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Irrational beliefs predict increased emotional and physical exhaustion in Gaelic football  
athletes

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**Abstract**

In a large-scale investigation by the Economic and Social Research Institute, it was revealed that over 51% of Gaelic footballers drop out. Athlete burnout has been associated with increased dropout, but the psychological antecedents to burnout remain under debate. This study implemented a short-term repeated-measures design to assess fluctuations in burnout over time, and the association between changes in burnout and irrational beliefs. Elite Gaelic footballers ( $N = 46$ ) completed a burnout questionnaire at six timepoints across eight weeks in a competitive season, and an irrational beliefs questionnaire at the beginning and end of the eight weeks. In contrast to previous research, burnout did not fluctuate. Irrational beliefs significantly predicted increased emotional and physical exhaustion (one dimension of burnout). This is the first study to show a relationship between irrational beliefs and emotional and physical exhaustion in athletes. The implications of these findings are discussed alongside priorities for future research.

*Keywords:* athlete burnout; irrational beliefs; dropout; emotion; Gaelic football



1 interventions in order to reduce burnout. At a broader level, the identification of  
2 psychological antecedents of burnout may help the Gaelic Athletic Association (GAA) to put  
3 practices in place to curtail the severe fall off in participation among 17 to 19 year old  
4 athletes as revealed in the ESRI report. Therefore, this paper reports a longitudinal study  
5 exploring whether irrational beliefs, a sparsely studied construct within sport psychology, can  
6 predict changes in burnout over a season. Burnout is measured overtime in this study to  
7 understand changes in burnout over the course of a season.

8         The construct of burnout was first introduced outside of sport in the human services  
9 by Freudenberger (1974), and then by Maslach and Jackson (1984), but a sport specific  
10 conception emerged and evolved through the work of Raedeke (1997) and Raedeke and  
11 Smith (2001). Athletic burnout has been described as “a syndrome of physical/emotional  
12 exhaustion, sport devaluation, and reduced athletic accomplishment” (Raedeke, 1997, p.  
13 398). Physical and emotional exhaustion is associated with intense training and competition  
14 while reduced sense of accomplishment is linked to skills and abilities and the inability to  
15 reach personal goals or perform as expected (Goodger, Lavalley, Gorely, & Harwood, 2010,  
16 Raedeke & Smith, 2009). Sport devaluation reflects cynicism (a negative, callous, or  
17 excessively detached response; Maslach & Leiter, 2000). Importantly, athletic burnout is  
18 considered an experiential state ranging from low to high levels rather than being simply  
19 burned out or not (Raedeke & Smith, 2009). Symptoms of burnout include a loss of interest,  
20 lack of desire to partake in sport, physical and mental exhaustion, lack of caring, and  
21 increased anxiety (Goodger et al., 2010).

22         Past researchers have not found consistent relationships between training volume and  
23 burnout levels (Gustafsson, Kentta, Hassmen, & Lundqvist, 2007), but there are many  
24 proposed psychological antecedents of burnout, prominently related to self-determination  
25 theory (e.g., Lonsdale, Hodge, & Rose, 2009; Perreault, Gaudreau, Lapointe, & Lacroix,

1 2007). Apart from factors relating to self-determination theory, a potential antecedent of  
2 burnout that has received little attention in sport is irrational beliefs. Research from teaching  
3 (Bermejo-Toro & Prieto-Ursúa, 2006; Meehan, 2006) and nursing (e.g., Balevre, 2001;  
4 Balevre, Cassells, & Buzaianu, 2012) repeatedly asserts that high irrational beliefs are  
5 associated with high burnout. Given that past research has indicated that some athletes are  
6 prone to high irrational beliefs (Turner & Barker, 2013), it is reasonable to propose that  
7 irrational beliefs may be an important factor in the development of burnout in athletes, just  
8 like it is for teachers and nurses.

