't be a goal for them...' (APP / FEPPS / AG2 / Line 12 – 13)
6. 'I would like to think that I respond positively. At our facility, we strive to create an atmosphere where mistakes are totally acceptable, and feedback is always constructive. So I never feel the need to react negatively.' (APP / FEPPS / AG2 / Line 32 – 34)
7. 'Moderate (*level for high standards*)...Yes (goals are realistic).' (APP / FEPPS / AG26 / Line 4 – 6)
8. 'Negative at first, but then use it as positive learning. Calm down and focus on what's next, in the same competition or another competition.' (APP / FEPPS / AG26 / Line 27 – 28).

- **Acceptance of Limitations (APP / AL), Personal Standards (PS)**

1. 'I try not to think of it as a failure if I don't reach the standard that I set for myself with the goal because then my confidence lowers and I will never give

myself a target as high as that ever again which isn't realistic because I would be going backwards.' (APP / AL / BD5 / Line 27 – 29)

2. 'In a way when I was younger I almost used to be more forgiving of myself...' (APP / AL / BD7 / Line 11 – 12)
3. 'I expect a degree of failure but then to try, and achieve again, and bounce back.' (APP / AL / BD7 / Line 27 – 28)
4. 'You know sometimes things don't work out.' (APP / AL / BD2 / Line 33 – 34)
5. '...but now I'm a bit more mature and I take it with a pinch of salt and a bit more relaxed and I do enjoy it.' (APP / AL / BD4 / Line 21 – 22)
6. 'I do sometimes expect failure...' (APP / AL / AG2 / Line 14)
7. 'I would like to think that I respond positively. At our facility, we strive to create an atmosphere where mistakes are totally acceptable, and feedback is always constructive. So I never feel the need to react negatively.' (APP / AL / AG2 / Line 32 – 34)
8. 'Yes, (*expect failure*) but I learn from my failures and turn it into a positive.' (APP / AL / AG26 / Line 15)
9. 'Unaffected by failures.' (APP / AL / AG26 / Line 17)

- **Satisfaction with Imperfect Performance (APP / SIP), Personal Standards (PS)**

1. '...if it's something that's relatively new or quite hard I think well at least I tried it and I do everything to improve. (APP / SIP / AG1 / Line 31 – 32)

2. ‘...if it’s (*mistakes in*) competition, I just take myself off for a few minutes sort my head out and then focus on the next thing.’ (APP / SIP / AG13 / Line 44 – 47)
3. ‘...I then realized that I tried my hardest (or perhaps did not), and that as long as I did all that I could, what for someone else is failure can be a success for me.’ (APP / SIP / AG2 / Line 18 – 19)
4. ‘...if I realize that I tried my hardest and gave it my all, I am satisfied with my performance, and will just work towards improving for next time.’ (APP / SIP / AG2 / Line 29 – 30)

- **Parental Expectations (APP / PE), Parental Expectations (PE)**

1. ‘They are definitely just support. They weren’t dancers themselves so they never been pushy parents. They very much just enjoy what I do.’ (APP / PE / BD5 / Line 58 – 59)
2. ‘They have backed me since the very first day and very supportive, they’ll come and watch performances and I think you know my mum certainly understands me very well because she’s been to ballet competitions and stuff with me so she understands the process of you know I think they’ve backed me.’ (APP / PE / BD7 / Line 57 – 60)
3. ‘Well I think they are sort of big levelers I think for me. People that I can talk to about when it’s going well or badly. Just talk it through and make sure the emotions or things that I’m feeling are perhaps not unusual you know any walk of life. Make sure I’m being rational and realistic...levelers.’ (APP / PE / BD2 / Line 46 – 49)

