# Developmental Trends in Athletic Identity:
# A Two-Part Retrospective Study

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*Developmental theory suggests that late childhood through early adulthood is a critical period for identity development. Previous research has indicated that changes in the sport-related aspect of identity occur through adolescence and the college years. Two retrospective studies were conducted to examine the developmental trajectory of athletic identity. In Study 1, female intercollegiate gymnasts (N = 63) completed a measure of athletic identity for three ages (10 years, 15 years, current age). Athletic identity was significantly higher for age 15 and current age than for age 10. In Study 2, nonathletes (n = 34), former athletes (n = 112), and current intercollegiate athletes (n = 33) completed the measure of athletic identity for the same three ages assessed in Study 1. Athletic identity for current athletes was significantly higher than that for former athletes at current age, but not ages 10 and 15. Nonathletes had significantly lower athletic identity than former and current athletes for all three ages. Taken together, the results of Study 1 and Study 2 suggest that the athletic identity of athletes increases from late childhood to adolescence and remains elevated into young adulthood unless the individuals terminate competitive sport involvement, in which case athletic identity decreases. Replication of the findings with longitudinal methods is recommended.*

Identity, as defined by Erik Erikson (1968), is a process that unites personality and connects the individual to the social world. Theory on identity development has led to research on how identity changes over time (Erikson; Josselson, 1987; Marcia, 1966). Erikson proposed a theory of identity formation consisting of eight age specific stages of development. Each stage involves the experience of a crisis that must be resolved prior to moving forward in development. Upon entering adolescence, children face crises of industry versus inferiority and identity versus role confusion. The majority of identity development is thought to occur between these two stages or between the ages of 10 and 20 years. Changes in the athletic portion of identity may also occur during this time period (Brewer, Van Raalte, & Linder, 1993; Miller & Kerr, 2003).

Research on identity development has begun to focus on identity related to athletes. Athletic identity has been defined as the degree to which an individual identifies with the athlete role (Brewer et al., 1993). Much of the literature on athletic identity has examined the construct in relation to responses to sport transitions. For example, research has shown that athletic identity is positively associated with depressive responses to both actual and hypothetical sport injuries (Brewer, 1993), problems adapting to sport retirement (Alfermann, Stambulova, & Zemaityte, 2004), and anxiety in career decision making (Grove, Lavallee, & Gordon, 1997).

Researchers have also examined developmental aspects of athletic identity. In a retrospective study of investigating the importance of sport (i.e., how important does one consider sport to be in one's life) for former athletes across their development, Greendorfer and Blinde (1985) found that the importance of sport increased throughout high school and then drastically declined from freshman to senior year in college. Similarly, in a qualitative study, Miller and Kerr (2003) found a decline in the salience of the athlete role over the college career of student-athletes. In a cross-sectional study, Brewer et al. (1993) documented a negative relationship between athletic identity and age of collegiate student-athletes.

With the exception of the study by Greendorfer and Blinde (1985), who found a curvilinear relationship between the importance of sport and age starting in high school and running though college, research on the developmental aspects of athletic identity has focused primarily on the college years. To build on the work of Greendorfer and Blinde, the aim of Study 1 was to investigate athletic identity trends over an extended period of time exceeding five years. A sample of female collegiate gymnasts was selected to insure that participants would have a sport career of sufficient duration upon which to reflect. Based on previous research (Brewer et al., 1993; Greendorfer & Blinde, 1985; Miller & Kerr, 2003), the athletic identity of female gymnasts was predicted to be higher at age 15 than for age 10 and to decline from age 15 through college.

# STUDY 1
## Method

*Participants*

Female intercollegiate gymnasts ($N = 63$) aged 18 to 22 years participated in this study. Gymnasts involved in the study must have been performing in the sport of gymnastics for a minimum of 10 years prior to the investigation. Collegiate gymnastics coaches were contacted to distribute the study materials to the female gymnasts of each respective participating institution. Participants reported their ethnicity as African American ($n = 2$), Asian ($n = 1$), Hispanic ($n = 1$), and Caucasian ($n = 59$). Participation in this study was anonymous and voluntary. The sample included gymnasts from universities and colleges in four separate states in the United States.

