Athletic Identity and its Relationship to Sport Participation Levels

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Abstract

This study looked at the relationship between athletic identity and three levels of sport participation (elite, recreational, non participation). Athletic identity was measured using the Athletic Identity Measurement Scale (AIMS) with participants being compared on the total AIMS score and scores on its three factors (social identity, exclusivity, negative affectivity). Results indicated that the male non participation group scored lower on all three factors and the total AIMS when compared to the two athlete groups. The male elite and recreational groups did not differ on exclusivity and negative affectivity but did differ on the total AIMS and social identity, with elite scoring higher than recreational. For female participants, the non participation group again scored lower on all three factors and the total AIMS when compared to the two athlete groups. The female elite and recreational groups did not differ on negative affectivity but did differ on the total AIMS, social identity, and exclusivity, with elite scoring higher than recreational. Findings suggest that to assume sport is only important to elite athletes ignores the role that sport may play for less talented sport participants. Whilst not seeing themselves as athletes per se, it is suggested that participation in sport may still impact upon the self-perceptions of recreational sport participants. Therefore, threats to participation may result in similar negative consequences for both elite athletes and recreational sport participants.

KEYWORDS: Social Identification; Self Concept; Athletic Identity; Recreational Athlete; Elite Athlete

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Introduction

Athletic identity (AI) is the sport specific component of an individual's self-concept and is the extent to which an individual identifies with the athletic role [1]. As a social role, AI develops as a response to group affiliations and social interactions [2, 3]. As a cognitive schema, AI is the means by which individuals interpret information and behave according to the conventions of the athlete role. Typically viewed as a multidimensional construct, AI encompasses social, cognitive, and affective elements.

Brewer, Van Raalte, and Linder [1] argue that individuals who value the athletic element of the self-concept are more likely to engage in physical activity than those who do not. Thus individuals with strong athletic identities are more likely to participate in sport than those with weak athletic identities. Danish [4] also contends that a strong sense of self as athlete is a necessary requirement for success at higher levels of sport. Research that has examined the relationship between AI and sport participation has produced equivocal findings. Some studies [e.g., 3, 5, 6] have found AI increases with level of sport participation, thus supporting Danish's proposition. However a number of other studies have found no differences in AI between different sporting levels [e.g. 7, 8-12]. What appears to be a more consistent finding is an AI difference between individuals who participate in sport and those who do not. Sport participants, regardless of participation level, appear to identify more strongly with the athletic role than individuals who do not participate in sport in any form.

A possible reason for the above contradictory findings may be the lack of clear definitions concerning levels of sport participation that occur within some of past research. Indeed some studies have provided no definition concerning the level of participation [1, 5, 8, 9, 11, 12]. When a definition has been provided it is commonly the National Collegiate Athletics Association (NCAA) Division I, II, and III delineation. This in itself is problematic as the demarcation assumes that athletes who compete for Division I colleges and universities are more competitive and compete at higher levels than other divisions. However it is the institution not the athlete that holds the NCAA status, thus attributes about an

athlete are inferred from attributes about an institution. It is possible that some athletes who compete for Division II or III universities may be internationally or nationally ranked athletes and some athletes who compete for Division I universities may not necessarily be considered elite. Therefore, the use of institutional status as a definitional platform for classifying individual athletes on psycho-social attributes and the absence of participatory level definitions are problematic in terms of replication, validity, and reliability and serve to raise questions about past AI results.

In addition to the above, few studies have directly considered how AI differs across sport participation levels. Most AI research has focused on comparisons of elite and semi-elite participation levels and has not considered AI across a wider range of participatory situations. Given that the largest number of sport participants is to be found at lower levels of participation, there is an absence of research knowledge concerning how these individuals identify with the role of the athlete. Although AI is argued to be a salient aspect of the self-concept regardless of sport participation level [13], there is limited empirical evidence to support this proposition.