4. 'They are always very supportive and I think they are obviously biased but they don't, they're not pushy, they never have been. They just want me to enjoy it, they don't try to push me to be better or achieve more. They're not like that.' (APP / PE / BD4 / Line 54 – 56)
5. 'My mum always helps me if I've had a bad training session, she'll always help talk me up. She's also the one who pays for everything and she's also my taxi and takes me to almost every appointment, very supportive.' (APP / PE / AG1 / Line 36 – 38)
6. 'They are there to celebrate with me, they are there to cheer me up if it doesn't go well...so they are just kind of more the supportive role.' (APP / PE / AG13 / Line 60 – 62)
7. 'My parents have been quite positively involved in my sports career...when I need positive involvement, my parents are always there.' (APP / PE / AG2 / Line 38 – 41)
8. 'They always try to keep me happy and encourage me to do my best. They've expected high standards but realistic and only to bring the best out of me.'
(APP / PE / AG26 / Line 34 – 37)

Category B: Maladaptive Perfectionist in Performance (MPP)

- **High Personal Standards (MPP / HPS), Parental Criticism (PC)**

1. 'When I first joined the company I set very very high standards for myself and as a result I think I got injured partly because of my standards were set too high...' (MPP / HPS / BD5 / Line 3 – 4)

2. 'Yes I almost want to...I'm happy then I want to set an even higher standard for myself and do it straightaway.' (MPP / HPS / BD5 / Line 41 – 42)
 3. 'I think you set a high benchmark...' (MPP / HPS / BD7 / Line 3)
 4. 'I think I set quite high standards.' (MPP / HPS / BD2 / Line 3)
 5. 'I generally set quite high standards for myself in all walks of life really. I think I set them just above what I feel is possible for me to reach.' (MPP / HPS / BD4 / Line 3 – 4)
 6. 'My work should be of a high quality and a really high standard.' (MPP / HPS / AG1 / Line 19)
 7. 'I guess I set myself quite high standards.' (MPP / HPS / AG13 / Line 4)
- **Motivation by Fears about Implications of Failure (MPP / MFIF), Parental Criticism (PC), Concern Over Mistakes (COM), Doubts About Actions (DAA)**
 1. 'I think the nerves can sometimes help.' (MPP / MFIF / BD5 / Line 97)
 2. 'So I think yes I enjoy it and yes, I do get stressed but I think to some degree I enjoy that stress and it's what keeps me ticking most days and keeps me focused.' (MPP / MFIF / BD7 / Line 25 – 27)
 3. 'Definitely affected negatively but sometimes that negativity straight after can lead to a positive outcome depending on who you've got or how well you turn it around.' (MPP / MFIF / BD7 / Line 30 – 31)
 4. 'I think I work best when under pressure...' (MPP / MFIF / BD7 / Line 66)
 5. 'I like the adrenaline and I think makes me perform better than I would in rehearsal.' (MPP / MFIF / BD2 / Line 69 – 70)

6. 'So far, every time I make a mistake in performance I come back stronger.'
(MPP / MFIF / BD4 / Line 45)
7. 'So if I finish a solo and don't feel very well, the next step I do afterwards I try to put more into making up for it.' (MPP / MFIF / BD4 / Line 45 – 47)
8. '...if I'm working towards a big role I doubt myself in the beginning so it gives me an extra push or an extra drive.' (MPP / MFIF / BD4 / Line 60 – 62)
9. 'So if I fell out on a particular move or something wasn't quite working I would always go back into the gym and work on that so that I can fix it and get better.' (MPP / MFIF / AG1 / Line 25 – 27)
10. '...I think it's as I've entered competition I've realized that I need to make the quality of my work better.' (MPP / MFIF / AG13 / Line 12 – 13)
11. '...although I do not enjoy it (*failure*), I do think I benefit from it.' (MPP / MFIF / AG2 / Line 14 – 15)
12. '...failures affect me negatively, (i.e. I feel as if though I should have done better).' (MPP / MFIF / AG2 / Line 17)

- **Self-Imposed Standards and Goals (MPP / SISG), Parental Criticism (PC)**

1. '...I put too much pressure on myself because I was a new comer.' (MPP / SISG / BD5 / Line 4 – 5)
2. 'For each specific role that I do, yes. Different roles require different standards.' (MPP / SISG / BD5 / Line 31)
3. 'I suppose only you can help yourself really...' (MPP / SISG / BD5 / Line 53)