*Measures*

The Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001) was used to assess athletic identity. The AIMS consists of 7 items to which individuals respond on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). AIMS scores can range from 7 to 49, with higher scores indicative of stronger athletic identity. The AIMS is internally consistent ($\alpha = .81$) as well as highly correlated with a previous 10-item version of the AIMS (Brewer et al., 1993). The AIMS has been used retrospectively in at least two previous studies (Grove et al., 1997; Shachar, Brewer, Cornelius, & Petitpas, 2004). For example, Grove et al. asked retired athletes to remember their athletic identity at the time of their retirement. On average, the time between the participants' retirement and the filling out of the AIMS was 3.44 years. Similarly, Shachar et al. asked former athletes to reflect on their athletic identity at the time of retirement. The fact that the sample included individuals between the ages of 20 and 44 years indicates that some participants (i.e., those age >40) had to reflect on what their athletic identity was like many years prior. In both of these studies, findings consistent with theoretical predictions were obtained. Although the use of a retrospective method is not ideal, research on the "reminiscence bump" (i.e., the tendency to recall relatively larger amounts of information about the late adolescent/early adulthood years) indicates that individuals may remember more information about when they were between the ages of 15-25 due to the development of one's identity, self-image, and life schema during this time (Fitzgerald, 1998; Rathborne, Moulin, & Conway, 2008; Robinson & Swanson, 1990). The development of these important aspects of the self may in turn facilitate the retention of related memories (Fitzgerald). One example of an important aspect of the self during this time period is the athlete role.

*Procedures*

After completing an informed consent form, participants were asked to complete the AIMS. Instructions were given to complete the AIMS retrospectively for the ages of 10 and 15 years as well as for the current age of the athlete.

## Results and Discussion

Differences in athletic identity scores among three different ages (ages 10, 15, and current age) of female gymnasts were examined using a one-way repeated-measures analysis of variance (ANOVA). There was a significant effect for athletic identity across the three ages, $F(2, 61) = 7.56, p = .001$. The magnitude of the association between age and athletic identity was examined by calculating a partial eta-squared. A value of .20 was obtained, indicating that approximately 20% of the variance in AIMS scores was accounted for by the age of the athletes.

Pairwise comparisons were computed to better understand the significant effect for athletic identity as a function of stage of sport career. As shown in Figure 1, participants reported having lower athletic identity at age 10 ($M = 34.67, SD = 8.89$) than they did at age 15 ($M = 37.82, SD = 5.64$), $t(60) = 3.42, p = .001$. Participants reported having significantly lower athletic identity at age 10 than they did at their current age in college ($M = 37.41, SD = 5.33$), $t(60) = 2.51, p = .015$. No significant mean difference was found between athletic identity at age 15 and their current age, $t(60) = 0.65, p > .05$. To explore the possibility of a relationship between athletic identity and current age, Pearson correlations were calculated between current athletic identity scores and both age in college and year in school. Current athletic identity score was not significantly related to both age in college ($r = .01, p > .05$) and year in school ($r = .01, p > .05$). Given the limited age span and number of years in school represented, there is the potential of restriction of range. This potential, however, is negated somewhat by previous research in which significant correlations between these variables and athletic identity have been obtained with college student samples (Brewer et al., 1993).

In sum, contrary to the hypothesis that athletic identity would significantly decline with age, we found a significant increase in athletic identity from age 10 to age 15. Moreover, there was no significant change in athletic identity between age 15 and current age. We also found that current athletic identity of college athletes was greater than their level of athletic identity at age 10, indicating that athletic identity did not decline to levels experienced during preadolescent years. In addition, the correlation between current age and current AIMS score was not significant. One possible explanation for the findings in Study 1 could be the tendency of the sport of gymnastics to inspire overidentification with the athlete role. It is also possible that