This study aimed to explore the relationship between AI and sport participation in an Australian sporting context. There were two hypotheses associated with this aim. Firstly, it was hypothesised that the elite group would exhibit significantly greater levels of AI than both the recreational and non participation groups. It was also hypothesised that the recreational group would exhibit significantly greater levels of AI than the non participation group.

Materials and Method

Participants

A convenience sample of 214 participants was used in this study. Of these 51 were considered to be in the elite participation category (23 men, 28 women), 118 in the recreational (57 men, 61 women), and 45 in the non participation (11 men, 34 women). Elite was defined as having represented a sport at a national or international sanctioned competition during the past 6 months. Recreational was defined as currently playing sport in an organised competition at any grade and never having represented a sport at any grade at a regional or above level, including junior representation. Non participation was defined as

not having competed in organised or social sport for the last five years prior to the study commencing. If a non participation individual had previously competed in social or competitive sport, this participation was only at the recreational level definition.

Nineteen different sports were represented in this study (e.g., rugby union, netball, touch football, orienteering) and included both individual (e.g., swimming) and team (e.g., cricket) sports. The mean age of participants was 33.52 years old (*SD* = 16.517) and the majority of participants self-identified as Australian (*n* = 131). Participation in this study was voluntary with incentives offered in the form of university course credit or a departmental raffle ticket.

Materials

AI was measured using the Athletic Identity Measurement Scale (AIMS) [1]. It is a 10-item questionnaire where responses are made on a 7-point Likert scale that ranges from 1 (Strongly disagree) to 7 (Strongly agree). Scores on the AIMS range from 10 to 70, with higher scores indicative of a stronger identification with the athletic role. Originally conceived by Brewer et al [1] to be a unidimensional scale, the AIMS has since been found to consist of three factors, social identity, exclusivity, and negative affectivity [14]. Social identity is the degree to which an individual views him/herself as occupying the role of an athlete and includes items 1, 2, and 3. Exclusivity is the degree to which an individual's self-worth is established through participating in the athletic role and includes items 4, 5. 6, and 9. Finally, negative affectivity is the degree to which an individual experiences negative emotions from unwanted sporting outcomes and includes items 8 and 10.

A total AIMS score is typically used to differentiate between sport levels. However two studies [8, 15] have examined level differences on the social identity and exclusivity AIMS factors rather than on a total AIMS score. Thus this study used both a total AIMS score, which refers to an individual's overall level of AI, and scores on the three factors to examine participation differences. The AIMS has been found to have acceptable reliability and validity [1, 10, 13] as have the three factors [8]. The Cronbach alphas for this study can be found in Table 1.

[INSERT TABLE 1 ABOUT HERE]

Procedure

Data collection occurred across a number of locations in order to maximise participation rates. Some recreational and elite level participants were approached to participate and complete the AIMS at training or at competition. Others and the non participation group were approached to participate and complete the AIMS during class time at a regional university or at various workplaces. Informed consent was gained prior to data collection as per National Health and Medical Research Council ethical guidelines, and all participants were offered debriefing and result feedback upon request.

Statistical Analysis

Given that gender differences in AI have been reported previously [see 1, 5, 6, 12], initial gender analyses were undertaken to determine if the data could be pooled. For this, the total AIMS was analysed using a one-way ANOVA and the three AIMS factors were analysed using a one-way MANOVA. In order to examine participation level differences, a one way ANOVA was also used for the total AIMS, with the three AIMS factors being analysed using a one-way MANOVA.

Results

A significant gender difference was found for the total AIMS, F (1, 212) = 11.57, p = .001. A significant gender difference was also found across the three factors (see Table 2). Therefore, the data was not pooled and the male and female participant data were treated separately as this is consistent with the study's aim of examining the influence of participation level on AI.

