Parental Pressure, Anxiety, and Performance Among Age Group Swimmers

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PARENTAL PRESSURE, ANXIETY, AND PERFORMANCE AMONG AGE GROUP SWIMMERS

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
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in

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by

Timothy M. Dasinger
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ABSTRACT

Background/Purpose

Parents introduce children to youth sport and can increase a child’s level of enjoyment in the sport. However, parents can also place too much pressure on the child, which can lead to increased pre-competition anxiety and decreased performance (Bois, Lalanne, & Delforge, 2008; Scanlan & Lewthwaite, 1984). The purpose of this study was to examine the relationships among perceived and desired parental pressure, pre-competition state anxiety, subsequent performance, and intention to continue the sport in youth swimmers ages 9-18.

Method

A sample of 43 swimmers (17 male, 26 female; $M=12.8 \pm 2.6$ years) on a United States Swimming (USS) sanctioned club team in a mid-sized Southern city participated in this study. These swimmers completed the directive behavior scale of the Parental Involvement in Sport Questionnaire (PISQ) in the days preceding a swim meet. Variables analyzed in the PISQ include perceived pressure, desired pressure and the discrepancy between perceived and desired pressure for each parent. Immediately before the swimmer’s first race of this meet, each athlete completed the Competitive State Anxiety Inventory-2 Modified for Children (CSAI-2C); the swimmer’s performance from this first race was compared to the previous personal best of the athlete to develop a performance time-ratio. After the meet concluded, each swimmer declared his or her intention to continue swimming past this year.

Analysis/Results

Bivariate correlations and regressions were run to analyze the questionnaires. Discrepancy of father’s pressure (b=0.277, $p=.021$) and self-confidence (b=-.374, $p=.004$) were significant predictors of cognitive anxiety in a regression analysis. In separate regression
analyses, cognitive anxiety predicted intention to continue (b = -0.066, p = 0.036); the more cognitive anxiety a swimmer experiences, the less likely that swimmer will intend to continue swimming and age was the only significant predictor of performance (b = 0.012, p < 0.001).

Conclusions

Results indicate the importance of working with parents to learn appropriate supportive behaviors when interacting with their children in sport settings and working with parents and coaches to develop programs to reduce cognitive anxiety in children participating in sport.
INTRODUCTION

Sport participation has a variety of physical (Paffenbarger, Morris, Haskell, Thompson, & Lee, 2004), psychological (Holt, Kingsley, Tink, & Scherer, 2011; Howie, Lukacs, Pastor, Reuban, & Mendola, 2010), and social benefits for children (Findlay & Coplan, 2008; Zarrett et al., 2009). Physical benefits of sport involvement include a reduced risk of cardiovascular heart disease, obesity, and certain cancers (Paffenbarger et al., 2004). While the physical gains, such as increased health and fitness, are more obvious, a young athlete can also develop skills such as leadership and teamwork (Smoll, Cumming, & Smith, 2011). In addition, youth sport can be a means of social interaction and integration and can even create tighter family bonds (Heinemann, 2005; Smoll et al., 2011). Given the range of benefits associated with youth sport, it is important to examine reasons that children may continue or stop participation. A variety of variables including physical ability and pressure have been associated with attrition from youth sport (Burton & Martens, 1986). Parents’ attitudes and behaviors may influence these factors by increasing their children’s anxiety levels.

Literature Review

Adherence

Persisting in not only youth sport, but also physical activity has many benefits such as increased cardiovascular health and boosted self-esteem (Smith & Smoll, 2004). Mothers and fathers can have an influence on a child’s abiding in being physically active; parents that are physically active will more likely have children that are prone to being physically active (Sallis & Owen, 1999).
The main reason a child participates and remains in a sport is enjoyment (Scanlan & Lewthwaite, 1984). Although competitive success in youth sport may be important to some individuals, researchers have found that most youth sport athletes endure in athletics because it is enjoyable (Côte, Baker, & Abernethy, 2003). Although placing too much emphasis on winning seems as if it would be the most common reason children drop out of sport, Gould and colleagues (1982) found that this only accounted for 16% of athletes quitting. The researchers also found that the main reason for dropping out was having too many things to do. Other motives for attrition include inferior ability in the sport as well as lack of fun (Gould, Feltz, Horn, & Weiss, 1982; Klint & Weiss, 1986). In addition, Klint and Weiss (1986) found that youth athletes dropped out because too much pressure was placed upon them by their parents. Youth sport participants prefer to be supported by their parents rather than being pressured to perform at a higher level (Knight, Boden, & Holt, 2010).