*Figure 1.* Athletic identity of female gymnasts for retrospective ages 10, 15, and current age in college in Study 1.
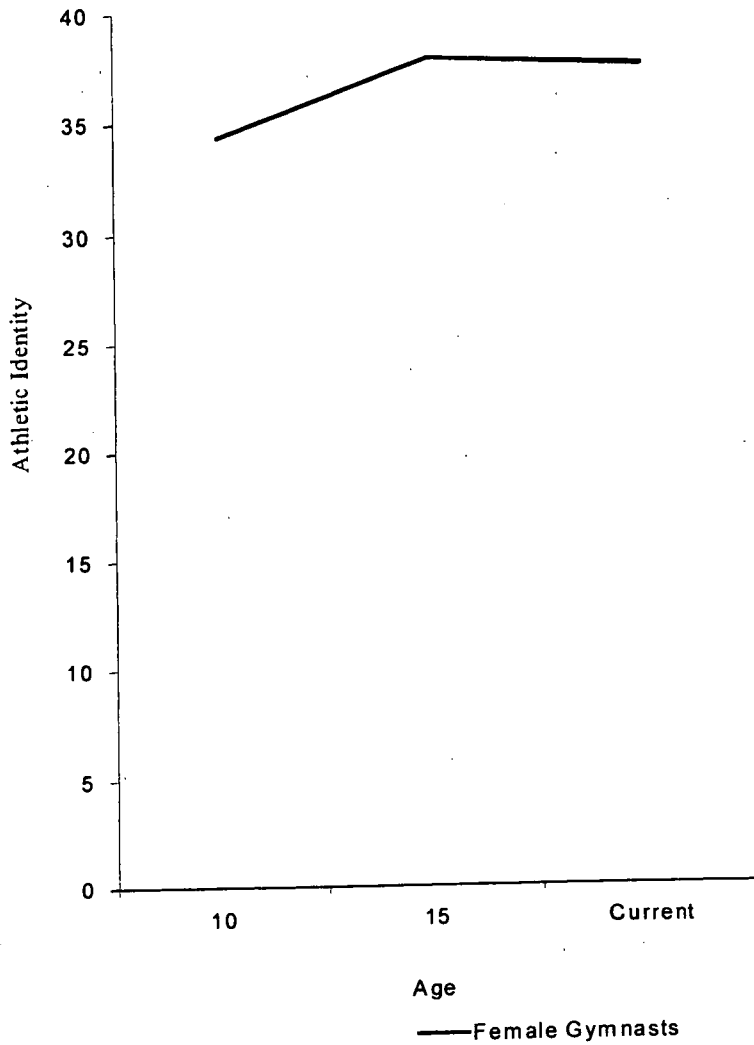
the divergent findings in Study 1 are related to the level of sport of the athletes within the study or were a function of assessing athletes at a highly committed period of their sport careers. Thus, including college-aged participants with sport careers that ended at the high school level could help explicate the findings in Study 1.

The unexpected findings from Study 1 call for follow-up research to identify an explanation. Of the two explanations given above for the findings in Study 1, the more likely of the two is that athletic identity increased over time because the sample that took part in Study 1 (collegiate gymnasts) was still highly invested in the sport. Put another way, because the gymnasts were still participating, their athletic identity may still have been at an elevated level during their college years. These possibilities should be explored further.

## STUDY 2

Past research has established a certain tendency for individuals involved in gymnastics to experience encouragement to overidentify with their role as an athlete (Kerr & Dacyshyn, 2000; Klint & Weiss, 1986; Krane, Greenleaf, & Snow, 1997; Lavallee & Robinson, 2007). Klint and Weiss investigated the demands of gymnastics and attrition rate related to such demands. Gymnasts were reported to have left the sport because of the conflict with social activities other than gymnastics. This attrition would thus leave only the athletes willing to identity strongly with the sport at the expense of outside activities. Kerr and Dacyshyn also commented on the sacrifices demanded of gymnasts, noting how the extreme amount of time needed for the sport can lead to exclusion from other activities besides gymnastics. Krane et al. investigated the role of coaches in such overidentification with the sport. Coaches were reported to have rewarded those gymnasts willing to strive above and beyond standards for perfection. Kerr and Dacyshyn further remarked on the narrow focus in gymnastics, stating that "female gymnasts become single-mindedly focused on sport far earlier in life than most athletes" (p. 127). Lavallee and Robinson also noted that gymnastics creates a "strong and exclusive gymnastics identity" (p. 130). Because gymnasts begin the sport at such a young age, the identity of the gymnast is intertwined heavily with the sport instead of dispersed widely among other activities.

