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Citation:

Cranswick, I and Tod, D and Clarke, P and Jones, A (2023) Exploring the impact of athletic identity on gender role conflict and athlete injury fear avoidance in English professional academy football players. *Science and Medicine in Football*. pp. 1-9. ISSN 2473-4446 DOI: <https://doi.org/10.1080/24733938.2023.2224293>

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Article (Published Version)

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To cite this article: I. Cranswick, D. Tod, P Clarke & A Jones (2023): Exploring the impact of athletic identity on gender role conflict and athlete injury fear avoidance in male English professional academy football players, Science and Medicine in Football, DOI: [10.1080/24733938.2023.2224293](https://doi.org/10.1080/24733938.2023.2224293)

To link to this article: <https://doi.org/10.1080/24733938.2023.2224293>




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Published online: 18 Jun 2023.



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Exploring the impact of athletic identity on gender role conflict and athlete injury fear avoidance in male English professional academy football players

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ABSTRACT

Men's academy football can encourage a commitment to the athletic role and masculine norms. When injured, the ability to fulfil an athletic masculine identity is threatened and athletes may experience injury fear-avoidance behaviours as part of a negative injury appraisal. The aim of the study was to explore whether higher athletic identity (AI) was associated with higher gender role conflict and injury-related fear-avoidance. Seventy-two male English academy footballers completed an Athletic Identity Measurement Scale (AIMS), Gender Role Conflict Scale (GRCS), and Athlete Fear Avoidance Questionnaire (AFAQ) based on self-reported historical injuries. Correlational analyses were conducted for all variables, and a one-way ANOVA was used to compare high, moderate, and low AI. AIMS was significantly positively correlated with two GRCS subscales: success, power, and competition (SPC) and restricted affectionate behaviour between men (RAM). AIMS exclusivity also positively correlated with SPC and AIMS negative affectivity positively correlated with GRCS total and RAM. Additionally, the current study showed that high and moderate levels of AI had significantly higher levels of total GRCS than those with low AI. No significant results were found for AIMS, GRCS, and AFAQ. Results suggest that players with higher and more exclusive AI may be susceptible to masculine role conflicts, specifically, SPC and RAM, especially when there is a risk to their athletic role. The current study informs sport and health professionals of the need to monitor AI and masculine conformity in academy-level footballers to minimise gender-role conflict and potential maladaptive rehabilitation responses when their identities are threatened.

ARTICLE HISTORY

Accepted 4 June 2023

KEYWORDS

sport psychology; sports medicine; return to sport; masculinity

Introduction

Conforming to culturally informed masculine and athletic identities can influence individuals' injury-related attitudes, self-perceptions, and behaviours (Young et al. 1994; Mahalik et al. 2003; Mitchell et al. 2014; Cranswick et al. 2020). Injury is a critical moment for athletes that may cause significant psychological threat to sporting identities (Brewer et al. 2010; Nesti et al. 2013). Threats and disruptions to masculine and sporting identities can stimulate an increase in anxiety, reduced help-seeking for physical and psychological issues, and maladaptive rehabilitation behaviours (Wiese-Bjornstal et al. 1998; Mahalik et al. 2003; O'Brien et al. 2005; Ommundsen et al. 2005; Benson et al. 2015; Hilliard et al. 2017; Cranswick et al. 2020). The exploration of athletic identity (AI) and gender roles in a sporting injury context, however, is limited, and no studies have examined these constructs in association with fear-avoidance attitudes in English football players. Gaining new insight into the relationship between AI, masculinity, and injury fear-avoidance may help better identify and support athletes possibly at risk of withholding injury, over/under adhering to musculoskeletal (MSK) rehabilitation, displaying maladaptive injury responses, and prematurely returning to sport. Specifically, understanding the athletic role and its ties with masculinity and injury fear could help normalise injury and reduce the perceived threats that may be attributed to injury in male athletes, which could

improve rehabilitation outcomes, adherence, and the chances of successful and safe return to play.

Gender role conflicts

Gender role conflict (GRC) conceptualises the psychological distress caused by an inability to meet socially constructed gender roles, which can result in the restriction, devaluation, or violation of oneself or others (O'Neil 2008). Male sport often promotes conformation to masculine-role traits, such as the focus on winning, suppression of emotion, homophobia, and male physical dominance (Messner 1990; Messner and Sabo 1994; Wellard 2002; Nesti et al. 2013; Farrell et al. 2016; Harding 2022). Any deviation from masculine role expectations and gender etiquette in sport is traditionally marginalised and deemed feminine (Young et al. 1994; De Visser et al. 2009; Stewart et al. 2020; Harding 2022). Despite more inclusive masculinities in modern society, marginalisation of, and distancing from, unorthodox masculine behaviours is still present (Roberts et al. 2017; Stewart et al. 2020). It does, however, seem that institutional and contextual settings seem to shape and legitimise this process (Roberts et al. 2017; Stewart et al. 2020). The threat of injury could encourage men to (over) conform to restrictive, hegemonic, and stereotypical masculine

roles and behaviours as compensatory response and means of maintaining their male identities (Connell 2005; Connell and Messerschmidt 2005; O'Neil 2008).