In sport psychology, intention is frequently measured as a means of predicting future behavior (Azjen, 1985). However, in this study, intention was used to determine an individual’s intent to continue competing in the sport after this year, actual adherence to the sport was not measured.

Anxiety

Anxiety, a psychological concept that has been extensively studied in the field of exercise and sport psychology, is an undesirable construct that has been defined as an individual’s reaction to a stressful situation (Spielberger, 1966). Reacting to worrying circumstances is especially important in sport competition because a great amount of stress could be placed on performance under pressure. Anxiety was first conceptualized and accepted into literature as a one-dimensional model (Kais & Raudsepp, 2005). However,
starting in the 1950’s, researchers started dividing anxiety into a multidimensional concept. Anxiety has first been divided into trait and state anxiety. Trait anxiety has been defined as an individual’s existing predisposition to evaluate situations as threatening (Spielberger, 1966). Trait anxiety is perceived as a personality characteristic. On the other hand, state anxiety has been defined as anxiety that is temporary and is a response to a specific, threatening situation (Spielberger, 1966).

Furthermore, state anxiety has been divided into cognitive and somatic parts. Cognitive anxiety has been defined as the mental component of anxiety, and is caused by negative expectations about success or by negative self-evaluation (Craft, Magyar, Becker, & Feltz, 2003). This definition hints at an inverse relationship between cognitive anxiety and performance. Because expectations of success may change at any point during competition, cognitive anxiety is a more powerful mediator of performance while competition is ongoing (Craft et al., 2003). Gould, Petlichkoff, and Weinberg (1984) found cognitive anxiety to be a better predictor of performance than somatic anxiety in wrestlers. As expected, the researchers found a negative relationship between cognitive anxiety and wrestling performance. In addition, research by Burton (1988) demonstrated the powerful impact of expectations on performance. He also found a significant, negative relationship between cognitive anxiety and performance in swimmers. The more cognitive anxiety a swimmer had, the worse the swimming performance. Cognitive anxiety is also more consistently and strongly related to performance than somatic anxiety (Craft et al., 2003). Cognitive anxiety directly interferes with ongoing thought processes, which can significantly reduce performance (Burton, 1988). In addition, cognitive anxiety also deals with the consequences
of failure, negative self-evaluation; evaluation of one’s ability compared to others, the inability to focus and concentrate, and disrupted attention (Kais & Raudsepp, 2005).

On the other hand, somatic anxiety is defined as the physiological and affective elements of the anxiety experience that develop directly form autonomic arousal (Craft et al., 2003). Somatic anxiety is said to affect performance in a curvilinear fashion; both lower and higher levels of somatic anxiety are detrimental to performance. Somatic anxiety is thought to have less of an influence on performance because it is likely to reach its peak at the onset of competition and attenuates once the competition has begun (Craft et al., 2003). Somatic anxiety should only interfere with performance if arousal becomes excessive so that attention is diverted away from the competition (Burton, 1988). In addition to cognitive and somatic anxiety, self-confidence is thought to be the third subcomponent of state anxiety. Each individual has a different level of self-confidence that envelops the athlete’s global perceptions of confidence. Research has proposed a positive linear relationship between self-confidence and performance (Craft et al., 2003). The more self-confidence an athlete has, the better the performance will likely be. A hierarchy of anxiety is presented in Figure 1.

**Parental Influence**

More recently, parental influences on athletes have become a focus in youth sport research. Coaches in youth sport have commented that family is often detrimental to the athlete’s performance and conduct (Hellstedt, 1987). The demands of youth sport have been rapidly increasing; and as a result, parental stress on the young athlete has also been intensifying (Wiersma & Fifer, 2008).

In most cases, the parent acts as the main socializing agent and sparks the interest of the child and registers the child for a particular sport (Passer & Wilson, 2002). After this
initial enrollment, the parent will also have an influence on the athlete’s decision on whether to continue or quit the sport (Passer & Wilson, 2002). Parental influence can be a valuable resource in the realm of youth sports (Lindner, Johns, & Butcher, 1991). For example, the parents can provide transportation, funds for the sport, and the much needed emotional support to the youth athlete. However, parental influence can also hinder the athlete’s development and adherence to athletics and physical activity (Lindner et al., 1991). Many studies in the past have revealed that youth athletes and their parents have very different views about what behaviors are supportive. Youth athletes usually considered their parents’ behaviors to be at a higher level of pressure than did the parents themselves (Kanters, Bocarro, & Casper, 2008).