9         Irrational beliefs are the main focus of treatment in Rational Emotive Behavior  
10 Therapy (REBT), and are therefore an integral part of REBT theory and practice. REBT was  
11 developed by Albert Ellis in the 1950s and is considered by many to be the first cognitive-  
12 behavioral therapy. High irrational beliefs are consistently associated with unhealthy  
13 dysfunctional emotions such as anger and shame, and psychopathological conditions  
14 including depression, anxiety, and suicidal thoughts (for a review see Browne, Dowd, &  
15 Freeman, 2010), and maladaptive behaviors such as social avoidance, self-harming,  
16 procrastination, anger suppression, aggression, and violence (for a review see Szentagotai &  
17 Jones, 2010). It is not surprising then, that in educational and health contexts irrational beliefs  
18 are associated with burnout, in light of the relationship between irrational beliefs and  
19 emotional consequences that are often experienced alongside burnout (e.g., Cresswell &  
20 Eklund, 2006; Schaufeli & Buunk, 2003), such as anxiety (Price & Weiss, 2000; Goodger et  
21 al., 2007).

22         Furthermore, for athletes aged between 15 and 16, sport involvement is punctuated  
23 with pressure that emerges in part due to an ego-orientated climate perpetuated by coaches,  
24 parents, and athletes themselves (Harwood, 2008). A results-orientated climate, where the  
25 notion that winning is all that matters is promoted (Harwood, Drew, & Knight, 2010) coupled

1 with the irrational beliefs sometimes prevalent in athletes (Cockerill, 2002), may lead to  
2 athlete burnout. Sparse research expressly focuses on irrational beliefs and burnout, but  
3 suggests that higher irrational beliefs are associated with burnout in non-sport contexts (e.g.,  
4 Meehan, 2006; Balevre et al., 2012). In addition REBT programs that reduce irrational beliefs  
5 have also been shown to reduce burnout. For example, in one study (Malkinson, Kushnir, &  
6 Weisberg, 1997) REBT was applied with female production workers indicating that after the  
7 six-session program burnout was reduced compared to a control group. In addition, at a 12  
8 month follow-up burnout was still reduced from baseline levels. Therefore there appears to be  
9 a relationship between irrational beliefs and burnout, but no study is yet to investigate  
10 irrational beliefs and burnout in athletes.

11 In short, amidst the growing drop out rates among Gaelic football athletes (Lunn et  
12 al., 2013), burnout has emerged as a potential contributor to athletes withdrawing from Gaelic  
13 football. This study investigates burnout in elite Gaelic footballers aged 15 to 16, providing a  
14 unique enquiry within Ireland's most played sport. One potential psychological antecedent  
15 that has received recent attention in sport is irrational beliefs (e.g., Turner & Barker, 2013).  
16 Although irrational beliefs have been associated with burnout in other contexts such as  
17 teaching and nursing (e.g., Meehan, 2006; Balevre et al., 2012), research has yet to  
18 investigate the role irrational beliefs may have in the development of burnout in athletes.  
19 Therefore, similar to past research (e.g., Cresswell & Eklund, 2005) the present study adopts  
20 a longitudinal approach to understand the relationship between irrational beliefs and burnout.  
21 But as an addition to past irrational beliefs research the present study sought to understand  
22 the association between irrational beliefs and changes in burnout over time, rather than raw  
23 scores at one timepoint.

24 Based on the extant research, it was hypothesised that irrational beliefs would predict  
25 increased burnout over the eight-week period in which data was collected. Specifically, we

1 expected high irrational beliefs taken at the beginning of the time period to be associated with  
2 increased levels of burnout from the start to the end of the time period. That is, we anticipated  
3 that high irrational beliefs would predict increases in burnout over time. In addition, athlete  
4 burnout was also monitored across the eight-week period within a competitive Gaelic football  
5 season to examine changes in burnout over time. Recent research indicates that burnout can  
6 remain stable over short periods of time (three months; Madigan, Stoeber, & Passfield, in  
7 press) in junior athletes. However, some previous research indicates that athlete burnout may  
8 vary over time across short term (three months; Cresswell & Eklund, 2005; Quested & Duda,  
9 2011) and long-term (30 weeks; Cresswell & Eklund, 2006; six months; Isoard, Guillet, &  
10 Lemyre, 2012) time periods. Based on the notion that burnout is a syndrome that manifests  
11 over time (Quested & Duda, 2011) and past research that indicates longitudinal changes over  
12 short periods of time (Cresswell & Eklund, 2005), it was hypothesised that athlete burnout  
13 would fluctuate over time, with an increase from the beginning of the time period to the end  
14 of the time period. Put simply, we expected burnout to increase over time.