In sport, existent literature shows links between higher GRC and negative or stigmatised attitudes towards seeking psychological help, which often transcends into a reluctance to use therapeutic strategies and support (Blazina et al. 2005; O'Neil 2008; Steinfeldt et al. 2009; Steinfeldt and Steinfeldt 2010; Shepherd and Rickard 2012). Specifically, restrictive emotionality appears to be a significant predictor of negative help seeking attitudes in athletes (Steinfeldt and Steinfeldt 2010). Existing evidence might imply that male athletes might perceive help seeking for physical or mental health concerns as a sign of femininity, weakness, and deviation from traditional masculine values and role expectations (Ommundsen et al. 2005; Steinfeldt et al. 2009; Ramaecker and Petrie 2019).

Existing research, however, appears to focus on psychological health services, with no studies examining the potential relationship between GRC and the attitudes towards physical injury and MSK rehabilitation (Good et al. 2006; Steinfeldt and Steinfeldt 2010). A limited understanding of the interaction between identity and fear avoidance attitudes may hinder MSK rehabilitation professional's ability to optimise the safe return to sport and injury prevention in athletes with high AI and masculine beliefs. A better understanding of AI, GRC, and fear avoidance in injury rehabilitation contexts could help with the identification of 'at-risk' athletes and facilitate an optimal rehabilitation approach for these individuals that minimises the sense of loss and disruption.

GRC research in sport also appears to focus on American and Australian Football (Steinfeldt and Steinfeldt 2010, 2012), which does not provide insight into to other sporting contexts (e.g., English Football) and provides the current study with a novel population to explore within the field of AI and injury.

Athletic identity

A prolonged commitment to sport can lead to an increased identification with the athlete role, termed AI (Brewer et al. 1993; Steinfeldt and Steinfeldt 2010; Mitchell et al. 2014). The cultural messages of living, breathing, and eating football advocated in elite environments increase commitment to a professional sporting status and increased AI (Parker 2000; Holt and Dunn 2004; Holt and Mitchell 2006; Roderick 2006; Pain and Harwood 2008; Brown and Potrac 2009; Mitchell et al. 2014). Heightened AI can serve several positive psychological functions, such as an increased motivation, enhanced team cohesion, more positive athletic experiences, and better sporting performance (Brewer et al. 1993; Horton and Mack 2000; Steinfeldt and Steinfeldt 2010). Despite the potentially positive effects, however, there are many potential negative consequences of developing an overly strong AI, such as devaluing other social roles, overtraining, avoidance of help-seeking, use of performance enhancing drugs, and difficulty transitioning out of sport (Weichman and Williams 1997; Steinfeldt and Steinfeldt 2010; Mitchell et al. 2014). Professional and academy footballers experience multiple emotionally charged events or 'critical moments' throughout their careers that may produce threats to their athletic

identities (Nesti et al. 2013). Critical moments in sport and football include career termination (Ramaecker and Petrie 2019), de-selection or being sold (Holt and Dunn 2004; Tasiemski and Brewer 2011), and career-threatening injuries (Brewer et al. 2010; Tasiemski and Brewer 2011). Such critical moments can impact a player's sense of self, challenge their capabilities to cope with such stresses, and threaten and interrupt their identities (Nesti et al. 2013).

With regard to sporting injury specifically, AI has been linked to several negative consequences, such as anxiety when unable to train, a reluctance to report injury, rehabilitation overadherence, and a willingness to prematurely return to sport (Podlog and Eklund 2007; Brewer et al. 2010; Podlog et al. 2013; Hilliard et al. 2017). Little existing research examines the potential fearful attitudes that may influence negative emotional responses and dysfunctional rehabilitation behaviours in those with higher athletic identities.