Hellstedt (1987) portrayed parental influence on a continuum that ranges from underinvolved to overinvolved with moderately involved in between. Moderately involved parents encourage the best interest of the child. Underinvolved parents may not show any interest in the child’s participation and therefore lack the emotional support that a youth athlete requires. Children with underinvolved parents are susceptible to dropping out of the sport due to their parents’ inattention. On the other hand, athletes with overinvolved parents perceive very high levels of parental attention and pressure (Hellstedt, 1987). Because of these pressures, these athletes often deal with outcomes of pressure such as lowered self-esteem, guilt, distress, and even burnout (Donnelly, 1993). Parents can be perceived as supportive and help to aid the athlete’s enjoyment in the sport. On the other hand, parents can also be detected as providing too much pressure and contribute to precompetition anxiety (Stein, Raedeke, & Glenn, 1999).
Parents can help contribute to the enjoyment of youth sport; Fraser-Thomas and Côté (2009) found that parental support and enjoyment lead to an increased amount of enjoyment. Also, a child that receives encouragement from his/her parents is more likely to stay in the sport for a longer period of time. However, if the parent did not have any justifiable experience in the same sport, then the youth sport participant does not want methodological advice from the parent (Horn & Horn, 2007). Too much parental pressure can negatively affect a child’s enjoyment in youth sport. As the amount of parental pressure increases, an athlete’s enjoyment decreases (Anderson, Funk, Elliot, & Smith, 2003). Moderately involved parents have children with high levels of enjoyment than do overinvolved and underinvolved parents.

Youth sport athletes may not view involvement of parents equally (Brustad, Babkes, & Smith, 2001). Although both parents can influence their child, fathers have been shown to push the athlete more than the mother (Wuerth, Lee, & Alfermann, 2004). They are more likely to push the athlete to work harder and to compete at a higher capacity. Mothers, on the other hand, are more likely to be the nurturing, caring parent in youth sports (Wuerth et al., 2004). When mothers are not pressuring the youth athlete, the level of enjoyment for the partaker increases (Scanlan & Lewthwaite, 1984).

**Parents and Anxiety**

Anxiety in a child can generate negative consequences for the child’s functioning (Gosch, Flannery-Schroeder, Mauro, & Compton, 2006). Beidel and Turner (1997) found anxiety to be inherited from parents. Although allocated genetically, parents can intensify the amount of anxiety a child perceives by anxious rearing. Anxious rearing is a term coined by Rachman (1977) used to describe parents that describe pedestrian situations as threatening,
overtly express their own anxiety, and promote avoidance of coping strategies (Muris, Meesters, & van Brakel, 2003; Wood, McLeod, Sigman, Hwang, & Chu, 2003). In addition to anxious rearing, parents can also increase child anxiety by trying to control the child’s activities (Rapee, 1997). This overprotection has been found to restrict the child’s opportunities to explore the outside environment and will ultimately lead to a higher level of perceived anxiety (Barlow, 2002).

Also, parents that are perceived as being overly involved can also lead to an increase in precompetition anxiety, which in turn can lead to decreased performance. Scanlan and Lewthwaite’s (1984) study on youth wrestlers was one of the first studies to look at the effects of parental influence on precompetitive anxiety. In this study, the researchers found that an increase of parental pressure to compete lead to an increase in precompetition anxiety (Scanlan & Lewthwaite, 1984). This finding has been replicated by Gould, Eklund, Petlichkoff, Peterson, and Bump (1991) in youth wrestlers and by Bois, Lalanne, and Delforge (2008) with youth swimmers. In this study only cognitive anxiety and state self-confidence were examined as somatic anxiety has been shown to have a stronger relationship with performance. In addition, somatic anxiety disappears after competition has begun; for these reasons, somatic anxiety was not thoroughly observed (Craft et al., 2003).

**Purpose**

The purpose of this study is to examine the relationships among perceived and desired parental pressure, precompetition state anxiety, subsequent performance, and intention to continue the sport in youth swimmers ages 9-18. There have been few studies that have examined the relationship between parental pressure and precompetitive anxiety. In addition, even fewer studies have included performance as a variable. My first hypothesis for
this study is that individuals that perceive higher levels of perceived pressure will experience higher levels of precompetition cognitive anxiety. Also, I hypothesize that participants who experience higher levels of cognitive anxiety will not perform to the best of their ability and will have lower relative performance. Lastly, I hypothesize that athletes that experience higher amounts of cognitive anxiety and do not perform as well as expected will be less likely to continue swimming.
METHOD

Participants

A sample of 43 swimmers (17 male, 26 female) on a United States Swimming (USS) sanctioned club team in a midsized Southern city was used in this study. The ages of the swimmers range from 9-18 years ($M=12.8 \pm 2.6$ years). IRB approval was received for this study. Parental consent was given for each participant before the study began; all swimmers also provided assent.

