



Coaching confidence and player attrition in youth hockey

Philip Sullivan, Ph.D., & Mark Brown
Brock University, Saint Catharines, ON

Introduction

Attrition in youth sport was defined by Barnett, Smith, and Smoll (1992) as "the temporary or permanent termination of participation in a sport program" (p. 112). Researchers have estimated that 33% of participants between the ages of 10 and 17 drop out of sport every year (Lindner, Koenraad, Johns, & David, 1991).

Several studies have indicated a relationship between coaching and player attrition. Scanlan and Lewthwaite (1986) found that young male wrestlers' attrition is related to their levels of enjoyment. The same study reported that coaches' behaviours accounted for 53% of the variance in post-season assessments of player enjoyment. It has also been found that parents attribute coaches as an indirect cause of children's dropout from sports (Ferreira & Armstrong, 2002).

The impact of coaching behaviour on player attrition via coach training was demonstrated in a series of studies by Barnett, Smith and Smoll (Barnett, et al., 1992; Smith, Smoll, & Barnett, 1995; Smith & Smoll, 1997). The authors studied eighteen Little League baseball teams (18 head coaches and 152 children) from the ten to twelve year old age group. The teams were taken from two leagues; one league formed the experimental group and the other formed the control group. The coaches of the experimental group completed a preseason Coach Effectiveness Training workshop that was 2.5 hours in length. At the workshop coaches were given behaviour guidelines through didactic instruction and modelling. The coaches in the training program were also asked to focus on effort and enjoyment rather than success as shown on the scoreboard. At the conclusion of the season it was found that control-group players withdrew from sport at a much higher rate (26%) than those whose coaches were trained using the Coach Effectiveness Training program (5% dropout rate).

Coach training also has a positive effect on coach efficacy (Chase, Feltz, Hayashi, Hepler, 2005; Maleté & Feltz, 2000). Coach efficacy has been defined as the "extent to which coaches believe they have the capacity to affect the learning and performance of their athletes" (Feltz, Chase, Mortiz, & Sullivan, 1999, p. 765).