AI and gender role conflict

Male athletes commonly report both athletic and masculine identity-related reasons for underreporting sporting injury and pain symptoms, such as not wanting to appear 'weak or soft', a fear of losing their place in the team, and losing playing time (Young et al. 1994; Kerr et al. 2014, 2015; Asken et al. 2017; Clark and Stanfill 2019; Wayment et al. 2019; Cranswick et al. 2020). The conformity to the athletic role is a statement of identity, with sport being a field to demonstrate one's masculine value (Harding 2022). Sport, however, can also represent a burden that pressures young men to meet society's expectations for being male (Harding 2022), which manifests as a perceived need to perform and demonstrate actions, behaviours, and attitudes that are consistent with male sporting identities, such as dominance and competitiveness (Tasiemski and Brewer 2011; Podlog et al. 2013; Wayment et al. 2019; Harding 2022). The potential inability to perform such behaviours and attitudes and conform to their identity expectations may evoke injury-related fears, which is yet to be examined in the existing literature. Additionally, there appears to be limited exploration of AI's impact on MSK injured populations.

Injury appraisal and identity

The Integrated Model of Response to Sports Injury frames both the appraisal of and the response to injury (Wiese-Bjornstal et al. 1998; Wiese-Bjornstal 2010). The model highlights several personal and situational factors that inform an injury appraisal (Wiese-Bjornstal et al. 1998; Wiese-Bjornstal 2010). AI is a factor that influences an athlete's cognitive appraisal of injury (Wiese-Bjornstal et al. 1998; Podlog et al. 2013) and threatens their identity, which could result a response of fear and trepidation (Wiese-Bjornstal et al. 1998; Wiese-Bjornstal 2010; Nesti et al. 2013). Specifically, injury may be appraised according to the disruption of the goals, attributions, and beliefs that underpin these identities. For example, an inability to train and compete through injury limits the ability to achieve the traditional features of the masculine athlete (e.g., success, competition, and physical prowess), which may stimulate fearful attitudes and

maladaptive rehabilitation behaviours (Young et al. 1994; Cranswick et al. 2020; Ramaeker & Petrie, 2019).

In the context of injury, AI has been linked to, and shown to predict, rehabilitation behaviours, such as overadherence and a willingness to ignore practitioner recommendations (Podlog et al. 2013). An overadherence to rehabilitation may represent a compensatory behaviour that manages identity concerns and a fearful appraisal by gaining approval from significant others, such as teammates, spectators, and coaches, which maintains or redeems their athletic role and performative status (Podlog et al. 2013).

Study aims

The current study aimed to examine the relationships between AI, GRC, and athlete fear-avoidance attitudes associated with injury. Additionally, we aimed to compare GRC and fear avoidance scores between those with high, moderate, and low AI.

Methods

Participants

After gaining institutional ethical approval, participants were recruited via direct contact with the clubs' medical staff (known to the last author). At the time of data collection, one of the clubs was a category 1 football academy, and two were category 2 academies. The category system is based on the Elite Player Performance Plan (EPPP), which is a strategy led by the Premier League (2020) to ensure high-quality development of homegrown players. With permission from gatekeepers, players were sent participant information and informed consent declarations. Participants had to be contracted to a professional football academy and have had an injury within the last 5 years that removed them from training for over 1 week.

Seventy-two male, professional academy football players aged between 16 and 22 years-old ($M = 18.0$, $SD = 1.2$) were recruited from three different English professional football clubs. Males were chosen due to the cultural difference between men's and women's football and the potentially different constructions of masculinity and adherence to masculine norms in male athletes compared to their female counterparts. The men had a mean playing experience at academy level of 2.5 years (± 2.7 years) with a range of 1–14 years. The average time since their last reported injury was 8.6 months (± 9.0) with a range of 1–60 months. A range of predominantly acute musculoskeletal injuries (with the exception of one case of Osgood Schlatters) were self-reported by the players that included fractures, muscle strains, ligament sprains, and contusions. The author categorised these injuries by region using categories recommended by an IOC consensus for injury data collection (Bahr et al. 2020), which is displayed in Table 1.

Measures

Athletic identity measurement scale

The original AIMS assesses AI and the exclusivity of the athletic role (Brewer et al. 1993). The 10-item AIMS was used, which

Table 1. Self-reported injuries categorised by region.