## 15 **Method**

### 16 **Participants**

17 Forty-six male adolescent elite county Gaelic football athletes ( $M_{age} = 15.62$ ,  $SD =$   
18  $.53$ ) took part in the study. All athletes were members of an elite Irish development training  
19 squad at either Under-15 ( $N = 25$ ) or Under-16 level ( $N = 21$ ), and many also competed for a  
20 Gaelic Football club ( $N = 34$ ) based in Ireland. This athlete sample was selected due to their  
21 high level of involvement in Gaelic football. Ethical approval was granted and parental and  
22 minor consent was given prior to all data collection.

### 23 **Measures**

24 **Athletic Burnout.** The revised Athlete Burnout Questionnaire (ABQ; Raedeke &  
25 Smith, 2001) measures three dimensions of athletic burnout; perceived emotional and

1 physical exhaustion, reduced sense of accomplishment, and sport devaluation (Raedeke,  
2 1997). Each dimension contains 5 items, which are measured on a 5-point Likert scale from 1  
3 (*almost never*) to 5 (*almost always*). The ABQ is valid and reliable in youth athletes (reduced  
4 accomplishment = .84, emotional and physical exhaustion = .89, sport devaluation = .89) and  
5 good test-retest reliability of the scale (reduced accomplishment = .86, emotional and  
6 physical exhaustion = .92, sport devaluation = .92) has also been found (Raedeke & Smith,  
7 2001). In the current study, Cronbach's alpha coefficients indicated internal reliability across  
8 all timepoints with a range of .84 to .91.

9 **Irrational beliefs.** The Shortened General Attitudes and Beliefs Scale (SGABS;  
10 Lindner, Kirkby, Wertheim, & Birch, 1999) consists of 26 items forming 8 subscales. Total  
11 irrationality (22 items) is made up of self-depreciation (4 items), other-depreciation (3 items),  
12 need for achievement (4 items), need for approval (3 items), need for comfort (4 items), and  
13 demand for fairness (4 items). A rationality (4 items) subscale is also included. Athletes were  
14 asked to indicate the extent that they agreed with each of the 26 statements on a 5-point  
15 Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate  
16 stronger beliefs. Only the total irrational beliefs variable was used in the current study to  
17 ensure sufficient statistical power for appropriate analyses. The SGABS has high test-retest  
18 reliability ( $r = .91$ ; Lindner et al., 1999), good criterion, construct, concurrent, convergent,  
19 and discriminate reliability (MacInnes, 2003). In the current study, Cronbach's alpha  
20 coefficients indicated internal reliability at timepoint one ( $\alpha = .91$ ) and timepoint six ( $\alpha =$   
21 .87).

## 22 Procedures

23 Athlete burnout data were collected at six timepoints across the eight-week period  
24 between February 2014 and April 2014, and irrational beliefs data were collected at timepoint  
25 one and timepoint six. We wanted to collect burnout data as regularly as possible, without



1 causing the athletes any frustration regarding repeated measurement. Therefore, we felt that  
2 the six timepoints across eight-weeks allowed multiple markers of burnout to facilitate  
3 meaningful assessment of short-term fluctuation, while ensuring maximum adherence by  
4 athletes. In order to collect data, the Team Performance Exchange (TPE, 2014) was used.  
5 TPE is a facility which the athletes must access every day on their mobile phones or home  
6 computers in order to note any training advice or videos or to complete any questions that the  
7 coaches or development officers may have. This offered an ideal method by which to  
8 administer regular burnout questionnaires. A link to each questionnaire was created through  
9 the use of Qualtrics software (Qualtrics, London, UK), which was posted on each  
10 participant's homepage on TPE so that participants could gain access to the online surveys.