4. 'If I've done maybe a good rehearsal, sometimes I'm more nervous because I want to reach that standard or do better or likewise if you do a bad rehearsal that can put more pressure on you as well.' (MPP / SISG / BD5 / Line 79 – 81)
5. 'Yes, I think certainly have an idea of the perfect performance and exactly what you want from it.' (MPP / SISG / BD7 / Line 33 – 34)
6. 'I think in terms of targets even in the past, I've got a very clear idea of what I want.' (MPP / SISG / BD7 / Line 52)
7. '...I think the main drive, certainly in this company, is ourselves.' (MPP / SISG / BD7 / Line 54 – 55)
8. '...I think your self-reassurance comes from the performances that you do and how you feel about them and if you've had a period of no shows you almost feel like you're having to prove yourself all over again...' (MPP / SISG / BD7 / Line 69 – 72)
9. 'The goals that I try to achieve I think are quite high and they would be over anything I'd do in my career.' (MPP / SISG / BD2 / Line 3 – 4)
10. '...I want to always improve and always strive to be better.' (MPP / SISG / BD4 / Line 4 – 5)
11. 'If I progress in a higher rank and do more featured roles I would feel more exposed and more like I need to prove my status.' (MPP / SISG / BD4 / Line 15 – 16)
12. 'I always have a vision of how I want to do this specific performance.' (MPP / SISG / BD4 / Line 30 – 31)
13. 'I think I am my worst critic so I correct myself more harshly than other people do. I set my own goals really.' (MPP / SISG / BD4 / Line 49 – 50)

14. 'Yes, so it's all internal goals that I set for myself and it's my own pride.'
(MPP / SISG / BD4 / Line 76)
15. '...as I become older and I mature your body becomes stronger and you become more of your own person and you know what you want so you set yourself goals more than your coaches.' (MPP / SISG / AG1 / Line 8 – 10)
16. 'The thought of not doing your best can scare me.' (MPP / SISG / AG1 / Line 55)
17. '...there's always a silver lining in every performance whether you've performed to your full potential or whether you've not quite performed to how you want to.' (MPP / SISG / AG13 / Line 25 – 27)
18. 'When I'm going to competition it's kind of do what I've been doing in the gym, nothing more and nothing less...' (MPP / SISG / AG13 / Line 29 – 30)
19. '...it's kind of I want you to do the best routines you can on the day and if that comes home with a medal then so be it, if it doesn't, we've got a lot more to work on.' (MPP / SISG / AG13 / Line 53 – 55)
20. 'You've worked all those hours and you want to perform to your best...'
(MPP / SISG / AG13 / Line 71 – 72)
21. 'I usually set relatively high goals in all aspects of my life. I think that these goals are realistic, but not easily attainable, and I believe that is the point.'
(MPP / SISG / AG2 / Line 3 – 4)
22. '...I do put a lot of pressure on myself as well because I want to do myself well and reward myself for my hard work. As part of the national team I'm expected to be good so I feel under pressure for that.' (MPP / SISG / AG26 / Line 54 – 57)

- **Threatening Performance Domain (MPP / TPD), Doubts About Actions (DAA)**

1. 'Well the pressure you put on yourself to reach the goal makes it stressful because you want to succeed...' (MPP / TPD / BD5 / Line 22 – 23)
2. 'Pressure from staff and yourself.' (MPP / TPD / BD5 / Line 79)
3. 'It's always feeling the pressure. I always feel the pressure, whatever you do you still feel the pressure.' (MPP / TPD / BD5 / Line 84 – 85)
4. '...the audience what type of mob it is and there's a whole week where I'm a complete write off and should I fall in that space of time, no way.' (MPP / TPD / BD7 / Line 83 – 85)
5. 'I find it a little frustrating sometimes in the way we maybe do it here perhaps not having the best feedback, instruction you might want to achieve...' (MPP / TPD / BD2 / Line 12 – 13)
6. '...I think maybe because it's a role that perhaps people wouldn't see me particularly suited to, something like that, is probably higher and I feel the greater pressure improve also.' (MPP / TPD / BD2 / Line 58 – 60)
7. 'When it was a big competition I was really nervous and it affected my training a bit and it made me end training because I was getting so nervous and I was just thinking about the competition.' (MPP / TPD / AG1 / Line 45 – 47)
8. 'For me it's the thought of every competition I could experience some sort of pre-performance anxiety.' (MPP / TPD / AG1 / Line 54 – 55)
9. 'I think you always get some sort of anxiety prior to competition...you've got to try and keep relaxed so that you don't mess it up for the competition.' (MPP / TPD / AG13 / Line 71 – 75)