Injury Region	No. Reported
Head	2
Shoulder	2
Wrist	1
Hand	2
Abdomen	1
Hip	11
Thigh	13
Knee	12
Lower Leg	3
Knee	12
Ankle	17
Foot	3
Unreported	5

questions the importance of sport (e.g., 'sport is the most important thing in my life') and the identification with athletic role (e.g., 'other people see me mainly as an athlete'), and participants respond on a 7-point scale, with 7 representing *strongly agree* and 1 *strongly disagree*. Four subscales have been identified within the 10-item AIMS; *self-identity*, *social identity*, *exclusivity*, and *negative affectivity* subscales (Messner and Sabo 1994; Martin et al. 1997). Self-identity captures the self-referenced cognitions of the athletes and includes questions such as 'I have many goals related to sport'. Social identity reflects the identification with the athletic role with an increased focus on others' perceptions; 'other people see me mainly as an athlete' (Messner and Sabo 1994; Martin et al. 1997). Exclusivity refers to the reliance on an AI in sacrifice of other identities and is reflected in questions such as 'sport is the most important part of my life' (e.g., academic; Martin et al. 1997). Negative affectivity measures the negative emotional responses associated with an inability to participate in sport, for example, 'I would be very depressed if I were injured and could not compete in sport' (Martin et al. 1997).

The current study used the 10-item AIMS due to the strong psychometric properties demonstrated in college-aged athletes (Brewer et al. 1993). Despite more recent 7-item scale being available, at the time of data collection, this had not been validated in academy football. Existing AI research seems to demonstrate a varied use of the 10- and 7-item scales, which may suggest that future research needs to further validate AIMS versions to ensure consistency and inform recommended use. The 10-item AIMS demonstrated acceptable internal consistency for the AIMS in the current sample ($\alpha = 0.74$).

Gender role conflict scale

The gender role conflict scale (GCRS) analyses the potential conflicts created by socialised masculine norms and a fear of femininity (O'Neil et al. 1986; O'Neil 2008). All responses are recorded on a Likert scale of *strongly disagree* (1) to *strongly agree* (6). Higher scores on the GCRS indicate greater degree of conflict associated with the four GRC factors; *success, power and competition* (SPC; 13 items, e.g., 'I worry about failing and how it affects my doing well as a man'), *restrictive emotionality* (RE; 10 items, e.g., 'I have difficulty telling others I care for them'), *restrictive affectionate behaviour between men* (RAM; 8 items, e.g., 'affection with other men is difficult for me'), *conflicts between work and leisure – family relations* (CBWL-FR; 6 items,

e.g., 'my career, job, or school affects the quality of my leisure or family life'). The SPC subscale is associated with masculine norms and ideology, which indirectly measures GRC through analysing individuals' attitudes regarding common masculine traits (i.e., success, power, and competition; O'Neil 2008). RE, RAM, and CBWL-FR measure the operational elements of GRC and analyse specific gender role restrictions, such as expressing emotion, showing affection to other men, and balancing work and life, respectively (O'Neil 2008). The GRCS demonstrates moderate intercorrelations for factor validity (0.35–0.68) suggesting that the factors are related but remain separate entities (Moradi et al. 2000; O'Neil 2008). Internal consistency for the total GRCS in the current sample was good ($\alpha = 0.87$). The internal consistencies for the GRCS subscales varied in the current study, with SPC ($\alpha = 0.62$) showing questionable reliability, RAM ($\alpha = 0.78$) and CBWL-FR ($\alpha = 0.79$) showing acceptable reliability, and RE ($\alpha = 0.84$) showing good reliability.

Athlete fear avoidance scale

The Athlete Fear Avoidance Questionnaire (AFAQ; Dover and Amar 2015) measures athletes' injury-related fears and thoughts. The 10-item scale asks participants to record to which degree they experience specific thoughts and feelings when they have sustained a painful sports injury (e.g., 'I am worried about my role in the team changing'). The responses are recorded on a Likert scale of *not at all* (1) to *completely agree* (5). The current study demonstrated acceptable internal consistency for the AFAQ in the current sample ($\alpha = 0.71$)

Procedure

After gaining consent, questionnaire packs were distributed and completed. Seventeen players attended Leeds Beckett University as part of a separate study and completed the questionnaires in person with the first and last authors present. Fifty-five players were posted copies of the questionnaires and completed them within their routine training sessions at their club, supervised by the club's medical staff who were fully briefed and given the opportunity for questions about the study. All information packs also had clear information about questionnaire aims and completion instructions for all players to follow.

The players were asked to retrospectively recall their latest diagnosed injury within the last 5 years and use this as the context for answering the AFAQ. They provided a self-report description of the type of injury and how long ago this injury occurred. The first author categorised the injuries by region as described earlier. Six participants did not report the initial occurrence of their last injury, and five failed to describe the type of injury they last sustained. Participants then completed the three questionnaires (AIMS, GRCS, and AFAQ). All 72 participants returned fully completed questionnaires with no omissions.