Procedure

One Parental Involvement in Sports Questionnaire (PISQ) per athlete was distributed and completed during the week of an important, competitive swim meet. In addition, each athlete completed one Competitive State Anxiety Inventory-2 modified for children (CSAI-2C) the day of the meet before the athlete’s first swim. Performance from this first race was used to develop the time-ratio. The week following the meet, each swimmer documented his/her intention to continue the sport.

Measures

Parental influence

The athlete completed the PISQ (Lee & MacLean, 1997) to determine the perceived and desired behaviors of the parent. This tool was dispersed at swim practices the week of a swim meet. This questionnaire was developed by Lee and MacLean (1997) and initially used on youth swimmers. The original version of the PISQ contained 33 questions assessing three dimensions of parental involvement: Active involvement, praise and understanding, and directive behaviors (Lee & MacLean, 1997). The directive behavior scale has been found to be the most valid and reliable (Bois et al., 2009). For this study, only the 10-item Directive
Behavior Scale will be used. This adjusted scale was used by Bois et al. (2009) and again by O’Rourke and colleagues (2011) based on the findings from Lee and MacLean (1997).

This questionnaire contains ten questions about the athlete’s perceived parental behavior and their desired parental behavior. For each question, the athlete is asked about the behaviors of each parent (e.g. After a poor race, do your parents point out things they think you did badly). The athlete chose how they perceived both the mother and the father’s behaviors based on the scale: 1 (always), 2 (quite often), 3 (sometimes), 4 (hardly ever), and 5 (never). For each question, the athlete also answered how he or she desires his or her mother and father’s behavior on the same scale (Lee & MacLean, 1997). All ten questions of this measure ask about the directive behaviors of the athlete’s parents. Upon completion, all of the perceived and desired behaviors were summed for each parent individually to create four scales. Lower numbers of both perceived and desired behaviors correspond with higher levels of either perceived or desired pressure. To avoid confusion, all totals were reversed scored. Discrepancy between perceived and desired behaviors was calculated by subtracting the reversed desired pressure score from the reversed perceived score.

State anxiety

Each athlete also completed one CSAI-2C on competition day prior to the individual’s first race. This version was revised from the original to be comprehensible for children as young as 8 years old (Stadulis, MacCracken, Eidson, & Severance, 2002.) This revised instrument measures somatic anxiety, cognitive anxiety and self-confidence through 15 questions, five for each subdivision of anxiety. Each question is set to a four-point Likert scale (1-not at all, 2- somewhat, 3-moderately so, and 4- very much so). The directions articulate that the athlete will answer each question to describe his or her feelings right before
competition (Stadulis et al., 2002). Scores range from 5 to 20 for each subscale. Higher scores indicate higher intensities for both cognitive and somatic anxiety and also higher levels of self-confidence. Acceptable validity and reliability have been affirmed for this questionnaire (Stadulis et al., 2002).

**Intention**

After the meet, a one-item questionnaire measuring intent to continue the sport was completed. The question posed was “After this meet, how likely are you to continue swimming competitively?”. This item was asked on a 5-point Likert scale (1- *extremely unlikely*, 2- *not very likely*, 3- *unsure*, 4- *likely*, and 5- *extremely likely*).

**Performance**

Competitive swimming was defined by Terret (2005) as a sport that involves an individual traveling a specific distance on the surface of the water with a specific, technical movement in harmony with rules and regulations of the sport in the shortest time possible. Swimming performance is a physically demanding sport that is a combination of explicit techniques, coordination, flexibility, strength, physical fitness and conditioning, and psychological prowess (Bishop & Girard, 2013; Gardner & Moore, 2006; Olbrecht, 2000).

Each swimmer’s previous personal best (PB) was compared to his/her performance in the individual’s first race in which the measure of state anxiety was completed. Meet times (MT) were divided by the swimmer’s PB to develop a time-ratio. This ratio was used to take into consideration the differences in competition distances. A smaller time-ratio indicated that a participant swam a better time in the meet relative to his/her personal best. This swim meet was competitive and significant to the swimmers.
**Statistical Analyses**

Descriptive statistics including means and standard deviations were calculated for all variables. A correlation matrix was created to examine bivariate relationships between the variables. T-tests were also run to assess differences in parental pressure. Finally, three regression models were run to examine the relationships between 1) parental pressure and state anxiety, 2) state anxiety and performance, and 3) state anxiety and intention to continue. Age of swimmer and gender were entered as control variables in all regression models.
RESULTS