Although the overidentification argument is interesting to consider, a more plausible explanation for the findings in Study 1 has to do with the elevated investment of those athletes sampled. This argument begs two separate questions: (a) What happens to the athletic identity levels of athletes when they stop participating in competitive sport? and (b) What maintains athletic identity levels when competitive athletes are still involved in sport?

Shachar et al. (2004) studied athletes after retirement, comparing those who became coaches and those who did not. Those who did not become coaches had a greater decline in athletic identity than those who maintained involvement in sport through coaching. Grove, Fish, and Eklund (2004) compared the athletic identity levels for athletes who made the cut for a team and those who did not, finding that athletic identity decreased significantly for those individuals who were cut from a team.

If athletes are still involved in sport, what maintains their athletic identity levels? Wenner (1995) implicated both schools and parents in reinforcing how an athlete identifies with the athlete role, discussing how schools allow athletes to miss classes and days of school because of sport. Similarly, Wenner argued that parents of athletes have a unique experience, viewing their child as special because of the involvement of the child in sport. Stephan and Brewer (2007) examined social and personal issues that may maintain the athletic identity of athletes. In the social domain, individuals who participated in elite sport reported feeling more like an athlete due to factors such as the ability to not have to be employed, having coaches reinforce their self-definition as elite athletes, having a team as a social network, having a social status, and being glorified as an athlete. Personally, individuals who were involved in elite sport allowed sport to give meaning to their lives, got an enhanced feeling from being an elite athlete, and relished such things as having a muscular body and outstanding skill.

To test these two explanations for the unexpected findings in Study 1, Study 2 included a sample of athletes and former athletes from multiple sports. If the results from Study 1 were a function of gymnasts overidentifying with their athlete role, we would expect to find a decline in the level of athletic identity among the athletes from age 15 to their current age. However, if our hypothesis that the Study 1 findings reflect an elevated level of investment among individuals still involved in sport were correct, then we would expect to find a similar pattern to that obtained with the gymnasts, where athletic identity would be higher at current age than at age 10 for athletes and that collegiate athletes would have higher levels of athletic identity than former athletes at their current ages. In addition, Study 2 included individuals who did not participate in competitive sport during high school and beyond to compare changes in former athletes to those of a control sample. Based on previous research (Grove et al., 2004; Shachar et al., 2004), athletic identity levels were predicted to be significantly greater in college for intercollegiate athletes compared to students who were athletes through high school only and student-nonathletes. It was also predicted that student-nonathletes would have significantly lower athletic identities at 10 years, 15 years, and current age in college when compared to the students with sport careers through high school and current college athletes.

## Method

*Participants*

A total of 179 individuals participated in the study. Self-report was used to indicate if participants were non-athletes, former athletes, or current athletes. Self-report was used to indicate if participants were nonathletes, former athletes, or current athletes. More specifically, former athletes were defined as those participants who indicated that they were involved in club or high school sports prior to attending college ($n = 112$). Nonathletes were participants who reported never having been involved in sport ($n = 34$). Finally, current athletes were those participants who indicated that they were currently involved in Division IA intercollegiate sport ($n = 33$). Participants were recruited from classes and training sessions at a large Southeastern university.