10. 'The type of competition it is, how much pressure I've got on myself, what the competition is, and what it means to me (*regarding what influences pre-performance anxiety*).' (MPP / TPD / AG13 / Line 81 – 83)
11. 'I think that it is majorly, the high standards I set out for myself, along with the level I think my coaches expect (*influencing pre-performance anxiety*).'
(MPP / TPD / AG2 / Line 59 – 60)

- **Loss of Focus (MPP / LF), Parental Criticism (PC), Concern Over Mistakes (COM), Doubts About Actions (DAA)**

1. 'A lot of the time on stage I will be halfway through a performance or a solo and be negative and it will instantly change my performance.' (MPP / LF / BD5 / Line 62 – 63)
2. 'I think I'm quite a negative person and will chew over it two three acts away when something maybe happened in the first five minutes and I know it's a massive failure of mine but it does, I find it hard to sort of let it go.' (MPP / LF / BD7 / Line 44 – 46)
3. 'It (*loss of confidence*) may be in the build-up, the very beginning of the process of training for the role...' (MPP / LF / BD4 / Line 59 – 60)

Category C: Performance Level (PL)

- **Successful (PL / S)**
1. 'Well after a successful performance I straightaway want to do it again better. I don't know why.' (PL / S / BD5 / Line 38 – 39)
 2. 'On top of the world (*after successful performance*).'
(PL / S / BD7 / Line 36)

3. 'Yes definitely get straight back on there carry on. Invincible. Certainly the next morning in class you have that buzz about you.' (PL / S / BD7 / Line 38 – 39)
4. 'Great, I love it (*successful performance*).' (PL / S / BD2 / Line 25)
5. 'Yes definitely and I always enjoy it (*successful performance*) and I think 'oh god I'd love to do that again'. Yes definitely enjoy it.' (PL / S / BD2 / Line 27 – 28)
6. 'On a complete high especially if you work so hard and you put in a lot of effort to struggle through the process of it. If you do a performance as well as you wanted to you do get such a feeling of accomplishment.' (PL / S / BD4 / Line 33 – 35)
7. 'Yes definitely (*immediately repeating successful performance*). I think that's the hard part, if you have a really good show is replicating it.' (PL / S / BD4 / Line 37)
8. 'I always feel really good, I always feel proud of myself and happy, like all that hard work has paid off.' (PL / S / AG1 / Line 21 – 22)
9. '...when you're stood with the medal around your neck or you've achieved something in the gym that you've been trying to achieve for a while, that's when it makes it all worthwhile and you don't really remember the hard bits, you only kind of remember the good bits.' (PL / S / AG13 / Line 18 – 21)
10. 'Just knowing that all that hard work has paid off. Knowing that those hard days when in the gym you didn't really want to do it because either something was hurting or it wasn't quite going to plan, it makes it all worthwhile so it just makes all that hard work worth it.' (PL / S / AG13 / Line 35 – 38)

11. ‘...I feel very accomplished, and at ease, knowing that my hard work paid off for me, and that I was able to have some tangible results to show everyone else.’ (PL / S / AG2 / Line 24 – 26)

12. ‘Relief, and happy that the hard work has paid off.’ (PL / S / AG26 / Line 22)

• **Unsuccessful (PL / U)**

1. ‘Not confident at all and I almost dread doing it again because it’s almost like I’ve lost control...I don’t know what I’m going to be like.’ (PL / U / BD5 / Line 44 – 45)

2. ‘Not angry because I always try my best, but disappointed.’ (PL / U / BD5 / Line 47)

