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Psychological Distress in Elite Adolescent Soccer Players Following Deselection

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Elite adolescent soccer players may represent one athletic population that is vulnerable to developing psychological distress following deselection. This study examined the proportion of players experiencing clinical levels of psychological distress following selection procedures and whether player status (i.e., deselected vs. retained) had a significant effect on psychological distress. Data was collected from 91 players who completed the General Health Questionnaire -12 at three time points: 7–14 days before selection procedures, 7 days after and 21 days after. Although outcomes were heterogeneous, a sizable proportion of deselected players were found to experience clinical levels of psychological distress. A factorial ANOVA ($p < .001$) found that deselected players experienced higher levels of psychological distress than retained players at postselection time points. The research provides evidence that some deselected players are "at risk" of developing clinical levels of psychological distress. Clinical implications and recommendations for future research are discussed.

Keywords: deselection, elite soccer, psychological distress, GHQ-12

Athletic career termination has been found to be associated with heterogeneous reactions and outcomes. Whereas some athletes reportedly experience positive reactions, such as relief from the demands of training and competition, and express enthusiasm regarding opportunities for alternative lifestyles and development (Alfermann, 1995; Allison & Meyer, 1988; Chow, 2002; Young, Pearce, Kane & Pain, 2006), other athletes have been found to experience various forms of psychological distress. Examples include depression, identity crisis or confusion, loss of self-worth or esteem, suicidal ideation, attempted suicide and trauma (Douglas & Carless, 2009; Stephan, Bilard, Ninot & Delignieres, 2003; Stephan, Torregrosa & Sanchez, 2007; Warriner & Lavallee, 2008; Wippert & Wippert, 2008, 2010). As such distress is associated with a number of negative consequences, such as decrements to health, well-being, and social dysfunction (Moussavi, Chatterji, Verdes, Tandon, Patel & Ustun, 2007; Wells et al., 1989), there is a need to identify athletes who are most at risk for developing psychological distress following career termination.

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Considering (i) conceptual and developmental models of career transition in sports (Taylor & Ogilvie, 1994; Wylleman & Lavallee, 2003), and (ii) research regarding multidimensional factors associated with transition quality, an interaction between personal athlete characteristics and factors encompassed within specific sports can influence outcomes following career termination. Examples of characteristics and factors that are associated with problematic transitions include the development and/or experience of a high athletic identity, identity foreclosure, involuntary career termination, limited control regarding the continuation of the athletic career, a failure to achieve sporting goals, unfulfilled sporting potential and limited psychosocial support (Alfermann, 2000; Cecić-Erpič, Wylleman & Zupančič, 2004; Park, Lavallee & Tod, 2012; Warriner & Lavalee, 2008). Examples of factors associated with healthy transitions include appropriate career planning, voluntary retirement, institutional support, achievement of sporting goals and higher socioeconomic and educational status (Albion, 2007; Cecić-Erpič et al., 2004; Chow, 2001; Park et al., 2012; Wheeler, Malone, VanVlack, Nelson & Steadward, 1996)

As elite adolescent soccer players have been reported to develop the aforementioned characteristics and encounter the aforestated experiences associated with problematic transitions (Brown & Potrac, 2009; Brownrigg, Burr, Locke & Bridger, 2012; Green, 2009; Woods, Buckley & Kirrane, 2004), some young players may be vulnerable to developing psychological distress following deselection. For example, as recruitment into professional club junior development programs usually occurs between the ages of 5 and 10 years (Development Centres, 2013; Green, 2009), various demands and experiences within a prolonged junior career (e.g., attending regular training sessions and kudos associated with sporting excellence) can foster the development of a high athletic and foreclosed identity (Brown & Potrac, 2009; Mitchell et al., 2014). As this identity profile has been found to have a positive association with psychological distress following career termination both within football and across other sports (Brown & Potrac, 2009; Kerr & Dacyshyn, 2000; Lally, 2007; Warriner & Lavallee, 2008), young adolescent players may be at risk for developing psychological distress following deselection.