[INSERT TABLES 2 AND 3 ABOUT HERE]

As seen in Table 3, there was a significant effect of sport level for males on the total AIMS and on the three factors. To isolate these differences a number of Bonferroni post hoc analyses were conducted (see Table 4). Results indicate that the elite group displayed significantly higher levels of AI and saw themselves as occupying the role of athlete more than the recreational and non participation groups. Likewise, the recreational group displayed significantly higher levels of AI and also saw themselves as occupying the role of athlete more than the non participation group. When considering the

exclusivity and negative affectivity factors, both elite and recreational groups saw themselves as deriving more of their self-worth from the athletic role and felt that they would experience higher levels of negative emotions from unwanted sporting outcomes than the non participation group. However when compared with each other, there was no difference between the athlete groups on either of these two factors.

[INSERT TABLE 4 ABOUT HERE]

When the female data set was considered, a violation of univariate homogeneity of variance was found for total AIMS, social identity, and exclusivity. As a result, the univariate F-tests for these variables were interpreted at an alpha of .025. A significant effect of sport level was also found for both the total AIMS and the three factors (see Table 3). Bonferroni tests were conducted to determine the location of these differences. As can be seen in Table 4, the elite group displayed significantly higher levels of AI, saw themselves as occupying the role of athlete, and derived more of their self-worth from the athletic role than recreational and non participation groups. The same pattern of results was found when the recreational group was compared to the non participation group. In respect to negative affectivity, the elite and recreational groups felt that they would experience higher levels of negative emotions from unwanted sporting outcomes than the non participation group. There was no difference between the two athlete groups on this factor and this is different to the male data.

Discussion

The purpose of this study was to examine AI across three levels of sport participation. When considering the total AIMS, the elite group, regardless of gender, identified more strongly with the role of the athlete than the recreational and non participation groups. Further, the recreational group identified more strongly with the athletic role than the non participation group. The findings support the stated hypotheses. The results of this study support previous findings [e.g., 1, 3, 5, 6] that AI increases according to sport participation level when a total AIMS score is considered. However, the results contradict other studies that have not found level differences [e.g., 7, 8-11]. Given that this study used clearly defined, current, and clearly differentiated sport participation levels, it appears that an individual's

identification with the athletic role becomes more salient with their level of sport participation. Hence an elite athlete who identifies strongly as an athlete internalises this perception within their social identity and self-concept [16].

The results of this study become more intriguing when the AIMS three factors are considered. At this point it is pertinent to point out that the exact three factor structure and factor loadings utilised in this study as originally postulated by Brewer and colleagues [17], has not always been found by other researchers [see 14, 18, 19]. Thus the dimensionality of the scale is somewhat questionable. Further, the reliability of the negative affectivity factor was somewhat low in this study indicating potential measurement error. Hence the below discussion should be treated cautiously and as avenues for possible future explorations rather than as definitive of the relationship between AI and participation levels.

Although the second hypothesis is still supported when comparing the recreational and elite groups with the no participants on all three factors, the first hypothesis is only partly supported when comparing the elite with the recreational group. Taking the male data first, it appears that when faced with undesirable sporting outcomes, both the recreational and elite athlete sport participants say that they would experience these as negative events and thus may experience commensurate negative emotions. Similarly, it appears that the self-worth of both athlete groups is largely established through their participation in some form of sporting endeavour. Thus it may be that men who participate in sport, regardless of level, may treat sport as a domain of great importance and value to their self-worth, where challenges to this athletic self-worth may be perceived as threatening. This is perhaps not unexpected as sport and participation in sport is highly valued by men in Australia [20] and in other countries such as the United States of America [e.g., America 13, 21]. The above results appear to be consistent with the view that self-esteem, motivation, behaviour, and performance can be influenced by the importance an individual places on a self-concept domain [22]. What is interesting is that although the self-worth of both recreational and elite sport participants appears to be related to their participation in sport, the elite group see themselves as occupying the role of athlete more than the recreational group.