3. ‘Awful and don’t sleep, can’t really eat after a show and churning over. Feeling a lot of disgust.’ (PL / U / BD7 / Line 41 – 42)

4. ‘I think I sort of think about it (*unsuccessful performance*) a little bit more. Philosophical, try and work out what happened and whether it was something that I did or whether there was something in my preparation that I perhaps could have done better...’ (PL / U / BD2 / Line 30 – 32)

5. ‘Quite frustrated (*about unsuccessful performance*)...’ (PL / U / BD4 / Line 40)

6. ‘I always feel quite disappointed.’ (PL / U / AG1 / Line 24)

7. ‘I always feel down and I always say that I can’t do it and I can’t do a move because it’s just not working at all and I always get down and think that I can’t do anything.’ (PL / U / AG1 / Line 41 – 43)

8. 'I get frustrated (*mistakes in competition*). (PL / U / AG13 / Line 40)
9. 'When I have a poor performance (similar to when I don't meet my goals) at first I am not extremely happy...' (PL / U / AG2 / Line 28 – 29)
10. 'Annoyed with myself and disappointed. Afraid of other people's reactions.'
(PL / U / AG26 / Line 24)

- **Targets and Goals (PL / TG)**

1. 'Well for example 'Dawn' solo the stamina is a big issue for me in that so my goal in that is to take it to pace myself because it's quite long whereas 'Gallantries' was more a quick outburst and I needed to use all my energy to get through it and it required a different approach.' (PL / TG / BD5 / Line 33 – 36)
2. 'Just the technical side is quite specific. I think I like to do certain things in performance, things that I've worked towards so I try and hit them each time and then and anything after that just keeps going.' (PL / TG / BD2 / Line 21 – 22)
3. 'Yes in class I try to concentrate on the technicality of it and try to perfect my technique and make sure everything is very clean and so by the time I come to performance I can let go a bit of that and try to enjoy it and be a bit more free. Theoretically the technique is still there. In a performance for to complete everything technically perfect is important for performances as well as the artistry so I do bear quite an importance in that in performance but not as much as in class.' (PL / TG / BD4 / Line 7 – 12)
4. '...I think there are goals I would never reach, or I've set my goals as more like dreams...' (PL / TG / BD4 / Line 24 – 25)

5. 'I always set harder goals...' (PL / TG / AG1 / Line 3 – 4)
6. 'It (*pursuing goals*) can be stressful because if you're not reaching it and you're not target you're worried about not being good enough.' (PL / TG / AG1 / Line 13 – 14)
7. 'I set targets such as scores I want to achieve, skills I want to learn and being selected for certain competitions.' (PL / TG / AG26 / Line 19 – 20)

Category D: Maladaptive Dimensions of Perfectionism (MDP)

- **Concern Over Mistakes (MDP / COM), Concern Over Mistakes (COM)**
 1. 'I have to be a little bit hard on myself otherwise it (*mistakes*) will just keep happening...' (MDP / COM / BD5 / Line 49 – 50)
 2. '...but I feel like 'that's it, it's all over'. I dwell (*on mistakes*) far too much.' (MDP / COM / BD7 / Line 49)
 3. 'I think I take them (*mistakes*) quite hard and initially...' (MDP / COM / BD2 / Line 16)
 4. 'In performance initially I take them (*mistakes*) badly and I think I need to work on that instead of affecting me adversely and 'oh that was rubbish therefore everything was rubbish'. It's hard to stop that (*mistakes*) affecting me worse than what's going to happen.' (MDP / COM / BD2 / Line 36 – 38)
 5. 'I don't really like failure. I don't think anybody does...' (MDP / COM / BD4 / Line 24)
 6. 'Failures I don't like to face to be honest...' (MDP / COM / AG1 / Line 16)
 7. '...if it's something that I can do I get mad at myself and I'm like 'oh I shouldn't have made that mistake' (MDP / COM / AG1 / Line 30 – 31)

8. 'I'm quite a perfectionist so I like everything to be perfect and don't like to give up on it if it's not. Sometimes I can get frustrated.' (MDP / COM / AG13 / Line 4 – 5)
9. '...some mistakes are harder to take than others.' (MDP / COM / AG13 / Line 47)