It is also reported that only 1–10% of young players who embark on a career in professional football actually go on to sign professional contracts at the age of 18 (Green, 2009; Anderson & Miller, 2011). This indicates that many young players experience involuntary career termination and limited control over their future in the sport. Previous research has found that athletes who are involuntarily dismissed without any control are more likely to experience psychological distress following career termination than athletes who are able to voluntarily choose and control when they end their respective careers (Cecić-Erpič et al., 2004; Fortunato & Marchant, 1999; Wippert & Wippert, 2010). Research in clinical psychology has also found that perceiving one has less control of event onset is associated with the development of psychological distress (Kendler, Karkowski & Prescott, 1999; Kessler, 1997; Ozer, Best, Lipsey & Weiss, 2003). The extent to which an individual believes they have influence over a specific event is therefore associated with the manifestation of psychological distress. Morever, as outlined by Webb, Nasco, Riley & Headrick (1998), the psychological advantage for athletes who can exert control over the timing of retirement is that this can lead to psychological and practical preparation for retirement and the implementation of well-controlled

plans for the future. Conversely, athletes who are deselected may be propelled into circumstances without such preparation or plans and consideration of how life might be different outside of sport. Considering these findings, the notions outlined by Webb et al. (1998) and the high failure rates inherent in professional club selection procedures, reports of adolescent players experiencing psychological distress following deselection may well be unsurprising.

In addition, whereas many players expect to achieve the full lifespan of a professional footballer (Gearing, 1999), in reality, many do not achieve their sporting goals and fail to maximize their sporting potential. In view of the positive associations between the achievement of sporting goals/fulfillment of sporting potential and transition quality following career termination (Cecić-Erpič et al., 2004; Chow, 2001; Koukouris, 1994), deselected adolescent players may be at risk for developing psychological distress.

Despite an abundance of research examining career transitions across a range of sports and participation levels, limited research has been undertaken with elite adolescent soccer players. In fact, only one retrospective, qualitative study using interpretive biographies has examined psychological distress in adolescent soccer players following deselection. Brown & Potrac, (2009) used two post-deselection interviews with players ($N = 4$) to explore (a) the development of a high athletic identity, (b) the impact of deselection in relation to sense of self, and (c) adaptations to life outside of elite soccer. These players described a number of problematic experiences following deselection, namely anger, anxiety, depression, fear, humiliation and identity crisis.

Despite these reported experiences, no study, to date, has quantified psychological distress following deselection in a sample of elite adolescent soccer players. The current research consequently aimed to establish the prevalence of clinical levels of psychological distress in elite adolescent soccer players following deselection. This aim was in accordance with national soccer recommendations regarding young player development (e.g., recommendation 60—finding out what happens to players when they are released from professional clubs; Lewis, 2007), as well ethical principles (e.g., beneficence) and institutional obligations (Thomas & Ermler, 1988). The study hypothesized that player status would have a significant effect on psychological distress, whereby deselected players would experience higher levels of psychological distress than retained players at postselection time points.

Method

Design

A two-group cohort design is used in this study. This design compared deselected players and retained players, following them prospectively and across time to monitor psychological distress. Measures were taken at three time points to establish a clear timeline regarding the impact of deselection on psychological distress.

There were two independent variables (IVs). The first IV (between subjects) was player status with two levels (deselected vs. retained players). The second IV (within subjects) was time period and this had three levels (MT1, MT2, and MT3). The dependent variable (DV) was psychological distress.

Participants

A convenience sample of elite middle adolescent soccer players ($n = 91$) was gained from English and Scottish Premier League and Football League soccer academies during the 2011–2012 and 2012–2013 seasons. In order to participate in the study, participants were (a) aged 15–18 years ($M = 16.31$; $SD = 1.10$), (b) English speaking (i.e., English as first language or fluent in English), and (c) contracted to a Premier League or Football League Academy.

Measure

General Health Questionnaire-12 (GHQ-12; Goldberg & Williams, 1988). The GHQ-12 score represented the dependent variable and was used to detect an individual's psychological distress. This measure provides a unidimensional measure of psychological distress in community and nonpsychiatric settings that encompasses symptoms indicative of anxiety, depression, loss of confidence and social dysfunction (Hardy, Shapiro, Haynes & Rick, 1999; Russ et al., 2012).

Higher scores on the GHQ-12 represent greater psychological distress (Russ et al., 2012). Although there are several ways of scoring the GHQ-12 (e.g., modified Likert, simple Likert, GHQ scoring, CGHQ method; Goldberg & Williams, 1988), the current study used the GHQ scoring method (i.e., 0-0-1-1), as this method has been found to have the lowest measurement error (Hankins, 2008). The maximum score on this measure was therefore 12 and the minimum score was 0.