Even though male recreational sport participants do not label themselves as athletes, this does not mean that their participation in the sporting domain does not have the potential to influence how they feel about themselves, and that threats to participation or performance competence will not negatively impact upon their feelings of self-worth or self-value. Thus when unable to participate in sport for a variety of reasons or perform at self-expected levels, recreational sport participants may face similar reactions (e.g., adjustment problems) as do elite athletes. Brewer, Boin, Petitpas, Van Raalte, and Mahar [17] have argued that there are potential risks associated with an over identification with the athletic role. However this argument has often inadvertently focused on higher levels of sport participation. According to this study's data, it may be possible to extend this argument to consider that individuals at lower levels of sport participation may also experience some form of psychological distress when faced with threats to their sport participation. This is perhaps an area for future exploration. It may be that recreational sport participants value athletic activities in similar ways to elite sport participants even though they do not necessarily see themselves in the role of athlete. Thus an individual does not have to be an elite athlete to ascribe psychological importance to athletic participation.

A slightly different picture emerges when considering the female data. Similar to the male data, the elite and recreational groups did not differ on the negative affectivity factor. Female sport participants, regardless of level, feel that they would perceive threats to participation or sport performance negatively. Further, the elite sport participants saw themselves as athletes whereas the recreational sport participants were less likely to do so. The difference between male and female participants emerges on the exclusivity factor. Elite female sport participants saw themselves as deriving more of their self-worth from the athletic role than recreational sport participants. For women who participate in lower levels of sport, sport may not be a domain that they perceive to be overly important to how they feel about themselves. Indeed, gender sport researchers would argue that participation in sport for women is often seen as contrary to societal expectations [23, 24] and the above results could be explained as consistent with these expectations. The non difference on negative affectivity is, however, not consistent with this explanation. It may be that a recreational woman's participation in sport is more related to her sense of physical self-

worth or physical self-concept than athletic, and that unwanted outcomes may be more related to this physical aspect rather than the athletic aspect. For a woman, participation in sport may be linked to her ascription to a physically active role rather than athletic role per se. This may be an interesting avenue for future consideration.

There are several limitations in this study that bode for the tentative treatment of these results. Firstly as mentioned, the factor structure of the AIMS remains unclear and results based on the analyses of the three factors must be considered with caution. Future research on the factor structure is needed before any further factor differences should be contemplated. Related to this limitation is the use of the 10-item AIMS in this study. Brewer and Cornelius [14] suggest that the 7-item AIMS better reflects the AI construct as the 7-item scale provides a superior model of AI than the original 10-item scale. As Brewer and Cornelius report a high correlation between the two scales, research that uses the 10-item is still acceptable [25]. The use of the 7-item AIMS in examining participation level differences may be something for future researchers to consider.

The main findings of the research are not particularly surprising considering that those individuals with stronger athletic identities are more likely to participate in sport than those who have weaker athletic identities [1]. However the above findings may be useful in trying to understand why some people participate in sport and others do not. That is, if participation in sport is viewed by the non participant as being for those who are athletes, then moves to encourage non-participators to participate need to be carefully constructed. Further, to assume that sport is only important to the identity of the elite athlete ignores the role that sport may play for the not so talented. Although not seeing themselves as athletes per se, participation in sport may still influence the self-perceptions of those at lower levels of participation, and threats to these sport self-perceptions may be associated with negative self-consequences. As Brewer et al [17] argue, measures of AI can be used to identify and assist those athletes who are at risk from potential emotional disturbances associated with threats to sport participation. The data from this study suggests that this at risk population may extend beyond that to which Brewer and colleagues envisaged.

Practical Implications

- Athletes of all levels, not just elite, can gain a strong sense of self from participating in sport.
- Coaches and sport professionals should not assume that just because someone is a recreational level athlete, that they will not experience negative emotions when faced with threats to their sport participation.
- Recreational level athletes do not have to see themselves as occupying the role of athlete per se, for participation in sport to have perceived positive psychological benefits.