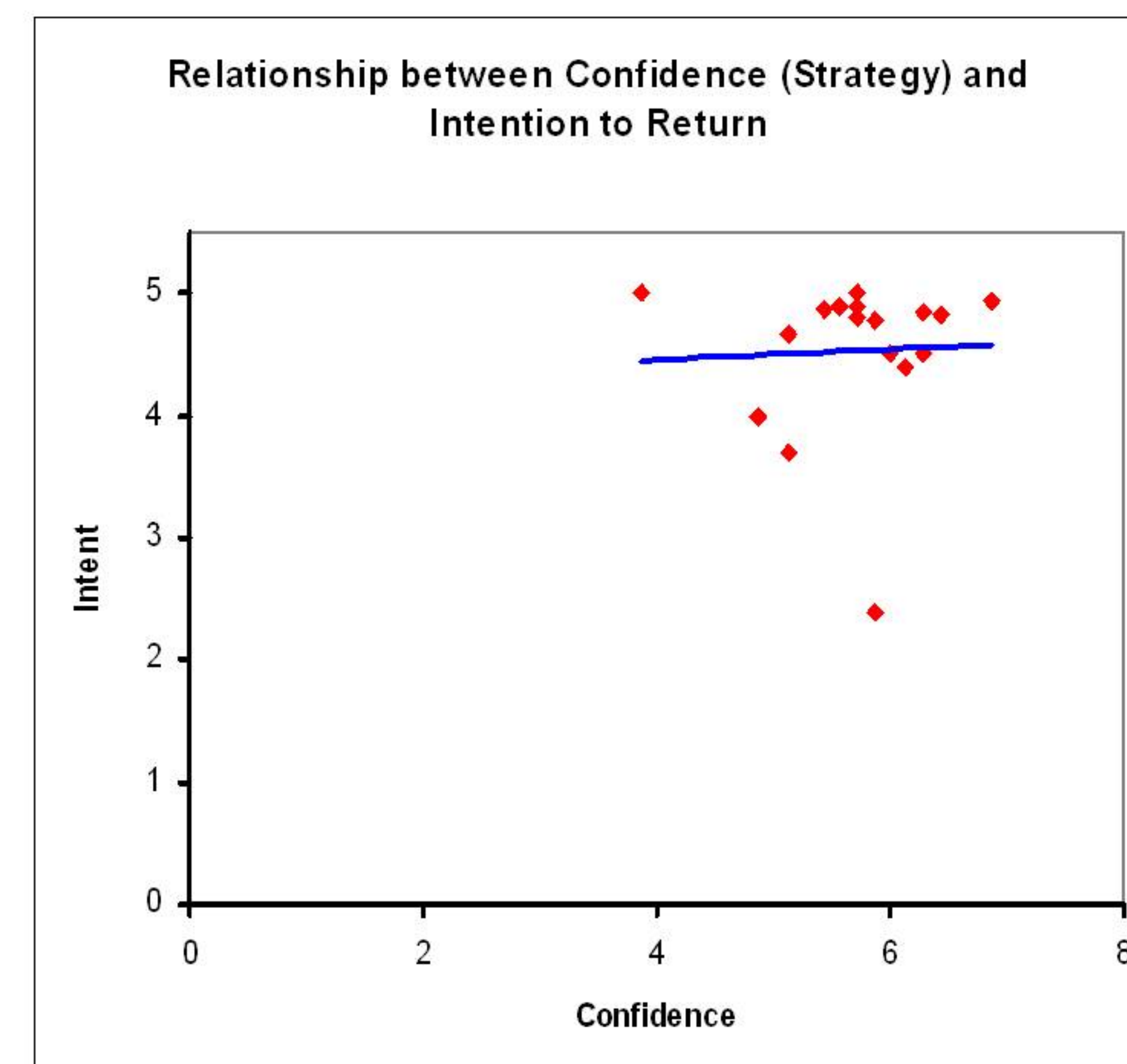
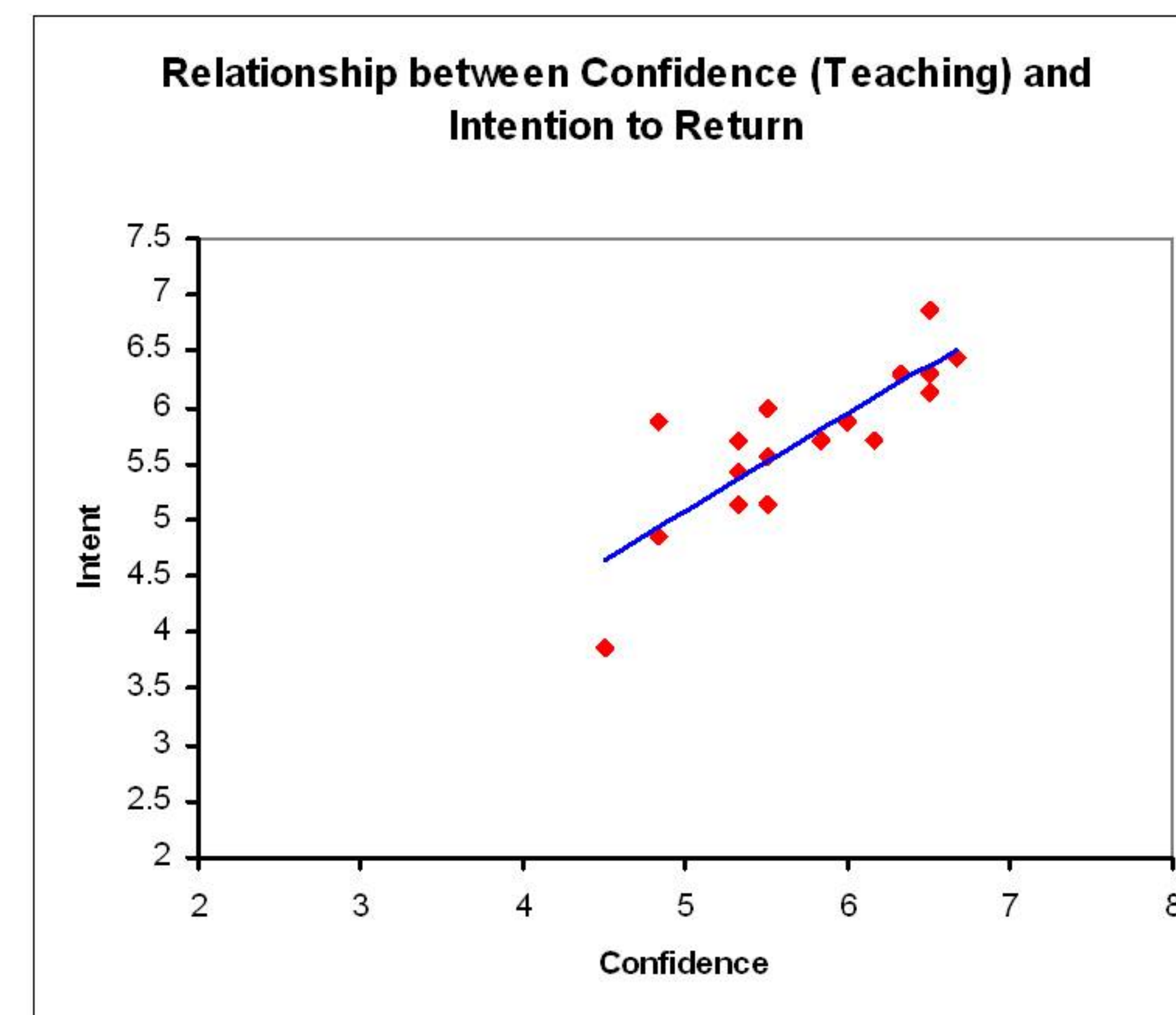
The current study is designed to explore the relationship between coaching efficacy and player attrition. The focus is on eleven and twelve year old hockey players as this has been shown to be the age where most children leave the game of hockey (Crossman, 2003). Player attrition is an ongoing concern in Canadian minor hockey and therefore we must critically examine the impact that coaches have on children who are leaving the national game.