A score of three or greater was used to indicate clinical levels of psychological distress (i.e., cases). Scores of two or less were used to indicate the absence of psychological distress (i.e., noncases). These values were selected on the basis of previous research, which evaluated the most accurate threshold scores to achieve optimum specificity and sensitivity in nonpsychiatric settings (Goldberg & Williams, 1988; Goldberg et al., 1997; Jacob, Bhugra & Mann, 1997; Makowska, Merecz, Moćcicka & Kolasa, 2002; Plummer et al., 2000).

The GHQ-12 was also selected on the basis of its internal consistency, test-retest reliability, criterion, convergent and discriminant validity (Aalto, Elovaino, Kivimäki, Uutela & Pirkola, 2012; Cano et al., 2001; Hardy et al., 1999; Makowska et al., 2002; Patton & Donohue, 1998). Indeed, as shown in Table 1, the internal consistency of the GHQ-12 scored using the GHQ scoring method demonstrated good levels of internal consistency at MT1, MT2 and MT3 (Altman, 1991; Nunally, 1978; Streiner & Norman, 2008).

Procedure

Ethical approval for the study was granted by the Research and Governance Committee at Teesside University. In order to recruit participants, e-mail and/or telephone contact was made with a number of representatives (e.g., Academy Director, Heads of Youth Development/Education and Welfare) from English and Scottish Premier League and Football League soccer academie**s.** Each representative received an information sheet about the study. Several national soccer organizations (e.g., The Professional Footballers' Association, League Football Education, The Scottish Football Association, and PFA Scotland) also issued a statement advocating their support for the research.

Table 1 Cronbach's Alpha Statistics to Measure the Internal Consistency of GHQ-12 (Using GHQ scoring) at MT1, MT2, and MT3

Time point	*n*	Cronbach's Alpha
MT1	91	0.75
MT2	65	0.86
MT3	58	0.86

Note. The scores of players whose retention/release status was unknown ($N = 14$) were included in the analyses at MT1.

Once informed consent was received from club representatives regarding player participation, such representatives assisted the researcher in introducing the research to players. There were three recruitment options. The first option involved club representatives distributing information packs on behalf of the researcher. For players aged 15–17, club representatives distributed or sent these packs to their respective parents/guardians. For players aged 18, club staff distributed or sent the packs to players directly.

The second option involved club staff providing access to player or parent contact details. For players aged 15–17, if players' parent/guardian provided their explicit consent or if players aged 18 provided their explicit consent for the researcher to have access to their contact details, the researcher then sent the player and/or parent information about the research..

The third option involved the lead researcher visiting the club and delivering a short presentation about the research and leaving information sheets for the parents/guardians (for players aged 15–17) and players (if aged 18) to keep and consider. If players wished to take part, they then contacted the researcher directly.

Regardless of how the research was introduced, player participation was voluntary. Information sheets stated that by submitting a completed questionnaire, players were providing their informed consent to take part. Players aged 18 were considered legally competent and able to decide for themselves whether they wished to take part. Due to some concerns about the competence and capacity of players aged 15–17 years to provide informed consent (Miller, Drotar & Kodish, 2004; Vitiello, 2008), additional procedures were implemented (e.g., gaining parental or guardian permission and giving these players further information about their own research rights).

As shown in Table 2, players were recruited across two soccer seasons.

In accordance with the two-group cohort design, there were three phases of the research and each phase required players to complete the GHQ-12.

In Phase 1, the GHQ-12 was administered to all participants in the mid to late season (January to May) before selection procedures were implemented. Even though measures were scheduled to be completed 7–14 days before selection procedures, due to several logistical challenges (e.g., dates of selection procedures being moved forward or back outside the control of the researcher or academy staff), this was not always possible. The mean time measures were completed before selection procedures was 21.03 days ($SD = 16.82$; Range = 1–59 days).

Table 2 Frequency of Players Participating in Each Respective Season (*n*)

	Time point 1	Time point 2	Time point 3
Season 2011–2012	35	22	21
Season 2012–2013	56	43	37
Total	91	65	58

Of the 91 players who completed the measures in this phase of the research, 56 (61.5%) were retained and 21 (23.1%) were released. The retention/deselection status of 14 players (15.4%) was unknown.