References

1. Brewer BW, Van Raalte J, Linder DE. Athletic identity: Hercules' muscles or achilles heal. International Journal of Sport Psychology 1993; 24: 237-254.
2. Brewer BW, Van Raalte JL, Petitpas AJ, Sklar JH, Phlman MH, Krushell RJ. Preliminary psychometric evaluation of a measure of adherence to clinic-based sport injury rehabilitation. Physical Therapy in Sport, 2000; 1: 68-74.
3. Tasiemski T, Kennedy P, Gardner BP, Rachel A. Athletic identity and sports participation in people with spinal cord injury. Adapted Physical Activity Quarterly, 2004; 21: 364-378.
4. Danish SJ. Musing about personal competence: The contributions of sport, health, and fitness. American Journal of Community Psychology, 1983; 11: 221-240.
5. Good AJ, Brewer BW, Petitpas AJ, Van Raalte JL, Mahar MT. Identity foreclosure, athletic identity, and college sport participation. The Academic Athletic Journal, 1993; 8: 1-12.
6. Matheson H, Brewer BW, Van Raalte JL, Andersen B. Athletic identity of national level badminton players: A cross-cultural analysis. In: Reilly TM, Hughes M, Lees A, editors. Science and Racket Sports. London: E & FN Spon; 1994. p. 228-231.
7. Brown C. Athletic identity and career maturity of male college student athletes. International Journal of Sport Psychology, 1998; 29: 17-26.
8. Hurst R, Hale B, Smith D, Collins D. Exercise dependence, social physique anxiety, and social support in experienced and non-experienced body builders and weightlifters. British Journal of Sports Medicine, 2000; 34: 431-435.
9. Shachar B, Zach S. Self-identity of adolescent competitive athletes: The influence of identification with the athlete's role. Bitnu'a/Movement, 2000; 5: 409-430.
10. Todd M, Brown C. Characteristics associated with superstitious behavior in track and field athletes: Are there NCAA divisional level differences? Journal of Sport Behavior, 2003; 2: 168-187.
11. Tusak M, Faganel M, Bednarik J. Is athletic identity an important motivator? International Journal of Sport Psychology, 2005; 36: 9-49.
12. Wiechman SA, Williams J. Relation of athletic identity to injury and mood disturbance. Journal of Sport Behavior, 1997; 20: 199-210.
13. Horton RS, Mack DE. Athletic identity in marathon runners: Functional focus or dysfunctional commitment? Journal of Sport Behavior, 2000; 23: 101-130.
14. Brewer BW, Cornelius AE. Norms and factorial invariance in the athletic identity measurement scale (AIMS). The Academic Athletic Journal, 2002; 15: 103-113.
15. Smith DK, Hale BD, Collins D. Measurement of exercise dependence in bodybuilders. Journal of Sports Medicine and Physical Fitness, 1998; 38: 66-74.
16. Turner J.C. Towards a cognitive redefinition of the social group. In: Tajfel H editor. Social Identity and Intergroup Relations. Cambridge: Cambridge University Press; 1982. p. 17-40.
17. Brewer BW, Boin P, Petitpas AJ, Van Raalte, J, Mahar M. Dimensions of athletic identity. Paper presented at the American Psychological Association; 1993. Toronto, Ontario.
18. Hale BD, James B, Stambulova N. Determining the dimensionality of athletic identity: A Herculean cross-cultural undertaking. International Journal of Sport Psychology, 1999; 30: 83-100.