Data analyses

To examine the relationships between variables, correlational analyses were conducted on AFAQ, AIMS and its subscales (self-identity, social identity, exclusivity, and

negative affectivity), and GRCS and its subscales (SPC, RE, RAM, CBWL-FR). Normality was assessed via Q:Q plots and histograms alongside a Kolmogorov–Smirnov test for all measures, with AFAQ, exclusivity subscale (AIMS), and all GRCS measures meeting requirements for normality allowing the use of Pearson's correlations to analyse these variables. The breach of normality for the AIMS total, self-identity, social identity, and negative affectivity informed the use of Spearman's rank-order correlation coefficient to examine the relationships between these variables.

Additionally, a one-way ANOVA with Tukey post hoc analysis was conducted to determine whether GRCS, and AFAQ scores were different for players with high, moderate, and low AI. Based on a previous study, the AI threshold levels were determined through percentile calculations (Weinberg et al. 2013). Low AI was represented by the 25th percentile and below, moderate was 25th to 75th percentiles, and high above the 75th percentile (AIMS scores = <51, 51–60, and >60 in the current study, respectively).

Both GRCS-Total and AFAQ data for each AI group were normally distributed ($p > 0.05$). Homogeneity of variances for GRCS-Total and AFAQ was assumed, as assessed by Levene's test for equal variances ($p = .804$ and $.599$ respectively). No outliers were present for the GRCS-Total, as assessed by boxplots. Two outliers were found for the AFAQ, one in the low and one in the moderate AI groups. A one-way ANOVA was conducted with and without the outliers and there was no significant change to the outcome of the analysis, and they were therefore left in for analysis using one-way ANOVA.

Results

Relationships between GRCS, AIMS, and AFAQ

Table 2 shows the correlations for the AIMS, GRCS, and AFAQ. No significant relationship was found between AI (AIMS) and total GRCS. AI total, however, showed a significant, low, positive correlation with two of the GRCS subscales: GRCS-SPC ($r = .252$, $p = .033$) and GRCS-RAM ($r = .257$, $p = .029$). Additionally, AIMS exclusivity subscale showed a significant, low, positive correlation with GRCS-SPC ($r = .235$, $p = .047$). AIMS negative affectivity showed significant, low, positive correlations with GRCS-Total ($r = .246$, $p = .037$) and GRCS-RAM ($r = .239$, $p = .044$). There were no significant correlations between the AFAQ and the AIMS nor GRCS.

Comparison of high, moderate, and low AI

Table 3 shows the means and standard deviations for the AIMS, GRCS and its subscales, and the AFAQ for each AI group. Mean GRCS scores were significantly different between high (127.36 ± 23.79), moderate (125.63 ± 19.86), and low AI groups (106.78 ± 18.49), $F(2, 69) = 6.111$, $p = .004$. Post-hoc analyses revealed significant differences between the moderate and low AI groups, and the high and low AI groups. The mean difference of 18.84 (95% CI, 5.02 to 32.68) in GRCS-Total between moderate and low AI groups was significantly different ($p = .005$). The mean difference of 20.58 (95% CI, 3.22 to 37.94) in GRCS-Total

Table 2. Correlations for AIMS, GRCS, and AFAQ.

	1	2	3	4	5	6	7	8	9	10	11
1. AIMS Total	–										
2. AIMS Self-Identity	.23										
3. AIMS Social identity	.49**	.28*									
4. AIMS Exclusivity	.78**	.00	.20								
5. AIMS Negative Affect	.81**	.05	.25*	.55**							
6. GRCS Total	.23	–.07	.06	.22	.25*						
7. GRCS-SPC	.25*	.08	.09	.24*	.18	.59**					
8. GRCS-RE	.18	–.17	.43	.16	.21	.81**	.27*				
9. GRCS-RAM	.26*	.04	.10	.20	.24*	.78**	.28*	.59**			
10. GRCS-CBWLFR	–.06	–.16	–.09	.03	.03	.68**	.21	.46**	.42**		
11. AFAQ	–.29	–.06	.12	–.15	.02	.05	.19	–.03	–.13	.07	

Note: * $p < 0.05$, ** $p < 0.01$, AIMS; Athletic Identity Scale, GRCS; Gender Role Conflict Scale, GRCS-SPC; Gender Role Conflict Scale – Success, Power and Competition, GRCS-RE; Gender Role Conflict Scale – Restrictive Emotionality, GRCS-RAM; Gender Role Conflict Scale – Restrictive Affectionate Behaviour Between Men, GRCS-CBWLFR; Gender Role Conflict Scale – Conflict Between Work, Leisure, Family Relations, AFAQ; Athlete Fear Avoidance Questionnaire.

Table 3. Descriptive statistics for AIMS, GRCS, and AFAQ by athletic identity group.