Although the GHQ-12 was scheduled to be completed 7 days after selection procedures in Phase 2 of the research, a number of players (N = 33; 50.8%) did not complete the questionnaire on this day despite being sent a standard reminder. In accordance with the initial reminder, such players completed the questionnaire retrospectively between 7 and 13 days however (M = 8.6 days; SD = 2.11). Of the 65 players who completed measures in this phase, 51 (78.5%) were retained and 14 (21.5%) were deselected.

Whereas the GHQ-12 was scheduled to be completed 21 days after selection procedures in Phase 3 of the research, a number of players (N = 30; 51.7%) did not complete questionnaires on this day. In conjunction with the initial reminder, such players retrospectively completed questionnaires between 21 and 28 days however (M = 22.29 days; SD = 1.85). Of the 58 players who completed measures in this phase, 47 (81%) were retained and 11 (19%) were released.

At each of the three time points, participants were given the choice of completing assessments on paper copies or via an online portal (Bristol Online Survey System). All participants completed the GHQ-12 via the portal. To reduce the likelihood of attrition, the researcher also reminded participants via e-mail of the times to complete assessments. No researchers were present at times when outcome measures were completed, consequently reducing the likelihood of demand characteristics and response bias (Cook, 2010).

Although several postselection time points could have been selected, this research strategically selected two time points on the basis of several factors. Firstly, in view of (a) positive associations between the onset of a stressor and the development of psychological distress in the first month after this stressor (e.g., depression; Kessler, 1997), and (b) stress theory (e.g., alarm reaction; Horowitz, 1987; Selye, 1976), the research focused on players' reactions in the first month after selection procedures. Secondly, shorter recall periods were implemented to minimize recall bias, which is more common in procedures that assess psychological distress over extended intervals (Derogatis et al., 2011; Folkman & Moscowitz, 2004).

Response Rates and Attrition

In the 2011–2012 season, only the first recruitment option was used. Of 390 information packs distributed only 35 players completed questionnaires at the

first time point; a response rate of 8.97%. Other recruitment options were used in the 2012–2013 season. With these options, it was difficult to establish a precise response rate as the exact number of players to whom the research was presented or introduced was unknown. Nevertheless, of the 176 players who forwarded their contact details via option two or three, 56 completed questionnaires at the first time point; a response rate of 36.13%. Combining both seasons together, an approximate, mean response rate of 16.08% was calculated. This figure was most likely to be an over-estimate however as the frequency of players who received presentations or information about the research in the second season was higher than 176.

In addition, despite implementing recommended procedures to minimize attrition (e.g., sending players reminders; Boys et al., 2003), the attrition rate from MT1 to MT3 was 47.62% (10/21) for deselected players and 16.09% (9/56) for retained players. A 2 × 2 Pearson chi square test suggested that deselected players were less likely to complete questionnaires at MT1 and MT3 compared with retained players ($\chi^2 = 8.18$, $df = 1$, $p = .004$).

Results

Proportion of Deselected Players Experiencing Clinical Levels of Psychological Distress

Descriptive statistics were used to calculate the proportion of deselected players who experienced clinical levels of distress (i.e., cases). As shown in Table 3, a proportion of deselected players were classified as "cases" at both MT2 and MT3. The maximum score for released players on the GHQ-12 was 12/12 at MT2 and 8/12 at MT3. In combination, these results suggest that a number of deselected players experienced clinical levels of distress and that some players actually experienced severe levels of psychological distress.

Main Effect of Player Status on Psychological Distress

To determine whether player status had a significant effect on psychological distress, a mixed model repeated-measures ANOVA was used. The three levels of the within subjects IV were the respective time periods at which measures were completed and the two levels of the between subjects IV represented player status (i.e., released vs. retained). The dependent variable was the level of psychological distress experienced.

Table 3 Proportion of Deselected Players Who Experienced Clinical Levels of Psychological Distress Following Deselection at MT2 and MT3

Time Point	Frequency of Cases	*n*	Experiencing Clinical Levels of Psychological Distress, %
MT2	5	14	35.7
MT3	6	11	54.5

In accordance with recommendations regarding the use of mixed model repeated-measures ANOVAs (Clark-Carter, 2010), only players who completed measures across all three time points were included in the ANOVA analysis. As shown in Table 4, the mean level of psychological distress was calculated for players who completed GHQ-12 measures at each respective time point.