### 11 **Analytic Strategy**

12 Prior to main analyses, Shapiro Wilks tests were performed. If the presence of  
13 significant ( $p < .05$ ) outliers were indicated then z scores for significant outliers were  
14 assessed. Data-points with z scores greater than two were removed (two for change in  
15 emotional and physical exhaustion, three for change in reduced sense of accomplishment, and  
16 four for change in sport devaluation) following guidelines (Smith, 2011). All  
17 multicollinearity, homogeneity, normality and outlier checks met the assumptions necessary  
18 for all data analyses, apart from sport devaluation at all timepoints. However, change scores  
19 were used in subsequent regression analyses therefore the variable was retained. Main  
20 analyses followed four steps. First, irrational beliefs at timepoint one were compared to  
21 irrational beliefs at timepoint six to assess the stability of irrational beliefs overtime. Second,  
22 a repeated-measures MANCOVA was conducted to assess fluctuations in the burnout  
23 variables over the six timepoints, with age as the covariate. Third, intraclass correlation co-  
24 efficients were performed to assess the within-subject stability across the six timepoints for  
25 each of the three burnout variables. Finally, to assess the relationship between irrational

1 beliefs and change in burnout, three multiple hierarchical regression analyses were  
2 conducted. A change score for each burnout variable was calculated by subtracting baseline  
3 (timepoint 1) scores from timepoint six scores. Baseline (timepoint 1) burnout was included  
4 as a covariate so any variance explained by irrational beliefs could be considered alongside  
5 baseline levels of burnout, allowing baseline burnout to be accounted for when predicting  
6 change in burnout from baseline to timepoint six.

## 7 **Results**

### 8 **Stability in irrational beliefs**

9 A paired *t*-test revealed no difference in irrational beliefs,  $t(45) = .33, p > .05$ , from  
10 timepoint one ( $M = 56.60, SD = 12.12$ ) to timepoint six ( $M = 56.04, SD = 10.82$ ). Therefore,  
11 irrational beliefs remained stable over time ( $MChange = .54, SD = 11.24$ ).

### 12 **Changes in burnout over time**

13 A repeated-measures MANCOVA revealed a significant main effect of time, Wilks  
14 Lambda = .84,  $F(3,15) = 2.12, p < .01$ . Follow-up univariate analyses revealed a significant  
15 effect of time for emotional and physical exhaustion,  $F(5,190) = 4.17, p < .001$ . Post Hoc  
16 Bonferroni analyses showed that timepoint two ( $M = 2.21, SD = .64$ ) was significantly ( $M =$   
17  $.42; SD = .46; p < .001$ ) higher than timepoint four ( $M = 1.82, SD = .60$ ) and significantly  
18 higher ( $M = .40; SD = .46; p < .001$ ) than timepoint five ( $M = 1.83, SD = .60$ ). There were no  
19 further significant differences. Intraclass correlation coefficients revealed that within-subject  
20 emotional and physical exhaustion scores were stable,  $F(43,215) = 11.68, p < .001$ , across  
21 time, ICC = .91, 95% Confidence Interval from .87 to .95. Univariate analyses did not reveal  
22 a significant effect of time for reduced sense of accomplishment,  $F(5,190) = .20, p > .05$ .  
23 Intraclass correlation coefficients revealed that within-subject reduced sense of  
24 accomplishment scores were stable,  $F(43,215) = 11.47, p < .001$ , across time, ICC = .91, 95%  
25 Confidence Interval from .87 to .95. In addition, univariate analyses did not reveal a

1 significant effect of time for sport devaluation,  $F(5,190) = 2.28, p > .05$ . Intraclass correlation  
2 coefficients revealed that within-subject sport devaluation scores were stable,  $F(43,215) =$   
3  $16.57, p < .001$ , across time,  $ICC = .94$ , 95% Confidence Interval from .91 to .96.

#### 4 **Irrational beliefs and burnout**

5 To examine the relationships between irrational beliefs and changes in the three  
6 burnout variables, three separate hierarchical multiple regression analyses were carried out,  
7 with change in burnout (change in emotional and physical exhaustion, change in reduced  
8 sense of accomplishment, or change in sport devaluation) as the outcome variable  
9 (controlling for participant age and baseline burnout) predicted by irrational beliefs measured  
10 at timepoint one. Participant age was included in step 1, and baseline burnout (emotional and  
11 physical exhaustion, reduced sense of accomplishment, or sport devaluation) was included in  
12 step 2 to account for the potential influence of baseline levels in predicting change in burnout  
13 in the regression analyses, and irrational beliefs was included in step 3.