Method

Seventeen PeeWee hockey teams in Ontario minor hockey were recruited to participate in the study. This sample comprised one hundred fifty nine (n=159) hockey players and their seventeen head coaches. All athletes were 11 or 12 years old, and coaches ranged in age from 16 to 53 years with a mean age of 41.3 years. Mean coaching experience of the coaching sample was 10.5 years ranging from 1 to 33 years with a mean playing experience of 29.9 years ranging from 7 to 43 years. Two coaches had competed at the provincial level or higher as players, one at the university/college level, and the remainder at the recreational level. The coaches had participated in 1 to 10 coaching certification or re-certification courses with an average of 3.7 courses per coach. Three coaches were certified at the NCCP Level II coaching certification level or equivalent while the remainder were certified at NCCP Level I or equivalent.

The players' questionnaire was a simple two-item questionnaire designed to measure intended attrition and the strength of that intention. Players were asked "Do you think you will play hockey again next year?" (Yes or No circled-response) and "How certain are you of this answer?" (circled-response scale of 1 to 5 with 1 being designated fairly uncertain and 5 being very certain).

The coaches were given two questionnaires. The first one was designed to give the researchers demographic information including the coach's age, experience coaching, experience playing hockey, highest level of hockey played, number of coaching courses taken, and highest coaching certification. The second questionnaire was the Coach Efficacy Scale designed by Feltz et al., (1999). The Coach Efficacy Scale measures coach efficacy in four domains (Strategy, Teaching Technique, Motivation, and Character Building) by means of a seven point Likert scale. Motivation (e.g., confidence to motivated athletes) and Strategy (e.g., confidence to recognize opponents' strategies and adapt to it during competition) were each measured by 7 questions. Teaching Technique (e.g., confidence to demonstrate the skills of your sport) was measured by 6 questions while Character Building (e.g., confidence to instill an attitude of fair play among athletes) was measured by 4 questions. Each question on the Coach Efficacy Scale has the same stem question: "how confident are you in your ability to..." and responses range from "Not at all confident" (1 on the Likert scale) to "extremely confident" (7 on the Likert scale). All factors showed acceptable internal reliability with the current sample, with Cronbach's alphas ranging from .79 to .91.