The mixed model repeated-measures ANOVA found that for the whole sample (N = 58), the main effect of time period was small and not significant, $F(2, 112) = 0.792$, $p = .456$, partial $\eta^2 = 0.014$ [0.000, 0.069]. Moreover, the main effect of time period corrected using a Bonferroni adjustment reflected no significant differences between MT1 and MT2, MT1, and MT3, and MT2 and MT3 ($p > 0$ .05). This suggests that when player status was ignored, there was no significant difference in psychological distress scores across time.

To determine whether time had an effect on psychological distress in retained and released players respectively, further one-way ANOVAs were implemented. For released players (n = 11), the one way ANOVA found that the main effect of time was moderate and not significant, $F(2, 20) = 0.90$, $p = .422$, partial $\eta^2 = 0.083$ [0.000, 0.292]. The main effect of time period corrected using a Bonferroni adjustment reflected no significant differences between MT1 and MT2, MT1 and MT3 and MT2 and MT3 ($p > .05$). This suggests that for released players, there was no significant differences in psychological distress across time.

For retained players ($n = 47$), a one-way ANOVA found that the main effect of time was moderate and significant however, $F(2, 92) = 6.006$, $p = .004$, partial $\eta^2 = 0.115$ [0.036, 0.228]. Although the main effect of time period corrected using a Bonferroni adjustment reflected no significant differences between MT1 and MT2, and MT2 and MT3 ($p > .05$), a significant difference was found between MT1 and

Table 4 Mean Levels of Psychological Distress for Players Who Completed the GHQ-12 at All Three Time points

	Player Status	Mean	*SD*
MT1 (predecision)	Retained	1.49	1.89
	Released	2.64	2.11
	Total	1.71	1.97
MT2 (postdecision)	Retained	0.96	1.63
	Released	3.82	4.24
	Total	1.50	2.56
MT3 (postdecision)	Retained	0.62	1.39
	Released	3.36	2.98
	Total	1.14	2.07

Note. Of the 58 players who completed questionnaires at each time point, 47 were retained and 11 were released.

MT3 (p = 0.03). This suggests that any psychological distress in retained players reduced across time. In combination, these two results support the hypothesis. For example, as psychological distress reduced in retained players across time, and did not change in released players at postselection time points, this suggests that deselected players had higher levels of psychological distress at postselection time points.

Notably, the main effect of player status corrected using a Bonferroni adjustment was found to be large and significant, $F(1, 56) = 16.449$, $p < .001$, partial $\eta^2 = 0.23$ [0.061, 0.393]. This suggests that released players generally experienced significantly higher levels of psychological distress than retained players. This result is in support of the hypothesis.

A significant interaction of medium magnitude was also found between the two IV's: player status and the time period in which GHQ-12 measures were undertaken (F (2, 112), = 4.056, p = <0.020, partial $\eta^2 = 0.068$ [0.001, 0.161]). This suggests that player status had a different effect on psychological distress depending on the time period at which GHQ-12 measures were completed. It also indicates that the difference in levels of psychological distress between retained and deselected players was larger at postselection time points (MT2 and MT3) compared with the preselection time point (MT1). This result is in support of the hypothesis and suggests that player status has a significant effect on psychological distress.

To examine this interaction further, Mann-Whitney tests were conducted. These tests were selected on the basis of nonnormally distributed GHQ-12 scores and the notion that such tests can examine the null hypothesis of equal scores. At MT1, no significant difference was found between retained and deselected players on GHQ-12 scores ($U = 174.500$, $N_1 = 47$, $N_2 = 11$, $p = .08$, two-tailed). A significant difference was found between retained and deselected players on GHQ-12 scores at MT2 ($U = 139.000$, $N_1 = 47$, $N_2 = 11$, $p = .0045$, one-tailed) and MT3 ($U = 110.500$, $N_1 = 47$, $N_2 = 11$, $p = .0005$, one-tailed) however. These results support the aforementioned interaction, whereby the difference in levels of psychological distress becomes larger and more statistically significant at postselection time points (MT2 and MT3) compared with the preselection time point (MT1). The results also suggest that released players experienced significantly more psychological distress than retained players at the postselection time points, thus supporting the hypothesis.