19. Martin JJ, Eklund RC, Mushett CA. Factor structure of the athletic identity measurement scale with athletes with disabilities. Adapted Physical Activity Quarterly, 1997; 14: 74-82.
20. Connell RW. Masculinities. Cambridge: Polity; 1995. p. 87.
21. Lantz CD, Schroeder PJ. Endorsement of masculine and feminine gender roles: Differences between participation in and identification with the athletic role. Journal of Sport Behavior, 1999. 22; 545-548.
22. Harter S. Causes, correlates and the functional role of global self-worth: A life span perspective. In Sternberg R.J, Kolligian J, editors. Competence Considered. New Haven, CT: Yale University Press; 1990. p. 67-97.
23. Gill DL. Feminist sport psychology: A guide to our journey. Sport Psychologist, 2001; 15: 363-372.
24. Whaley DE. Feminist methods and methodologies in sport and exercise psychology: Issues of identity and difference. Sport Psychologist, 2001; 15: 419-430.
25. Shachar, B, Brewer, BW, Cornelius, AE, Petitpas, AJ. Career decision-making, athletic identity, and adjustment difficulties among retired athletes: A comparison between coaches and noncoaches. Kinesiologia Slovenica, 2004; 10: 71-85.

Table 1

Summary of Cronbach Alphas

AIMS	Cronbach Alpha
Combined data[a]	
AIMS Total	.918
Social identity	.883
Exclusivity	.818
Negative affect	.651
Men[b]	
AIMS Total	.893
Social identity	.831
Exclusivity	.786
Negative affect	.618
Women[c]	
AIMS Total	.924
Social identity	.898
Exclusivity	.827
Negative affect	.656

Note: [a]$n = 214$. [b]$n = 91$. [c]$n = 123$

Table 2

Means, Standard Deviations, and Multivariate Analysis of Variance for the Effect of Gender on Athletic Identity

	Men (n = 91)		Women (n = 123)		MANOVA	
Variable	*M*	*SD*	*M*	*SD*	*F(1, 212)*	η^2
Social identity	13.78	4.31	11.48	5.69	10.44**	.05
Exclusivity	12.97	5.40	10.59	5.61	9.72*	.04
Negative affectivity	8.65	3.32	7.37	3.71	6.83*	.03

Note: Higher means indicate a stronger identification with the role of athlete.

Observed power was acceptable with the lowest value being .74 for negative affectivity.

η^2 = effect size.

*A p value of .017 was used as a Bonferroni-type adjustment. **p < .001.

Table 3

Multivariate and One-way Analyses of Variance for the Effect of Sport Participation Level on Athletic Identity for Male (n = 91) and Female Participants (n=123)

Variable	ANOVA		
	df	*F*	η^2
Male			
AIMS total	2,88	24.92**	.36
Social identity	2,88	32.63**	.43
Exclusivity	2,88	11.20**	.20
Negative affectivity	2,88	9.99**	.19
Female			
AIMS total	2, 120	90.71**	.60
Social identity	2, 120	95.18**	.61
Exclusivity	2, 120	44.02**	.42
Negative affectivity	2, 120	36.31**	.37

Note: Higher means indicate a stronger identification with the role of athlete.

Observed power was acceptable for all analyses with the lowest observed power being .982 for the male negative affectivity factor

η^2 = effect size.

A p value of .017 was used as a Bonferroni-type adjustment.

**p < .001.

Table 4

Athletic Identity for Female and Male Elite, Recreational, and Non participation Participants

	Elite (E)		Recreational (C)		Non-participation (NP)		Post hoc
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	
Male							
AIMS total	46.91	9.43	39.47	10.83	20.55	8.12	E>C>NP
Social identity	16.87	3.48	13.82	3.26	7.09	3.11	E>C>NP
Exclusivity	15.43	4.78	13.12	5.14	7.00	3.35	E=C>NP
Negative affectivity	9.87	2.74	8.86	3.15	5.00	2.93	E=C>NP
Female							
AIMS total	45.71	8.52	36.30	11.67	14.59	5.20	E>C>NP
Social identity	16.18	2.57	13.18	4.51	4.56	1.99	E>C>NP
Exclusivity	14.86	5.06	11.70	4.85	5.06	1.88	E>C>NP
Negative affectivity	9.50	2.63	8.39	3.24	3.76	2.64	E=C>NP

Note: Higher means indicate a stronger identification with the role of athlete.

The letters in parentheses in column heads refer to the groups used for illustrating significant differences in the last column title ‘Post hoc’.