- **Doubts About Quality of Performance (MDP / DAQP), Doubts About Actions (DAA)**

1. 'A lot of the time it (*negative thought*) will be for something that I think I can't do. I don't believe that I can do it and not all the time but a lot of the time it does stop me from doing it. I have actually had one experience where that happened instantly.' (MDP / DAQP / BD5 / Line 65 – 67)
2. 'Mentally sometimes doubt myself a lot if I'm very very nervous.' (MDP / DAQP / BD5 / Line 88 – 89)
3. '...I mean I think there's always an element of self-doubt you know, how it's going to be...' (MDP / DAQP / BD7 / Line 74 – 75)
4. '...if it's a role I haven't done before, even if I've successfully done it in the studio and haven't done it in performance, it's the thought that I'm not capable of doing it.' (MDP / DAQP / BD4 / Line 72 – 74)
5. 'I think everyone has days where you probably think 'why am I doing this, training is not going well' (MDP / DAQP / AG13 / Line 65 – 66)
6. 'I think that it comes a time in every athlete's career where they feel as if though they will never be quite good enough to compete at the next level...' (MDP / DAQP / AG2 / Line 45 – 46)

7. 'I feel pressure from coaches a lot, because they see you train everyday and you don't want to let them down. Loss in confidence usually from thinking too much about other people's reactions if you did fail.' (MDP / DAQP / AG26 / Line 42 – 44)

Category E: Pre-Performance Anxiety Symptoms (PPAS)

- **Cognitive (PPAS / C)**

1. 'I think lack of sleep, a lack of concentration you know 'what are my objectives for this show, what have I got to think about' and you just keep on getting distracted by issues that are not important.' (PPAS / C / BD7 / Line 88 – 90)
2. 'Yes definitely (*experience pre-performance anxiety*). Just wonder if I'm going to do it, if it all goes well.' (PPAS / C / BD2 / Line 54)
3. 'They are more mental. Just start questioning things and wondering whether you are accurate.' (PPAS / C / BD2 / Line 65 – 66)
4. 'Mental I think I just try and go over and visualize the performance a lot...so if I have all day to think about it (*performance*), sometimes if I don't set a routine for myself, I can let it (*thoughts about the performance*) overtake me and get me more nervous.' (PPAS / C / BD4 / Line 81 – 83)
5. '...I get mental blocks and I feel like I can't do certain moves and it makes me scared of that one move.' (PPAS / C / AG1 / Line 59 – 60)
6. 'I can't sleep, sometimes disruptive sleep. Sometimes you're dreaming about competitions, sometimes it's really good and sometimes it's not so good.'

Sometimes you can be a bit stroppy with your flat mate or friends or parents.'

(PPAS / C / AG13 / Line 86 – 88)

7. '...some mental ones regarding what if this happens, or what if I fall...'

(PPAS / C / AG2 / Line 63 – 64)

8. 'Lack of sleep, tiredness.' (PPAS / C / AG26 / Line 60)

- **Somatic (PPAS / S)**

1. 'Always always get nervous...' (PPAS / S / BD5 / Line 69)

2. 'Definitely have felt a little bit ill before...pre-performance.' (PPAS / S / BD5 / Line 88)

3. 'Physical sometimes when putting on makeup, if I haven't got a lot of time I can feel my hand shaking and I can feel like the blood rushing around my body quite a lot and little bit shaky.' (PPAS / S / BD4 / Line 79 – 81)

4. 'When I get really bad pre-anxiety my lower back gets really tense, I feel like I can't do anything because my back just gets really sore.' (PPAS / S / AG1 / Line 58 – 59)

5. '...nervousness, which could be seen as a mild form of anxiety. I believe slight nervousness is to be expected, not everyone is comfortable with performances.' (PPAS / S / AG2 / Line 51 – 52)

6. 'Feeling cold, thirsty.' (PPAS / S / AG26 / Line 60)

Category F: Pre-Performance Anxiety and Performance (PPAP)

- **Positive (PPAP / P)**

1. 'I always react quite well to it actually.' (PPAP / P / BD2 / Line 69)