To be consistent with the theme of Study 1, we sought to represent three developmental periods: (a) preteen (10 years); (b) teen (15 years); and (c) adulthood (current age in college). Thus, we established a selection criterion that prospective participants must be at least 19 years of age and no older than age 25 to participate. The participants ranged in age from 19 to 24 years. The sample consisted of first-year students ($n = 34$), sophomores ($n = 50$), juniors ($n = 42$), seniors ($n = 38$), and fifth-year students ($n = 16$). For the current athlete group, the sports from which participants were drawn were baseball ($n = 14$), football ($n = 5$), softball ($n = 2$), swimming ($n = 3$), track and field ($n = 3$), tennis ($n = 2$), and several other sports that had one individual who participated (e.g., diving, volleyball, equestrian, water polo, and women's lacrosse). For the former athlete group, the sports in which they participated were softball ($n = 42$), basketball ($n = 36$), soccer ($n = 27$), cheerleading ($n = 26$), baseball ($n = 16$), football ($n = 14$), swimming ($n = 12$), volleyball ($n = 11$), and several other sports (e.g., rowing, ice hockey, lacrosse, golf, tennis, equestrian, dance, track and field). No gymnasts were involved in the sample of college athletes in order to ensure that any replication of results in Study 2 would not be a function of specific aspects of the sport of gymnastics. However, four former athletes participated in the sport of gymnastics. Considering the importance of not including gymnasts in the college athlete population for comparison purposes, the inclusion of the four former gymnasts was deemed acceptable. The participants were predominately Caucasian ($n = 150$), with the remaining participants self-identifying as Black/African American ($n = 21$), American Indian/Alaskan Native ($n = 2$), Asian ($n = 1$), and biracial or multiracial ($n = 6$). Participation was voluntary and participants did not receive any benefits in exchange for their participation.

*Procedure*

The athlete sample was recruited following team training sessions, as well as from university classroom settings. Former athletes and nonathletes were recruited from classroom settings. After completing an informed consent form, former athletes, nonathletes, and current athletes were asked to complete the AIMS for the retrospective ages of 10 and 15 years as well as for the current age.

## Results and Discussion

A 3 (age 10, age 15, and current age) X 3 (former athletes, nonathletes, and current athletes) mixed ANOVA was used to test the hypotheses. Although significant main effects were found for status as and athlete (former athlete, nonathlete, and current athlete), $F(2, 166) = 75.64, p < .001$, and age, $F(2, 332) = 25.07, p < .001$, these main effects are qualified by a significant interaction between age and athletic status, $F(4, 332) = 21.32, p < .001$ (see Figure 2). To better understand the significant interaction, we examined the simple effects of group for each age. The test of simple effects of group for current age yielded a statistically significant result, $F(2, 167) = 92.74, p < .001, \eta_p^2 = .53$. We conducted post hoc analyses using the Tukey HSD and found that the nonathletes ($M = 12.09, SD = 1.36$) had significantly lower levels of athletic identity than the former ($M = 22.37, SD = 0.86$) and current ($M = 39.18, SD = 1.24$) athletes ($p < .001$ in both cases). In addition, the former athletes had significantly lower levels of athletic identity than did the current athletes at their current age ($p < .001$). The test of simple effects of group for age 15 was statistically significant, $F(2, 169) = 79.26, p < .001, \eta_p^2 = .48$. Examination of the post hoc analyses revealed that nonathletes ($M = 16.53, SD = 1.65$) had significantly lower levels of athletic identity than both former ($M = 36.12, SD = 0.87$) and current ($M = 39.21, SD = 1.14$) athletes ($p < .001$ in both cases), whereas the current and former athletes did not differ ($p = .20$). Finally, the tests of simple effects of group for age 10 was statistically significant, $F(2, 170) = 16.61, p < .001, \eta_p^2 = .16$. The athletic identity of nonathletes ($M = 20.35, SD = 2.19$) was significantly lower than that of former ($M = 30.67, SD = 1.04$) and current ($M = 34.33; SD = 1.41$) athletes ($p < .001$ in both cases), but the levels of athletic identity did not differ significantly between athlete groups, $p = .19$.

To ascertain whether the athletic identity of current athletes was significantly higher at their current age than at age 10, we conducted a single repeated-measures ANOVA with AIMS scores at ages 10 and current age serving as the dependent measures. As expected, athletic identity was significantly higher for current age when compared to age 10 for individuals still involved in sport, $F(1, 32) = 10.48, p = .003, \eta_p^2 = .25$.