Discussion

The current study examined the proportion of elite adolescent soccer players who experienced clinical levels of psychological distress following deselection, and whether player status had a significant effect on psychological distress. Considering that a number of deselected players were found to experience clinical levels of psychological distress as measured by the GHQ-12 (35.7% at MT2 and 54.5% at MT3), this suggests that some players may experience symptoms of anxiety, depression, loss of confidence and social dysfunction in the first month following deselection. Moreover, in view of the maximum GHQ-12 scores for deselected players at MT2 and MT3 and the notion that GHQ-12 scores between 8 and 12 reflect severe psychological distress (Rai et al., 2012), deselection may have been particularly distressing for some individuals. The notion of players experiencing

clinical and severe levels of psychological distress is particularly salient as individuals who experience such levels of distress typically require service input from mental health professionals (National Institute for Health and Care Excellence, 2011).

The hypothesis that player status would have a significant effect on psychological distress was supported by several results. Indeed, as well as the main effect of player status being found to be large and significant, the results relating to the effect of time suggested that deselected players had higher levels of psychological distress at postselection time points. The significant interaction between player status and the time period in which GHQ-12 measures were undertaken, as well as further analysis also suggested that deselected players experienced significantly more psychological distress than retained players at the postselection time points. The results relating to the proportion of players experiencing psychological distress and the hypothesis are in corroboration with previous research, which found that adolescent players can experience various forms of psychological distress following deselection (Brown & Potrac, 2009). Indeed, akin to adolescent players in the Brown and Potrac study (2009), the current study suggests that adolescent players can experience symptoms of depression (e.g., negative thoughts about self), anxiety, a loss of confidence and social dysfunction. Although Brown and Potrac (2009) reported that adolescent players experienced distress in a retrospective, qualitative study, the current study included several strengths. Firstly, the current study used a reliable and valid quantitative measure to determine the proportion of players experiencing clinical levels of distress and impairment (Aalto et al., 2012; Cano et al., 2001; Hardy et al., 1999; Makowska et al., 2002; Patton & Donohue, 1998). In view of the reliability and validity of the measure used, the results provide further support to the notion that some players can indeed experience clinical levels of psychological distress following deselection.

In addition, as well as finding statistically significant differences in levels of psychological distress between retained and released players, the results also highlight that deselection can be clinically significant for some players. For example, as the GHQ-12 encompasses psychological and social impairment (Hardy et al., 1999), results also suggest that between 1 and 21 days following selection procedures, deselection can have a negative influence on the everyday functioning of some players.

Moreover, as the design of the study was a two-group cohort design, which found that the differences in psychological distress between the two groups became larger and more statistically significant postselection, it is conceivable that deselection was the antecedent of psychological distress and impairment for some players. These results support the notion that factors encompassed within deselection can potentially increase players' vulnerability to such distress. For instance, as deselection encompasses a number of factors found to be negatively associated with transition quality (e.g., limited control and choice over the decision to end the elite athletic career, not achieving sporting goals or fulfilling sporting potential; Alfermann, 2000; Cecić-Erpič et al., 2004; Chow, 2001; Koukouris, 1994), this suggests that such factors may have contributed toward the development of psychological distress in some players.

The idea of deselection being the antecedent of distress also supports stress theory, whereby a number of phases follow the onset of a stressor. Phases include alarm reactions (e.g., shock, high stress reactivity) in the short term and resistance/adaptation in the longer term (Horowitz, 1987; Selye, 1976). Players' experience of distress

between 1–21 days after deselection corroborates with the notion of alarm reactions and asserted positive associations between the onset of a stressor and the development of psychological distress in the first month after the stressor (Kessler, 1997).

Not all players experienced clinical levels of psychological distress following deselection, however. In fact, a number of released players did not experience clinical levels of psychological distress (64.3% at MT2 and 45.5% at MT3). This notion is in accordance with previous research with other athletic populations (e.g., tennis players; Allison & Meyer, 1988) and conceptual models of adaptation to career termination (Taylor & Ogilvie, 1994), which suggest that outcomes can vary and that numerous factors can account for such variation. Indeed, an interaction between multidimensional factors (e.g., voluntariness, degree of control over the event, educational development, career planning, access to institutional support, personality traits, coping strategies) are likely to have influenced whether deselection was appraised as harmful, threatening, or challenging and whether individuals perceived they had coping strategies and resources available to meet the demands of deselection (Lazarus & Folkman, 1984). Such appraisals, in turn, would have influenced whether clinical levels of distress were experienced. In view of previous research, factors that may have contributed to players (a) appraising deselection as nonthreatening/harmful, and (b) perceiving that they had resources available to meet the demands of deselection, may have included career planning, institutional support and higher educational development (Albion, 2007; Cecić-Erpič et al., 2004). The presence of these factors may have reduced the likelihood of distress being experienced.