	Athletic Identity Group	Mean	SD
AIMS	Low (N = 18)	44.39	6.87
	Mod. (N = 40)	56.10	2.74
	High (N = 14)	63.57	2.10
GRCS-Total	Low (N = 18)	106.78	18.49
	Mod. (N = 40)	125.63	19.86
	High (N = 14)	127.36	23.79
GRCS-SPC	Low (N = 18)	49.94	6.80
	Mod. (N = 40)	53.20	5.94
	High (N = 14)	56.43	7.14
GRCS-RE	Low (N = 18)	23.61	8.32
	Mod. (N = 40)	29.83	8.70
	High (N = 14)	30.71	7.80
GRCS-RAM	Low (N = 18)	18.00	5.38
	Mod. (N = 40)	23.45	7.65
	High (N = 14)	24.29	8.74
GRCS-CBWLFR	Low (N = 18)	15.22	4.89
	Mod. (N = 40)	19.15	6.27
	High (N = 14)	15.93	6.32
AFAQ	Low (N = 18)	21.83	6.97
	Mod. (N = 40)	21.43	6.58
	High (N = 14)	22.64	5.08

Note: AIMS; Athletic Identity Scale, GRCS; Gender Role Conflict Scale, GRCS-SPC; Gender Role Conflict Scale – Success, Power and Competition, GRCS-RE; Gender Role Conflict Scale – Restrictive Emotionality, GRCS-RAM; Gender Role Conflict Scale – Restrictive Affectionate Behaviour Between Men, GRCS-CBWLFR; Gender Role Conflict Scale – Conflict Between Work, Leisure, Family Relations, AFAQ; Athlete Fear Avoidance Questionnaire.

between the high and low AI groups was also significant ($p = .016$). There were no significant differences in GRCS-Total between high and moderate AI groups ($p = .959$).

There were no significant differences in AFAQ scores between high (22.64 ± 5.08), moderate (21.43 ± 6.58), and low (21.83 ± 6.97) AI groups, $F(2, 69) = .188$, $p = .829$.

Discussion

The study aimed to examine the relationships between AI, GRC, and athlete fear-avoidance attitudes associated with injury and also to compare GRC and fear avoidance scores between those with high, moderate, and low AI. Both AI and masculinity have been associated with detrimental emotional and behavioural concepts linked to injury in athletes, such as depression and avoidance of therapeutic help-seeking (Manuel et al. 2002; Steinfeldt and Steinfeldt 2010). The current study, however, is the first to examine the direct relationships and differences between AI, GRC, and athlete fear-avoidance in male academy English footballers.

There were no significant relationships between AIMS, total GRCS, nor AFAQ. There was, however, some low positive correlations between total AI and specific masculine conflicts (SPC and RAM). Additionally, higher levels of exclusivity associated with a sporting identity was positively correlated with SPC. Further, negative affect associated with AI showed positive relationships with overall masculine conflict and conflicts associated with showing affection to other men. Finally, the current study found that players with high or moderate athletic identities appeared to have higher levels of total GRC than those with low AI, but there were no differences in injury fear avoidance attitudes.

Athletic identity and gender role conflict

The current findings show that higher and moderate AI have significantly higher total GRCS than low AI. Additionally, AI negative affectivity specifically seems to be positively related to total GRCS. These findings echo existing research demonstrating links between masculine conformity and AI (Steinfeldt

and Steinfeldt 2010, 2012). Some sports have a specific gender 'etiquette' which can culturally influence one's identity by offering a context that shapes and legitimises masculinity (Messner 1992; Cranswick et al. 2020; Harding 2022). The shaping and validating impact of sport and the institutional context on identity might explain why academy players who are more identified with the athletic role show greater gender role conflicts and conformity to masculine norms (Steinfeldt and Steinfeldt 2010, 2012; Ramaeker and Petrie 2019). For example, there are often social rules and expectations set by the institution, coaches, and/or parents (Roberts et al. 2017; Stewart et al. 2020), and by following the rules young men can accrue masculine capital to validate and enact their masculine and athletic identities (Cranswick et al. 2020; Harding 2022).

The link between AI negative affectivity and GRCS may also be explained by the validating relationship between sport and masculinity because if unable to participate in sport or fulfil an athletic status, players will gain fewer rewards (and capital) resulting in potential identity loss (i.e., masculinity), distress, and stigmatisation (Messner 1990; Steinfeldt and Steinfeldt 2012, 2012; Ramaeker and Petrie 2019; Cranswick et al. 2020).