2. 'It increases it (*performance*)...' (PPAP / P / BD4 / Line 88)
3. 'I think it (*pre-performance anxiety*) increases it (*performance*)...' (PPAP / P / AG1 / Line 63)
4. 'I think some nerves or anxiety prior to is good otherwise if you don't have that then you're not really bothered at all about the competition so I'd be worried if I wasn't stressed slightly prior to a competition.' (PPAP / P / AG13 / Line 91 – 94)
5. 'If one were to consider excitement as a form of anxiety then definitely it improves the quality of the performance.' (PPAP / P / AG2 / Line 72 – 73)
6. '...I try to use the nerves and adrenaline to do better. I remember how many times I have done my routines successfully and use this as encouragement.' (PPAP / P / AG26 / Line 46 – 47)

- **Negative (PPAP / N)**

1. 'I think (it) decreases (*referring to performance*).'

- **Positive and Negative (PPAP / PN)**

1. 'It's done both before, it just depends on the role and the demands it has on your body...how hard it is.' (PPAP / PN / BD5 / Line 94 – 95)
2. Increases (*performance*): Experiencing a positive feeling of being 'psyched up' with adrenaline. Excitement leading to a drive to perform / compete. Feel the adrenaline and have more power on some apparatus. Decreases (*performance*): Negative physical and mental symptoms affecting the individual's focus on the performance / competition, which affects the standard of performance / competition. Loss of focus allowing for intrusive

thinking centered on worry, causing low self-esteem and a weak performance / competition. Tighten up on apparatus such as pommel which causes loss of balance.’ (PPAP / PN / AG26 / Line 63 – 69)

- **Anxiety Management (PPAP / AM)**

1. ‘By practicing things that I find hard before I go on and being calm in the wing, some quiet time.’ (PPAP / AM / BD5 / Line 73 – 74)
2. ‘I like to have felt the stage, so not in the studio rehearsal...’ (PPAP / AM / BD7 / Line 82 – 83)
3. ‘...I know that I’m getting nervous and I know that as long as I control it, I can use it as an advantage.’ (PPAP / AM / BD4 / Line 69 – 70)
4. ‘...it’s just learning how to control it (*pre-performance anxiety*) and I think you learn that with time...’ (PPAP / AM / AG13 / Line 72 – 73)
5. ‘...you’ve got to try and keep relaxed so that you don’t mess it up for the competition.’ (PPAP / AM / AG13 / Line 74 – 75)

Category G: Pre-Performance Anxiety and Maturity (PPAM)

- **High Personal Standards (PPAM / HPS)**

1. ‘After being injured the standards I set for myself were much lower probably not as ambitious and in class the standards were just getting through class so my standards and my goal was to get through class...On stage was to get my confidence back so I feel confident onstage.’ (PPAM / HPS / BD5 Line 5 – 9)
2. ‘Yes definitely (*high standards will change with maturity*).’ (PPAM / HPS / BD5 / Line 17)

3. ‘...now I’m there (*Principal position*), it’s harder that those goals are not so open ended and it’s because you don’t have that reward of a promotion at the end of the season as a mark against ‘right well I’ve done that and achieved that’, I feel it’s almost harder because it’s personal benchmarks that you set and they are not so quantifiable.’ (PPAM / HPS / BD7 / Line 5 – 9)
4. ‘...now as principal you sort of expect more from yourself but I think it’s strange as well because you beat yourself up because you think you should be at that certain level and when you don’t it could be detrimental.’ (PPAM / HPS / BD7 / Line 12 – 14)
5. ‘I think, I don’t know I mean it’s (*high standards*) I’d imagine along the way it’s going to be influenced by other things in life and maybe they will have an effect...’ (PPAM / HPS / BD7 / Line 17 – 18)
6. ‘I hope not (*high standards changing with maturity*).’ (PPAM / HPS / BD2 / Line 8)
7. ‘I think if anything it (*high standards*) will increase.’ (PPAM / HPS / BD4 / Line 15)
8. ‘Probably when I was younger I didn’t have as high standards. It was only when I kind of reached my first European final and got a medal that I realized that I needed to improve a bit further to be able to get medals on world stages so my training changed after that competition.’ (PPAM / HPS / AG13 / Line 6 – 9)
9. ‘I think that they (*high standards*) will change positively...’ (PPAM / HPS / AG2 / Line 7)