Descriptive statistics for each variable are displayed in Table 1 below. The means score for each variable, as well as the standard deviation of each variable is presented. Frequencies were examined for discrepancy between perceived and desired pressure from each parent. Based on the discrepancy scores, 60.5% of swimmers were found to desire less pressure from their mothers, 20.9% were satisfied with the amount of pressure given from mothers, and 18.6% would prefer more pressure from their mothers. On the other hand, 55.8% of youth swimmers would prefer less pressure from their fathers. Also, 20.9% of individuals were satisfied with the amount of pressure perceived from their fathers, and 23.3% of swimmers would like fathers to place more pressure on them.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>12.84</td>
<td>2.65</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>11.21</td>
<td>3.37</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>13.65</td>
<td>3.80</td>
</tr>
<tr>
<td>Perceived Press (M)</td>
<td>25.51</td>
<td>7.15</td>
</tr>
<tr>
<td>Desired Press (M)</td>
<td>22.23</td>
<td>5.74</td>
</tr>
<tr>
<td>Perceived Press (F)</td>
<td>27.14</td>
<td>7.77</td>
</tr>
<tr>
<td>Desired Press (F)</td>
<td>24.63</td>
<td>7.63</td>
</tr>
<tr>
<td>Intention</td>
<td>4.65</td>
<td>.613</td>
</tr>
</tbody>
</table>

Paired sample t-tests were then run to analyze differences in pressure between parents. There was a significant difference between perceived and desired pressure from mothers ($t=3.474$, $p = .001$). A similar, significant difference was found for fathers ($t = 3.99$, $p < .001$). With regard to discrepancy between perceived and desired pressure, there was no significant difference between parents ($t = -.405$, $p = .688$).

Next, bivariate correlations were performed; results from these analyzes can be found in Table 2. Cognitive anxiety was found to be negatively correlated with intent to continue
swimming ($r_{(41)} = -.425, p = .005$) and positively correlated to discrepancy for both mothers and fathers ($r_{(41)} = .302, p = .049; r_{(41)} = .426, p = .004$, respectively). Performance (time-ratio) was significantly correlated with both perceived pressure from mother and discrepancy for mother ($r_{(41)} = .361, p = .017; r_{(41)} = .431, p = .004$, respectively).

<table>
<thead>
<tr>
<th>Table 2 Bivariate Correlation Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR, CA, SC, Int, PM, PF, DM</td>
</tr>
<tr>
<td>CA</td>
</tr>
<tr>
<td>SC</td>
</tr>
<tr>
<td>Int</td>
</tr>
<tr>
<td>PM</td>
</tr>
<tr>
<td>PF</td>
</tr>
<tr>
<td>DM</td>
</tr>
<tr>
<td>DF</td>
</tr>
</tbody>
</table>

Note. TR= time-ratio (performance), CA= cognitive anxiety, SC= self-confidence, Int= intention, PM= perceived pressure from mother, PF= perceived pressure from father, DM= discrepancy between perceived and desired pressure from mother, DF= discrepancy between perceived and desired pressure from father. *p<.05.

In a regression analysis, discrepancy of father’s pressure, age, and gender remained significant in predicting cognitive anxiety as shown in Table 3. About 50% of the variance was explained ($R^2 = .504$). For every unit increase in discrepancy of father’s pressure, there will be a .277 unit predicted increase in cognitive anxiety. With respect to self-confidence, for every unit increase in self-confidence, there will be a .374 unit predicted decrease in cognitive anxiety. Females had higher average cognitive anxiety scores than males, but not at a significant level.
Table 3 Regression Analysis Predicting Cognitive Anxiety

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrepancy Mother</td>
<td>-.189</td>
<td>-.347</td>
<td>.123</td>
</tr>
<tr>
<td>Discrepancy Father</td>
<td>.277</td>
<td>.115</td>
<td>.021*</td>
</tr>
<tr>
<td>Age</td>
<td>.312</td>
<td>.245</td>
<td>.089</td>
</tr>
<tr>
<td>Gender</td>
<td>1.092</td>
<td>.160</td>
<td>.276</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>-.374</td>
<td>-.423</td>
<td>.004*</td>
</tr>
</tbody>
</table>

Note. $R=.710$, $R^2=.504$, standard error of the estimate $= 2.530$.
*p<.05.

In addition, as exhibited in Table 4, age was established to be the only significant predictor of performance (time-ratio). Nearly 30% of the variance was explained ($R^2=.297$) in this model. For every year increase in age, there was a .012 increase in time-ratio. Neither gender nor cognitive anxiety was found to significantly predict performance.