Results

Players' intent to return to minor hockey was coded as -1 for "no" and +1 for "yes", and then multiplied by the 1 – 5 strength of intention, to give a variable for intent that could range from -5 to +5. Because coaching efficacy comprised the independent variables, intent was analyzed at the team level. Specifically, a team average of players' intent to return was constructed for each team. These team averages ranged from 2.38 to 5.00 with a mean across all teams of 4.53 (SD = 0.66).

A regression analysis was performed using SPSS 14.0. Motivation, Strategic, and Teaching Technique efficacies were the independent variables and players' intent was the dependent variable. The regression was significant ($F(3, 11) = 5.06, p < .05$, adjusted $R^2 = .47$). Two of the three predictor variables were significant – Teaching Technique ($B = .99, p < .05$), and Strategy ($B = -1.10, p < .05$).

Discussion

The results of the study showed that players' intention to return to the sport could be predicted by the confidence of the coach with respect to strategizing and teaching the skills of their sport. Specifically, greater Teaching Technique efficacy was related to higher intent to return, and greater Strategy efficacy was related to lowered intent to return.

These results are consistent with Feltz et al.'s (1999) conceptual model of coaching efficacy, which notes that coaches high in efficacy should have athletes that are more satisfied, confident, and more highly skilled. It is understandable that such athletes would wish to remain in the sport, whereas less satisfied, confident and skilled athletes (the result of low efficacy coaches) would choose to discontinue their participation.

In addition to these theoretical tenets, the current results are also consistent with studies that support an indirect link between coaching efficacy and athlete attrition. Particularly, Barnett et al., (1992) found that player attrition was significantly reduced when coaches had completed a coach education clinic. The effect of coach education on efficacy is both robust and comprehensive (Campbell & Sullivan, 2005; Chase et al., 2005; Feltz et al., 1999; Maleté & Feltz, 2000). Considering the combined results of these studies, it appears that coaching efficacy can have a significant impact on both the attitudes (i.e., intent) and behaviours (i.e., attrition) of athletes.

Although the link between coaching efficacy and player behaviour is consistent with previous conceptual and empirical studies, the current study clarified more precise relationships within the construct of coaching efficacy. Specifically, Strategy and Teaching Technique efficacy had significant, but differential relationships with intent. Greater Strategy efficacy was found to be related to decreased players' intent to return whereas greater Teaching Technique efficacy increases players' intent to return. This suggests that minor hockey players at the PeeWee age level prefer coaches that are confident in teaching the skills of the game over those who may place a greater emphasis on set strategic plays such as face-offs and defensive end break-outs. Interestingly, a coaches' confidence with respect to motivation was insignificant in terms of predicting players' intention. Based on these results, it appears that any benefit of the competence of a youth coach as a motivator may be better seen in other outcomes (e.g., satisfaction, performance).

Implications

In addition to the conceptual and empirical implications of these results, there are significant practical ramifications as well. Coaching is a contextualized process (Lyle, 1999), and as such, there are certain coaching attributes that may be a better fit within certain contexts. The present results suggest that at the level of PeeWee hockey (ages 11-12), specific patterns of coaching confidence are related to athlete outcomes (i.e., intent to return). Two primary suggestions can be made from this. First, coaches whose primary self-perceived strength is in strategy may be better suited to coach different levels of hockey, such as Bantam (ages 13-15), whereas coaches more confident in teaching technique remain in PeeWee. Alternatively, since coaching efficacy is a relatively dynamic attribute, it is advisable that coach education and certification courses for this context stress the importance of and skills required for efficacy in teaching the techniques of the sport, and de-emphasize those with respect to strategy at this level.