*Figure 2.* Athletic identity score for current athletes, former athletes, and nonathletes as a function of age in Study 2.
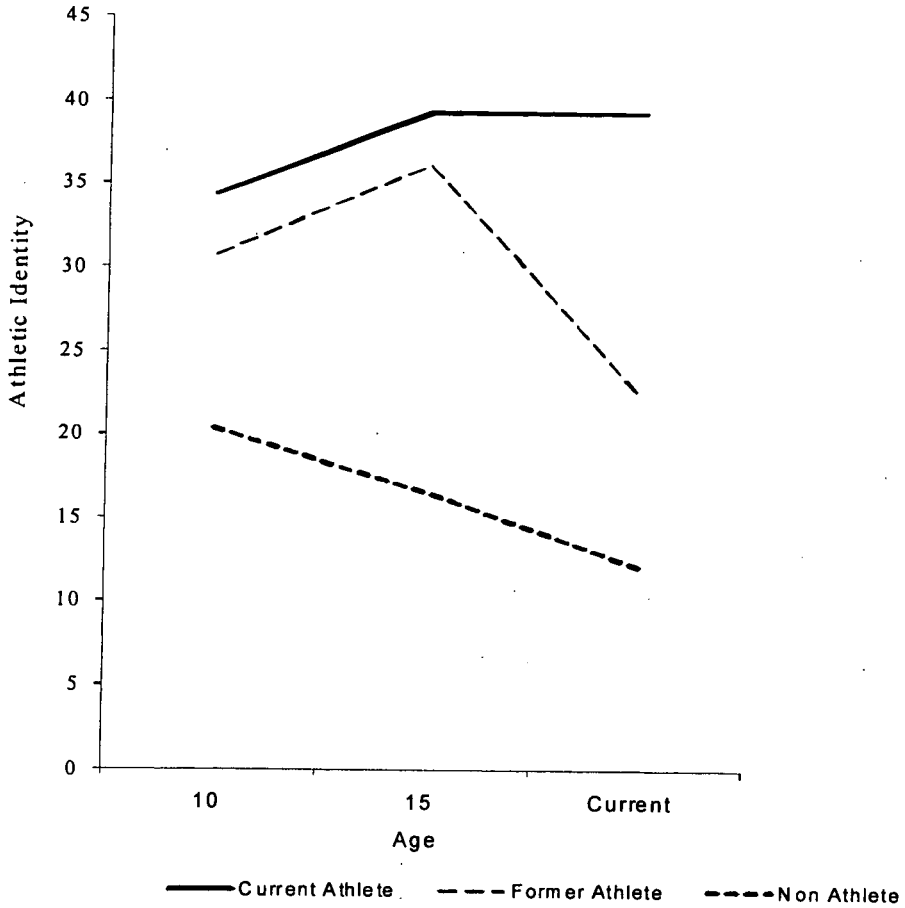
In sum, as predicted, the level of athletic identity for current athletes was significantly higher than that of former athletes at their current age in college. Nonathletes also had significantly lower athlete identity levels at retrospective ages 10 and 15 years, as well as for current age when compared to both former athletes and current athletes. In addition, no significant mean differences were obtained when comparing athletic identity levels of current athletes and former athletes at the retrospective ages of 10 and 15 years. Finally, the pattern for athletic identity across ages from Study 1 was replicated with the current athlete group in Study 2.

## General Discussion

The results from both Study 1 and Study 2 appear to contradict previous research regarding trends for athletic identity over time (Brewer et al., 1993; Greendorfer & Blinde, 1985; Miller & Kerr, 2003). As expected, the Study 1 findings indicated a significant increase in athletic identity for female gymnasts from retrospective age 10 to retrospective age 15. There was, however, no significant difference in athletic identity level from retrospective age 15 to current age. To understand the unexpected findings of Study 1 and explore a plausible explanation for the discrepant findings, Study 2 focused on exploring the athletic identity of athletes from various sports other than gymnastics as well as individuals who were not currently athletes. This sample was used to determine if the apparent failure to find a significant decrease from age 10 to current age in athletic identity in Study 1 was due to characteristics of the sport of female gymnastics or was a factor of sampling athletes who continued to be highly invested in their sport at the time of the investigation. Findings in Study 2 were similar to those in Study 1, revealing an increase in athletic identity from retrospective age 10 to retrospective age 15 for current athletes, with no significant difference from retrospective age 15 to current age. Thus, these findings support the explanation that the failure to find a significant decrease in athletic identity from retrospective age 15 to current age in Study 1 is related to the fact that the sample was still highly committed to their sport career at the time of the investigation.