Table 4 Regression Analysis Predicting Performance (Time-Ratio)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.012</td>
<td>.597</td>
<td>.000*</td>
</tr>
<tr>
<td>Gender</td>
<td>.017</td>
<td>.157</td>
<td>.280</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>-.004</td>
<td>-.286</td>
<td>.076</td>
</tr>
</tbody>
</table>

Note. $R=.545$, $R^2=.297$, standard error of the estimate $= .0459$.
*p<.05.

Cognitive anxiety was found to be a significant predictor of intention (see Table 5 below). About 20% of the variance was explained in this analysis ($R^2=.193$). For every unit increase in cognitive anxiety, there will be a .066 predicted decrease in intention. Age and
gender were not found to be significant predictors of intention after running regression analyses.

Table 5 Regression Analysis Predicting Intention

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.013</td>
<td>-.058</td>
<td>.717</td>
</tr>
<tr>
<td>Gender</td>
<td>-.138</td>
<td>-.111</td>
<td>.472</td>
</tr>
<tr>
<td>Cognitive Anxiety</td>
<td>-.066</td>
<td>-.365</td>
<td>.036*</td>
</tr>
</tbody>
</table>

Note. $R=.439$, $R^2=.193$, standard error of the estimate=.5712.  
* $p<.05$.  

* $p<.05$.  


DISCUSSION

The results from this study found that youth swimmers perceive more pressure than they desire; this finding is consistent with previous research (Kanters et al. 2008). Although these youth athletes perceived a larger discrepancy in pressure from their mothers, there was no significant difference between the discrepancy in pressure of the two parents. Placing too much pressure on youth sport athletes can decrease the child’s level of enjoyment and increase precompetition state anxiety, which in turn, can lead to the athlete withdrawing from the sport (Anderson et al., 2003; Gould et al., 1991).

Congruent with the first hypothesis, perceived pressure from fathers was found to be the best predictor of precompetition cognitive anxiety. This supports the first hypothesis that stated higher levels of perceived pressure would lead to amplified intensities of pre-competition anxiety. Previous research has discovered that pressure from parents can lead to an increase in anxiety, but these studies did not attribute the pressure to a specific parent (Bois et al., 2008; Gould et al., 1991; Scanlan & Lewthwaite, 1984). In addition, self-confidence was found to be a significant predictor of cognitive anxiety. This makes sense as state self-confidence was developed as a subdivision of state anxiety through a factor analysis, in which the items that measured self-confidence were originally used as means to measure cognitive anxiety through positively worded items (Martens, Vealey, & Burton, 1990). Cognitive anxiety was also found to be positively correlated with discrepancy in pressure for both parents. The larger the discrepancy between perceived and desired parental pressure, the higher the cognitive anxiety was for that swimmer. Increased state anxiety due to parental pressure was previously reported by Scanlan and Lewthwaite (1984), Gould and colleagues (1991), and Bois et al. (2008).
In addition, it was hypothesized that higher levels of cognitive anxiety would lead to an individual swimming a slower time than his/her previous best time. This proposition was based on findings from Craft and contemporaries (2003). However, there was no evidence to support this hypothesis in this study. Age was found to be the only significant predictor of swimming performance; the younger the swimmer, the more likely the athlete would swim a personal record. This may be due to growth and development of the older swimmers. As a swimmer matures, the athlete must adapt his or her swimming stroke to his or her anthropometric developments (Lätt et al., 2009). Also, with regard to performance, there was a positive correlation between perceived pressure of mothers and time-ratio. The more pressure a swimmer perceived, the slower the athlete would swim. This direct correlation was also found with discrepancy between perceived and desired pressure of mothers and time-ratio. It did no remain significant in the regression equation.

In this study, cognitive anxiety was also found to be a good predictor of an individual’s intent to continue swimming. This is a novel finding that supports the third hypothesis that stated increased levels of increased anxiety would be associated with a swimmer that is more likely to abandon the sport. Also, females indicated significantly higher levels of state anxiety than the males in the sample. Previous research supports that internalizing disorders are higher in females (Bourdon et al., 1988; McLean & Anderson, 2009; Weissman & Merikangas, 1986).

Limitations

A limitation of this study was the sample size; the number of participants was much lower than expected. This could have affected the power of the statistics. For example, there were a few variables that were almost significant, and with a larger sample size, these factors
could have been considerable. Another limitation to this study was that intent to continue was measured and not adherence. Since this study was completed before the start of the next swimming season, adherence to the sport could not have been measured. Finally, only one sport was measured.