The potential interplay between AI, negative affectivity, and gender role conflicts could suggest that sporting participation and masculinity, in some contexts, might be mutually beneficial to each other and removing sport may be problematic for the individuals overall masculine-athletic identity (Cranswick et al. 2020; Harding 2022). In essence, to be more masculine boys can engage in gender-appropriate sports and build capital but also by being more masculine their athletic status will simultaneously improve.

Athletic identity and success, power, and competition

The current study showed that total AI and AI exclusivity positively correlated with SPC, which suggests that the more an athlete identifies with, relies on, and prioritises their athletic role, the higher their need for success, competition, and dominance. The links between AI and SPC support existing literature, which shows individuals higher in AI appear to have heightened conflicts in needs for success (Steinfeldt and Steinfeldt 2010) and conformity to winning as a masculine trait (Steinfeldt and Steinfeldt 2012). Competition and success, specifically, epitomise organised sport and often come with tangible and intangible rewards (Messner 1990; Roderick 2006) and could increase athletic status, which may explain the link to AI. Additionally, young boys seem to champion sporting prowess, male authority, and being the best within their identities (Nesti et al. 2013; Farrell et al. 2016). It is, therefore, not surprising that in the current study highly identified academy athletes scored higher on SPC. Additionally, given that success, winning, and being dominant is seen, for some, as a way of validating athletic and masculine identities (Nesti et al. 2013; Farrell et al. 2016), this helps contextualise the current findings, as by striving for success and competing with others the academy players can establish themselves as an elite, male, athlete and legitimise their sense of self and identity.

Academy football culture is characterised by a need to perform and achieve success as a team but also compete internally with other players to secure one's place in the team and establish a professional career (Roderick 2006; Adams and Carr 2019). Academy players will learn at an early age the competitive and uncertain nature of football and what is needed to sustain a career (Roderick 2006) and it may be this engrained competition and ruthlessness that gets meshed into the athletic and masculine identities that these young boys begin to develop, which would help explain the current relationship between AI, exclusivity, and SPC.

Athletic identity and restricted affectionate behaviour between men

Higher overall AI and AI negative affectivity was also related to higher RAM. These findings may reflect the potentially homophobic culture and attitudes still present within some sports, whereby participation in 'macho' sports (e.g., football or rugby) is valorised and non-gender appropriate sports (e.g., ballet or dance) is stigmatised or deemed homosexual and feminine (Stewart et al. 2020; Harding 2022). Although there is a cultural shift in football and other sports with regard to homophobia and homosocial behaviour, this relies on an enculturation over time (Kimmel and Messner 2001; Muir and Seitz 2004; Anderson 2005; Roper and Halloran 2007). Elite football academies are often what Anderson (2005) refers to as near-total institutions, whereby the young men will live, play, train, socialise, and study together in a closed space. Despite some evidence that football academy settings demonstrate closeness and affection with other men, there do seem to be restrictions to homosocial behaviour and communication that may be influenced by the 'near-total institution' environment (Roberts et al. 2017).

The performance-orientated and competitive environment within an academy encourages status acquisition and frames teammates as rivals that can suppress intimacy and closeness, potentially explaining the link between AI and RAM in the current study (Zarbatany et al. 2000; Ommundsen et al. 2005; Magrath 2017; Roberts et al. 2017; Adams and Carr 2019). Because teammates can be seen as 'direct competitors' fighting for a limited number of professional contracts, players often report prioritising friends 'back home' and selectively saving emotional openness and physical tactility for these friends (Roberts et al. 2017, p. 346; Magrath 2017; Adams and Carr 2019). By sharing emotions with the male teammates around them, young academy players could be deemed weak and have their progression hindered by teammates being put higher in the 'pecking order' (Roberts et al. 2017; Magrath 2017). The competitive and closed culture within academy football might explain the relationship between AI and RAM in the current players.

The current findings suggest that in some academy-level environments, conformity to traditional masculine expectations, such as competitiveness and heterosexuality, may still be present and intertwined with the players athletic identities, which creates a mutual interaction between sporting participation and success and orthodox masculinity.

As well as the aforementioned competitive culture, another reason for AI negative affectivity being linked to

RAM conflicts may be that when a player's AI is threatened (e.g., injury) and they are unable to successfully participate in sport as a way of validating their masculine identity, they might resort to default, more orthodox, masculine behaviours (e.g., homophobia, restrictive emotionality) as a way of upholding their masculine status. Literature suggests that, despite more fluid and laterally aligned masculinities being present in society, normative masculinity seems to still be a dominant narrative and frame of reference for adolescent boys and their identities (Nesti et al. 2013; Farrell et al. 2016; Metcalfe & Lindsey 2020; Stewart et al. 2020). Therefore, in the current academy age players, if their sporting participation is hindered they may look for more orthodox ways of being masculine. The role of coaches and parents in academy football culture, and their generational differences may influence behavioural references for the players and their identities (Roberts et al. 2017). These individuals, such as parents, might maintain dominant orthodox attitudes and narratives (e.g., reluctance to show closeness to other men or upholding less homosocial behaviours) as a way of stabilising the young players' identities when injured (Roberts et al. 2017).