Although the developmental trends for athletic identity of current athletes in Study 2 are similar to those in Study 1, they are inconsistent with previous literature. Two related studies suggested that athletic identity declines with age after high school. Specifically, the current study contrasts with the findings of Greendorfer and Blinde (1985) and Brewer et al. (1993). One post hoc explanation for the discrepancies in the findings could be the differences in the way the studies were conducted. Compared to Studies 1 and 2, Brewer measured athletic identity cross-sectionally for college athletes, whereas Greendorfer and Blinde asked former athletes to report level of importance of sport in their career in a retrospective longitudinal manner. Specifically, Greendorder and Blinde analyzed changes in how important individuals

thought sport was in their life at different ages, focusing on those who initially reported sport was "very important" or "extremely important," thus examining change among only those athletes at the extreme end of the continuum without regard for the degree of decline.

Consideration of our findings for the former athlete group may help shed some light on the question of what predicts decline in athletic identity. Based on our findings that athletic identity significantly increased from age 15 (where members of the former athlete group were involved in sport) to present age (where members of the former athlete group were not involved in inter-collegiate sports), it appears reasonable to assume that if the investigators were to measure athletic identity after retirement for the athlete participants used in both studies, results would likely indicate a significant decline in athletic identity following athletic retirement. This trend would be consistent with current literature regarding declines in athletic identity following sport retirement (Grove et. al., 2004; Shachar et al., 2004)

Because both of the studies in this investigation garnered contradictory findings when compared to the literature on athletic identity trends over time, further research should explore this phenomenon. Stephan and Brewer's (2007) discussion of the social and personal issues that may maintain the athletic identity of athletes has important implications for understanding the findings of the current studies. Stephan and Brewer indicated that factors such as not having to be employed (outside of being an athlete) as well as having coaches reinforce athletes defining themselves as athletes contributes to the maintenance of athletic identity. It may also be the case that athletes come to the end of their career wanting to associate more with being an athlete with the knowledge that this facet of their life will soon be over. These and other hypothesized reasons for the lack of a decrease in athletic identity by current athletes in Study 1 and Study 2 should be explored further.

*Limitations*

A primary limitation of both Study 1 and Study 2 was the use of a retrospective design. Participants were requested to recall how they were at ages 10 and 15 and fill out the AIMS. Future research should explore athletic identity of athletes longitudinally using a prospective approach. A longitudinal study would minimize error due to memory and enhance understanding of changes that occur within athletes across time and the effects of relevant events (e.g., injury preventing competition, winning a competition, upset losses in competition, transition to off-season) on such changes. A second limitation involves the nature of the athlete sample. The athlete group for Study 2 was small (n = 33). Additionally, Study 2 had a restricted, predominantly Caucasian sample that was recruited from a single university, with individuals involved in selected sports or classes serving as participants in the athlete group. Research with a larger and more diverse group of athletes may provide additional information about

developmental trends in athletic identity. Finally, no demographic information regarding gender was included in Study 2. Including this information would have allowed for an observation of the similarities and differences between Study 1 and Study 2 athletic identity scores for males and females. In the future, researchers are encouraged to include this information for comparison of athletic identity by gender.

*Applied Implications*

Despite the limitations of the current study, the findings have several practical implications. Specifically, athletic identity appears to increase for collegiate athletes relative to their preteen years. This indicates that being an athlete is an important part of the individual's identity into early adulthood. This may leave collegiate athletes susceptible to negative consequences associated with elevated levels of athletic identity, such as depressive responses to becoming injured (Brewer, 1993), difficulty adapting to retirement (Alfermann et al., 2004), and a lower sense of career maturity (Murphy, Petitpas, & Brewer, 1996). These potential consequences should be considered when practitioners come into contact with athletes demonstrating unusually high levels of athletic identity.

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