**Practical Implications**

With the results of this study, swimming coaches and others can effectively educate parents and remind them of their roles in the sport. The main role of the parent is to support his or her child no matter the ability level of the swimmer or outcome of a competition. Since children perceive more pressure than they would desire from both parents, this is possibly the most important message that needs to be offered to all parents of youth athletes. Furthermore, swimmers who suffer from increased levels of state anxiety can resort to many safe options to help alleviate this precompetitive stress. For example, mental imagery (Cumming, Olphin, & Law, 2007; Mousavi & Meshkini, 2011), positive self-talk (Gourzi, Filippou, Kagioiri, & Zourbanos, 2007; Hatzigeorgiadis & Biddle, 2008), and talking to a certified sport psychologist are all effective methods of reducing anxiety in sport.

**Further Research**

In this study, only state anxiety was evaluated; further research should examine the relationship between trait anxiety and performance. With regard to anxiety, relationships between parental anxiety and child anxiety in sport should be researched. Another recommendation for further research includes measuring motivational climate of each individual and his or her desired and perceived parental pressure. Because only intention was measured to predict future swimming participation, actual adherence to the sport should be
examined in future research. Finally, interventions aimed at lowering anxiety and parental pressure for coaches and parents should be designed and tested.
REFERENCES


APPENDIX A
FIGURE

Figure 1. Hierarchy of anxiety as used in sport psychology.
APPENDIX B
IRB APPROVAL

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research projects involving humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This form helps the PI determine if a project may be exempted, and is used to request an exemption.

-- Applicant, Please fill out the application in its entirety and include the completed application as well as parts A-F, listed below, when submitting to the IRB. Once the application is completed, please the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at https://www.lsu.edu/vp/curd/human-subjects-screening-committee-members/

-- A Complete Application Includes All of the Following:
(A) A copy of this completed form and a copy of parts B thru F.
(B) A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)
(C) Copies of all instruments to be used.
   * If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.
(D) The consent form that you will use in the study (see part 3 for more information.)
(E) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (http://phsp.ihbtraining.com/users/login.php)
(F) IRB Security of Data Agreement: (https://sites1.lsu.edu/vp/curd/files/2013/07/Security-of-Data-Agreement.pdf)

1) Principal Investigator: Timothy Dasinger
Dept: Kinesiology
Ph: [ ]
Rank: Graduate Student
E-mail: [ ]

2) Co-investigator(s): please include department, rank, phone and e-mail for each.
* If student, please identify and name supervising professor in this space.
Dr. Birgitta Baker, Kinesiology Assistant Professor

3) Project Title:
Influence on Performance and Enjoyment in Age Group Swimmers

4) Proposal? (yes or no) [ ]
   If Yes, LSU Proposal Number
   Also, if YES, either
   [ ] This application completely matches the scope of work in the grant
   [ ] More IRB Applications will be filed later

5) Subject pool (e.g. Psychology students) [ ]
   Participants in community swimming team ages 9-18
   *Circle any "vulnerable populations* to be used: (children ≤ 18, the mentally impaired, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature
   [ ]
   Q(1 - 1) + 4 [no per signatures]

** I certify my responses are accurate and complete. If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action: Exempted [X] Not Exempted [ ] Category/Paragraph 24

Signed Consent Waived?: Yes [ ] No [x]
Reviewer [ ] Signature [ ] Date 1/1/2017
APPENDIX C
CONSENT/ASSENT FORM

Guardian Consent Form

Study Title: Influence on Performance and Enjoyment in Age Group Swimmers
Performance Site: LSU Natatorium and SPAR Aquatic Center
Investigators: The following investigators are available for questions, M-F, 8:00 a.m.-
4:30 p.m.: Timothy Dasinger and Dr. Birgitta Baker
School of Kinesiology, LSU
(225) 578-9232
ulsia1@tigers.lsu.edu, bbaker@lsu.edu
Purpose of the study: The purpose of the study is to examine relationships among
parental support, pre-competition anxiety, enjoyment, and subsequent performance in
youth swimmers ages 9-18.
Subject Inclusion: Swimmers ages 9-18 on the competitive swimming team Tiger
Aquatics are invited to participate in this study.
Study Procedures: Your child will be asked to complete questionnaires the week of a
meet, before a race, and after a race. Each time, the questionnaires should take less than
10 minutes to complete.
Benefits: This study may yield information that could help parents and coaches increase
enjoyment and improve performance in young swimmers.
Risks: Risks for participating in this study are similar to those that your child experiences
in ordinary life.
Right to Refuse: Your child can only participate in the study if both you and your child
agree. You or the child may change your mind at any time and your child can stop
participating.
Privacy: Results of the study may be published, but no names or identifying information
will be included in the publication. Your child’s identity will remain confidential unless
disclosure is required by law.