Athletic identity and injury fear avoidance

In relation to injury specifically, no significant relationships or differences associated with injury fear avoidance were found. Existing research, however, shows that higher AI is associated with negative rehabilitation behaviours, such as overadherence to rehabilitation and increased willingness to prematurely return to sport (Podlog et al. 2013; Hilliard et al. 2017). The current results may help contextualise these existing findings by suggesting that being removed from competition may impact a player's ability to validate their athletic and masculine identities through sporting success and competitiveness that could encourage maladaptive rehabilitation behaviours and possibly increase conflicts in other more orthodox masculine areas (e.g., homosexuality). Therefore, some injured athletes' reluctance to not play, overcommitment to rehab, and increased desire to return to sport prematurely may be a strategy to resolve SPC conflicts and maintain their athletic and masculine identities.

Limitations

Despite the current findings, the study limitations must be recognised. Firstly, the cross-sectional design does not allow us to imply causality. Secondly, the use of retrospective injury recall, the duration of this recall, and age of the players at time of injury could mean that as the players may not have sufficiently remembered the impact, appraisal, and response to their injuries that could have dampened or amplified their AFAQ scores. Thirdly, the self-report nature of the injuries does not represent a formal diagnosis by a medical professional, which may not provide the true extent or nature of the injuries due to misreporting or self-diagnosis. The severity and nature of injury may have an impact on the injury response and thus fear-avoidance. Future research could recruit currently injured athletes and/or use specific injury data collected by medical professionals within the clubs to

minimise recall bias and add injury context, respectively. Finally, a procedural limitation was that the questionnaires were completed in a team setting (at training) for convenience so players may have been indirectly influenced by others presence and apprehensive about answering honestly. Future research could allow players to complete questionnaires in their own time and alone with full anonymity assured. The current study was delimited to male academy level English footballers, and so future research could examine wider age ranges, higher-level playing status (e.g., 1st team), different level of competition (e.g., other competitive league levels), and female footballers.

Conclusions

In conclusion, the current study suggests that higher athletic identities may amplify masculine conflicts (specifically SPC and RAM) and that when AI is prioritised and threatened, there may be increased desire for success and a reluctance to demonstrate homosocial behaviour and emotion. Given that SPC and RAM have been associated with problematic coping methods and detrimental behaviours, such as substance abuse (O'Neil 2008), highly, and exclusively, identified athletes who experience high negative emotion when their identities are threatened may be indirectly (through gender role conflicts) more prone to developing maladaptive coping mechanisms for dealing with sporting injury. Maladaptive coping to injury through identity fears could lead to unfavourable rehabilitation outcomes. An awareness of the potential conflicts in masculinity could inform health professionals of the need to monitor highly identified athletes and their GRC and offer them healthy coping methods during times where identity-roles are threatened by injury.

Implications and future research

The current findings inform rehabilitation professionals of the potential relationship between heightened AI and GRC in academy-level footballers. This informs of the potential need to screen players' athletic identities and GRC. The current relationship between AI and SPC may identify a need to monitor and control the value placed on winning, dominance, and competitiveness in young, highly identified, athletes so as not to negatively impact their identities when these expectations are not met. Additionally, the link between AI and RAM may suggest more work is needed to ensure that the institution is supportive of a shift in culture to normalise affectionate behaviour among boys in youth sport and be more inclusive of homosexuality. Finally, given the suggested links in the literature regarding AI, masculinity, and maladaptive coping or negative and risky behaviours (e.g., premature return to play and reduced help seeking; Steinfeldt et al. 2009; Steinfeldt and Steinfeldt 2010; Podlog et al. 2013; Hilliard et al. 2017) it may be important to identify those high in AI and GRC so negative outcomes or maladaptive behaviours can be minimised during events where identities may become threatened.

Given the lack of significance found for fear-avoidance attitudes in the current study, future research may seek to further explore injury-related attitudes and behaviours in relation to AI and masculinity to further optimise rehabilitation approaches and outcomes in male athletes.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The author(s) reported that there is no funding associated with the work featured in this article.

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Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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