Considering previous research (e.g., Cecić-Erpič et al., 2004; Kendler et al., 1999), the degree of control players perceived they had in relation to the event of deselection may also have influenced reactions. For example, while some players may have been caught off guard by deselection, other players may have responded to cues (e.g., reduced playing time and changes in the communication and behavior of coaches) and attempted to exercise some control over the event by preparing psychologically and practically for deselection and implementing plans for the future. Those who acknowledged such cues and implemented such preparation and plans may have appraised deselection as less harmful and threatening, which in turn, may have reduced distress. Conversely, players who were thrust into deselection unexpectedly or those who chose not to acknowledge such cues, may have appraised deselection as particularly harmful and threatening, which in turn may have contributed to distress.

Limitations

The research included a small, voluntary, convenience sample, as well a low mean response rate (16.08%) and a moderate attrition rate within deselected players (47.62%). Considering previous research regarding acceptable response rates in survey research (e.g., 65%; Arber, 2001; Sitzia & Wood, 1998) and recommendations regarding follow up rates of 50–80% in cohort studies (Altman, 2000), the research may encompass a biased sample that is not representative of the target population. For instance, the deselected players who completed all measures may represent a more extreme group (e.g., those reporting higher levels of psychological distress than other deselected players). Alternatively, in view of the social stigma

regarding psychological distress in sport (Linder, Brewer, Van Raalte & de Lange, 1991), it may well be that the deselected players who did not respond or complete measures at postselection time points represented the players who experienced high levels of psychological distress.

Variation in recruitment methods across participants may also have resulted in a reporting bias (i.e., providing answers in line with the predicted outcome of the study) that may have been more common in certain recruitment approaches. For example, considering that the researcher was not blind to the hypothesis of the study, there is a concern that their own expectations, as well as cues of the experimental situation (e.g., demand characteristics), may have influenced how participants responded in the third recruitment option. However, given that the results of the research are in corroboration with previous research regarding the experiences of psychological distress in soccer players and other athletic populations following deselection (Brown & Potrac, 2009; Wippert & Wippert, 2008, 2010), the plausibility that such factors contributed to a reporting bias is reduced.

The recruitment methods may have also affected response rates and attrition. For example, in a review of recruitment methods and attrition in epidemiological studies, Bajardi et al. (2014) found that individuals recruited via online communication were less likely to complete follow up-questionnaires compared with those recruited through off-line methods and face to face strategies. As recruitment option one (if aged 15–17) and two encompassed recruitment via online methods, this may have contributed to low response rates and attrition. Although face to face contact was implemented before option three, this was not sustained across time and not part of other recruitment options. Considering that face to face contact at recruitment and across time can potentially increase response rates and retention (Gilliss et al., 2001; Leonard, Hutchesson, Patterson, Chalmers & Collins, 2014), limited face-to-face contact may have contributed to a low response rate and attrition across recruitment methods.

Moreover, although the current study implemented several procedures to minimize the effect of recall bias (e.g., sending reminders to players or to players' parents at specific times), a number of players did not complete questionnaires on specified days. This means that a proportion of players answered questions retrospectively beyond the recommended number of days. As a result, the responses of these players may have been affected by recall bias. Moreover, no analysis was completed to test for differences between those who completed the GHQ-12 on-time or off-time. As a result, this may have been a confounding variable. It is noteworthy, however, that players who did not complete the GHQ-12 on-time, typically completed the GHQ-12 one day after recommended time-period at both selection points (e.g., $M = 8.6$ days at MT2; $M = 22.29$ days at MT3). Consequently, the effect of recall bias may have been small.

In addition, the research only involved evaluating psychological distress in the first month following selection procedures. It is unclear whether findings will generalize beyond the first month. Further longitudinal research should be undertaken to examine reactions to deselection over an extended time-period.

Moreover, while the use of the GHQ-12 provided a unidimensional measure of psychological distress and an indication of clinical significance, its sensitivity and specificity in relation to detecting specific forms of psychological distress (e.g., depression) may be lower than that of specific measures designed to assess

specific forms of mental health problems (Clark-Carter, 2010) (e.g., Patient Health Questionnaire 9 for depression; Kroenke, Spitzer & Watson, 2001). If future research aims to focus upon and assess specific forms of psychological distress following deselection, researchers may wish to use specific measures rather than a unidimensional measure.