10. 'At a more mature level one understands better where they can improve and where they cannot, so you set the standards accordingly.' (PPAM / HPS / AG2 / Line 21 – 22)
11. 'Positively (*high personal standards changing with maturity*).' (PPAM / HPS / AG26 / Line 9)

- **Anxiety Experience (PPAM / AE)**

1. '...as I've matured I definitely know how to control it (*nerves*) more now and it doesn't affect my performance as much as it did when I first joined the company. It used to be really bad and it's definitely changing because I'm maturing.' (PPAM / AE / BD5 / Line 69 – 71)
2. 'Still maturing they (*pre-performance anxiety experiences*) definitely have changed for the better.' (PPAM / AE / BD5 / Line 77)
3. 'I think (it) probably stayed the same (*pre-performance anxiety experiences*).' (PPAM / AE / BD7 / Line 80)
4. 'Depends on what I'm doing. Certain roles have certainly I'd said have stayed the same (*pre-performance anxiety experience*)...' (PPAM / AE / BD2 / Line 57)
5. 'Yes, when I was very young I used to get very nervous but now I actually quite like the nerves before hand because it brings adrenaline.' (PPAM / AE / BD4 / Line 64 – 65)
6. 'I guess they've (*pre-performance anxiety experience*) decreased...' (PPAM / AE / BD4 / Line 69)
7. '...I think I've matured and can control it (*pre-performance anxiety experience*) and use it.' (PPAM / AE / BD4 / Line 88)

8. 'I think it will decrease because as you mature you have done more competitions and know how to handle your nerves, you know how to deal with the situation rather than when you were younger.' (PPAM / AE / AG1 / Line 50 – 52)
9. 'Probably decreased for me. You learn how to cope with it and strategies to cope with it.' (PPAM / AE / AG13 / Line 78)
10. 'Definitely has decreased, I think that as I have matured, I have become more confident in myself, along with my position within the sport...' (PPAM / AE / AG2 / Line 55 – 56)
11. 'I still get nervous, because the competitions mean more and I feel that I have a reputation to live up to.' (PPAM / AE / AG26 / Line 50 – 51)

- **Performance Targets and Goals (PPAM / PTG)**

1. 'But as my injury got better the goals changed again, then it was to push myself in class to get more out of my body and on stage was to work on my stage presence and stamina and be more ambitious.' (PPAM / PTG / BD5 / Line 9 – 11)
2. 'In the beginning probably not (*realistic goals*) but as I matured there's changing, much more realistic now because I know what I can do and know my limits.' (PPAM / PTG / BD5 / Line 13 – 14)
3. '...I mean I think was quiet interesting when I was working my way up in the company, it was always to be principal and that was sort of an easy goal to set but for over the last few years now I'm there, it's harder that those goals are not so open ended...' (PPAM / PTG / BD7 / Line 3 – 6)

4. ‘They (*goals*) wouldn’t change I don’t think based on one thing or the other. I always try and do the best I can.’ (PPAM / PTG / BD2 / Line 4 – 5)
5. ‘I think I always try and maintain a high standard. Whether it happens or not I think it depends on probably how your career is going, how your life is changing.’ (PPAM / PTG / BD2 / Line 8 – 9)
6. ‘I work quite hard at it (*pursuing goals*) sometimes, especially when I was younger, found I was so critical of myself that it lead to me getting quite depressed and not being as good as I wanted to be, but now I’m a bit more mature and I take it with a pinch of salt and a bit more relaxed and I do enjoy it.’ (PPAM / PTG / BD4 / Line 19 – 22)
7. ‘...as one matures, they begin to understand their limitations and strengths, therefore be able to re-form their goals to better fit their current position (i.e. they become more realistic).’ (APP / FEPPS / AG2 / Line 7 – 9)

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