Participant Signature: ___________________________ Date: ______________

The parent/guardian has indicated to me that he/she is unable to read or would prefer to
have the consent form read to him/her. I certify that I have read this consent form to the
parent/guardian and explained that by completing the signature line above he/she has
given permission for the child to participate in the study.

Signature of Reader: ___________________________ Date: ______________

STUDY EXEMPTED BY:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
130 David Boyd Hall
225-578-8697 / www.lsu.edu/lrb
Exemption Expires: 11/17/2017
Child Assent Form

I, ______________________, agree to be in a study to explore topics related to me and my swimming such as parental support, mood, feelings before competition, and my intention to continue the sport. I will fill out questionnaires about these topics and my swimming times will be recorded. I can stop filling out questionnaires at any time without getting in trouble.

Child’s Signature: ______________________ Age: ____ Date: ______________

Witness*: ______________________ Date: ______________

(* Witness must be present for the assent process, not just the signature by the minor.)

The participant has indicated to me that he/she is unable to read or would prefer to have the consent form read to him/her. I certify that I have read this consent form to him/her and explained that by completing the signature line above he/she has agreed to participate in the study.

Signature of Reader: ______________________ Date: ______________

STUDY EXEMPTED BY:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
130 David Boyd Hall
225-578-8692 / www.lsu.edu/irb
Exemption Expires: 1/12/2017
APPENDIX D
QUESTIONNAIRES

Parental Involvement in Sport Questionnaire

Read each statement and then make a clear circle around the appropriate number to indicate which response best reflects how you feel. You need to answer each question in the following way:

- A) How you perceive your mother's involvement in your swimming
- B) Which behavior you desire from your mother
- C) How you perceive your father's involvement in your swimming
- D) Which behavior you desire from your father

1. After a meet, do your parents tell you what they think you need to work on?

<table>
<thead>
<tr>
<th>Mother</th>
<th>Father</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>B</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

2. After a poor race, do your parents point out things they think you did badly?

<table>
<thead>
<tr>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>B</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

3. Do your parents tell you how they think you can improve your technique (starts, turns, etc.)?

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<tr>
<th>Mother</th>
<th>Father</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>B</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
4. During practice, do your parents tell you or signal to you what you should do?

<table>
<thead>
<tr>
<th>Mother</th>
<th>Father</th>
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</thead>
<tbody>
<tr>
<td>Always</td>
<td>Quite often</td>
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<tr>
<td>B</td>
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Desire

5. Do your parents yell or cheer before a game or match?

<table>
<thead>
<tr>
<th>Mother</th>
<th>Father</th>
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<tr>
<td>Always</td>
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6. Do your parents push you to train harder?

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<th>Mother</th>
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7. Do your parents get upset with you if they think your swimming is not going as well as it should?

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Desire
8. Before a race, do your parents tell you what particular things you need to work on in order to do well?

Mother                                    Father

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9. Before a meet, do your parents tell you how to swim your race?

Mother                                    Father

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10. After a race, do your parents tell you that you didn’t try hard enough?

Mother                                    Father

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CSAI-2C

Please read each statement, then circle the appropriate number to the right of the statement to indicate how you feel RIGHT NOW—at this moment. Choose the answer which best describes your feelings RIGHT NOW.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am concerned that I may not swim as well as I can today</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. My body feels tense</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I feel self-confident</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I feel tense in my stomach</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I feel secure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I’m confident I can meet the challenge of swimming well today</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I’m concerned that I will swim poorly today</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. My heart is racing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I’m confident that I will swim well today</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I am worried about reaching my swimming goal</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. I feel my stomach sinking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I’m concerned that others will be disappointed with my swimming performance</td>
<td>1</td>
<td>2</td>
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<tr>
<td>13. I’m confident because, in my mind, I picture myself reaching my goal</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>14. I’m concerned about not being able to concentrate today</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<tr>
<td>15. My body feels tight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**Intention Scale**

Please circle your answer to this question:

After this meet, how likely are you to continue swimming competitively?

<table>
<thead>
<tr>
<th>Extremely unlikely</th>
<th>Not very likely</th>
<th>Unsure</th>
<th>Likely</th>
<th>Extremely Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
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</tbody>
</table>
VITA

Timothy Dasinger, a Madison, Mississippi native, received his bachelor’s degree at Louisiana State University in 2013 while participating on the varsity swimming and diving team. Wanting to stay in the world of sport, he immediately started graduate courses in kinesiology. He expects to graduate in August 2014 with his Master’s degree and will continue being a graduate assistant in pursuit of his doctorate in the same field.