Clinical Implications

Despite these limitations, it is salient that between 1 and 21 days postselection, a number of deselected players were found to experience clinical levels of psychological distress and impairment. It is also noteworthy that individuals who experience such levels of distress typically require service input from mental health professionals (NICE, 2011). This suggests that deselected, elite adolescent soccer players may be a population at risk for developing clinical levels of psychological distress. As a result, such players may represent a special needs group (Bushy, 2009). These results also suggest that the multidimensional transition needs of some players were not being met by current service provision. For example, current provision may not be facilitating the development of effective coping strategies and resources to meet the task demands of athletic career termination.

While there may be a genuine need for clubs and organizations to develop service provision to enhance the transition quality of deselected players, as the current study only demonstrates that a proportion of a potentially biased target population experienced clinical levels of distress between 1 and 21 days following deselection, systematic and all-encompassing changes to current service provision is not currently warranted. Indeed, the players who experienced clinical levels of distress in the current study may return to normal functioning after a short period of time without clinical intervention. Nevertheless, considering (a) various factors encompassed within deselection (e.g., not achieving sporting goals and fulfilling potential, (b) conceptual and developmental models of career termination, and (c) previous research with soccer players and other athletes (e.g., Brown & Potrac, 2009; Wippert & Wippert, 2008, 2010), it is conceivable that a proportion of deselected players can experience adverse trajectories across time.

In future, should further research with a larger and more representative sample of elite adolescent soccer players establish that players do indeed experience clinical levels of distress in the short- and long-term, clubs and organizations should consider developing two strands of economically viable service provision that meet the multifaceted needs of all key stakeholders. Such provision should also be developed in accordance with ethical principles and institutional obligations, empirically validated treatment criteria (Chambless et al., 1998) and the notion of holistic development within soccer organizations and clubs (Premier League, 2012; Sunderland Association Football Club, 2013). Firstly, a therapeutic, problem-oriented service should be offered to players experiencing pervasive psychological problems following career termination. This service would involve practitioners implementing evidence-based approaches based on the presenting problems. Therefore, if a player presented with depression or grief following deselection, efficacious interventions such as cognitive behavior therapy or interpersonal psychotherapy could be implemented (Benton-Heird & Steinfeldt, 2013; Tolin, 2010). Secondly, if future longitudinal research establishes that players who possess certain characteristics or

traits (e.g., personality traits; avoidant trait coping) are more likely to experience psychological distress following deselection, clubs and organizations could consider developing evidence-based preventative approaches so that 'at risk' players are able to effectively meet the demands of deselection. For example, considering positive associations between alternative development (e.g., educational; Cecić-Erpič et al., 2004; Park et al., 2012) and the development of life skills (Lavallee, 2005) and transition quality following athletic career termination, preventative approaches could involve practitioners facilitating such development and skills.

Clubs and organizations should also attempt to promote and evaluate existing service provision, which reportedly includes events that consider transitional issues (e.g., CV preparation, job search; Williams, 2012) and access to the national counseling network ("PFA Continue to Expand," 2013) and within club psychologists. Although the clinical significance of this provision has not been evaluated as yet, access to counselors or psychologists may provide access to efficacious interventions that reduce psychological distress. Moreover, accessing transition events may facilitate other life skills that could enhance transition quality. Further research should attempt to determine the key processes within these initiatives that produce positive outcomes. This knowledge should then inform individuals disseminating such provision and consequently improve outcomes for players. Such promotion and evaluation would therefore be in accordance with ethical principles and institutional obligations.

In conclusion, the results of this research suggest that outcomes following deselection can vary. Whereas a sizable proportion of deselected players experienced psychological distress, other players did not. Results of this study nevertheless suggested that deselected players experienced significantly higher levels of distress than retained players at postselection time points and that deselection was the antecedent of such distress. Although these results may indeed be veridical and not the result of any experimental biases, there are several methodological limitations that limit the generalizability of the results. Consequently, recommending systematic and all-encompassing changes to current service provision is not currently warranted. The current study nevertheless provides a useful insight into the experiences of some players following deselection. Further longitudinal research with larger samples is required to establish the prevalence of global and specific forms of psychological distress across time and factors causally linked to such distress. Such research will help to inform clinicians, clubs and organizations and further clarify the development of service provision to enhance players' adjustment to deselection.

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