Investigating the Relationship Between the Relative Age Effect and Leadership Outcomes in Male Ice Hockey Players

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The relative age effect (RAE) began as a topic initially discussed and researched within academia; however, this phenomenon has attracted a wider audience thanks to Malcolm Gladwell’s (2008) best-selling book Outliers: The Story of Success and a segment on 60 Minutes (CBS Interactive, 2012). The RAE is used to explain the relative (dis)advantages individuals experience as a result of when their birthdate occurs relative to a pre-determined cut-off date in both sport and educational domains (Barnsley, Thompson, & Barnsley, 1985). Often, organizations within these settings will categorize individuals at young ages based on their general developmental similarities (e.g., cognition, physiology). Albeit unintentional, this process often advantages relatively older individuals at the expense of those who are relatively younger. Although the RAE is most pronounced in the sport and educational fields, it can develop anywhere that individuals are selected based on their perceived skill and placed into disparate streams (e.g., gifted or competitive) that provide differing developmental opportunities (Dixon, Horton, & Weir, 2011).

The National Hockey League and two Canadian developmental hockey leagues provided the first evidence of the RAE occurring within sport (Barnsley et al., 1985). Since this initial investigation, the RAE has been found to exist in nearly every level of hockey ranging from youth leagues through to collegiate and professional levels (e.g., Addona & Yates, 2010; Barnsley & Thompson, 1988; Barnsley et al., 1985; Hancock, Ste-Marie, & Young, 2013; Montelpare, Scott, & Pelino, 2000). Furthermore, in a meta-analysis conducted by Cobley, Baker, Wattie and McKenna (2009), ice hockey was identified as the sport to have received the greatest amount of research attention in the relative age literature.

The consequences of the RAE can be quite robust within sport and often lead to relatively older athletes becoming privileged. For example, when utilizing a December 31st cut-off date, those born in the early months of the year (i.e., January-March) are nearly an entire year older than those born in the later months (i.e., October-December). This advantage is associated with greater rewards, more success, along with better coaching, and more practice time. Conversely, those who are relatively younger are more likely to experience frustration and drop out of the sport altogether (Barnsley & Thompson, 1988; Barnsley et al., 1985). Moreover, within the education literature, relative age has been found to impact leadership opportunities and development in school settings. Specifically, Dhuey and Lipscomb (2008) revealed that relatively older high school students were 4 to 11% more likely to have a leadership role (e.g., team captain, club president) than their relatively younger peers. Additionally, relatively older students gained more leadership experience prior to graduating than their relatively younger classmates. On this basis, we hypothesize that within sport, relatively older athletes are more likely to be selected for team leadership roles, such as team captain, and score higher on a self-reported leadership scale.

The purpose of the current study is to examine the relationship between the RAE and leadership outcomes among male ice hockey players and to address the paucity of research linking relative age with leadership development. Data for this study are being collected from male hockey players between 16 and 20 years of age competing in house league hockey within the province of Ontario. Participants are being asked to complete an online survey that evokes general demographic information such as place and date of birth in order to determine their ‘relative ages.’ Additionally, these athletes are being asked to identify factors related to their sport, education, and other co-curricular activities that may have influenced their current level of success and development in ice hockey, including whether or not they are currently (or have previously been) a captain or assistant captain of their respective team.

Furthermore, participants are responding to all 40 items of the Leadership Scale for Sport (LSS; Chelladurai & Saleh,
The LSS (Chelladurai & Saleh, 1980) is a commonly used survey instrument within the fields of sport management and sport psychology that assesses five dimensions of leadership behavior: training and instruction (e.g., I see to it that every team member is working to his/her capacity), democratic behavior (e.g., I ask for the opinion of team members), autocratic behavior (e.g., I work relatively independent of other team members), social support (e.g., I help team members with their personal problems), and positive feedback (e.g., I compliment a team member for his/her performance in front of others). Participants are responding to items using a five-point Likert scale ranging from 1 (never) to 5 (always). Items for each leadership dimension will be summed and then an average score will be obtained for each dimension. Higher scores represent stronger self-perceptions and lower scores represent weaker self-perceptions of each particular leadership behavior. This scale has been used to assess both positive and negative aspects of athlete (e.g., Vincer & Loughead, 2010) and coach leadership behaviors (e.g., Moen, Hoigaard, & Peters, 2014).

Data collection is currently ongoing and is expected to conclude by December of 2014. To date, we have collected data from 128 participants and anticipate our overall sample to be in excess of 300 participants. The types of statistical analyses we intend to perform include: 1) multiple regression analysis to test for relationships between participants’ quartile of birth and their likelihood of being selected as a team captain; 2) MANOVA to compare birth quartiles on the various sub-scales of the LSS. We hope through these analyses to determine how relative age has played a role in shaping the leadership experiences and development opportunities of male house league hockey players.

Since leadership skills have become such valued qualities within the workforce (Kuhn & Weinberger, 2005), if relatively younger individuals are less likely to be given these opportunities in sport and/or school, they may become disadvantaged within the job market. Moreover, the benefits of leadership experience for high school students have been found to result in higher adult wages and an increased likelihood of holding a management position (Kuhn & Weinberger, 2005). The implications of leadership development are broad and may extend into many different domains. This research can be used as a foundation to develop effective ways to ensure all athletes have opportunities to develop leadership qualities that can be transferred and applied to all aspects of their lives.