14 **Emotional and physical exhaustion.** In step 1, age accounted for a significant  
15 proportion of variance,  $R^2 = .17, p < .01$  ( $\beta = -.30, p < .04$ ). In step 2, baseline burnout did  
16 not account for a significant proportion of variance,  $R^2Change = .07, p > .05$ . In step 3,  
17 irrational beliefs accounted for a significant proportion of variance,  $R^2Change = .11, p < .02$ .  
18 Higher irrational beliefs were significantly associated with larger increases in emotional and  
19 physical exhaustion ( $b = .20, \beta = .35$ ).

20 **Reduced sense of accomplishment.** In step 1, age did not account for a significant  
21 proportion of variance,  $R^2 = .02, p > .05$ . In step 2, baseline burnout accounted for a  
22 significant proportion of variance,  $R^2Change = .23, p < .01$  ( $\beta = -.48, p < .01$ ). In step 3,  
23 irrational beliefs did not account for a significant proportion of variance,  $R^2Change = .03, p >$   
24  $.05$ .



1 physical exhaustion suggest that those high in irrational beliefs are at particular risk of  
2 experiencing increased symptoms of emotional exhaustion across a short time span.

3         It was expected that burnout would fluctuate over the eight-week period, and  
4 specifically we expected burnout to increase over time. Contrary to our hypotheses,  
5 inferentially burnout did not fluctuate or increase over time and is in line with some previous  
6 research (e.g., Madigan et al., in press). Emotional and physical exhaustion significantly  
7 decreased at timepoint four and five from timepoint two, although scores returned to baseline  
8 levels at timepoint six, suggesting that burnout varied very little over time in contrast with  
9 past research (e.g., Cresswell & Eklund, 2005). Some variation is apparent on visual  
10 inspection of the Means, and this variation was predicted by irrational beliefs in the  
11 regression analyses, but in essence burnout was stable over time apart from at two timepoints  
12 for one dimension of burnout (emotional and physical exhaustion).

13         Within the regression analyses, an additional finding emerged that may further  
14 explain the development of emotional and physical exhaustion in Gaelic football athletes.  
15 Increases in emotional and physical exhaustion were more prevalent in younger athletes,  
16 suggesting that younger athletes are more at risk with regards to emotional and physical  
17 exhaustion, potentially owing to the range of factors outlined in the report by Lunn et al.  
18 (2013) such as participating in exams at school that lead to athlete drop out. Although age  
19 was not related to irrational beliefs in this study, past research indicates that higher irrational  
20 beliefs tend to be more prevalent in younger adolescents (e.g., Ndika, Olagbaiye, & Agiobu-  
21 Kemmer, 2012). Therefore, younger adolescents with high irrational beliefs may be at  
22 particular risk of experiencing burnout and dropping out of Gaelic football participation.

23         This is the first study to relate irrational beliefs to burnout in athletes, but the finding  
24 that irrational beliefs were able to predict increases in emotional and physical exhaustion  
25 supports previous research from health and education domains (e.g., Meehan, 2006; Balevre

1 et al., 2012). This study does not contain data that could illuminate why irrational beliefs  
2 were able to predict increased emotional and physical exhaustion, but it is possible to draw on  
3 past research and REBT theory to understand the connection in more detail. REBT can be  
4 regarded a motivational theory (David, 2003) akin to the cognitive appraisals paradigm  
5 asserted by Lazarus (1991). Irrational and rational beliefs represent specific types of hot  
6 cognition (e.g., Ableson & Rosenberg, 1958) or primary appraisal (Lazarus, 1991) that are  
7 strongly involved in the generation of emotion. In effect, irrational and rational beliefs are  
8 ways of appraising (hot cognition) particular representations of reality (cold cognitions) in  
9 terms of their personal significance to the individual (goal or motivational relevance; David,  
10 Lynn, & Ellis, 2010; Hyland & Boduszek, 2012). Therefore, because irrational beliefs  
11 generate dysfunctional emotions in goal relevant situations, it is perhaps unsurprising that in  
12 sport irrational beliefs can lead to emotional and physical exhaustion in athletes, given that  
13 sport is highly goal relevant for athletes. If irrational beliefs remain high, such as in the  
14 present study, dysfunctional emotions may occur frequently thus contributing to emotional  
15 exhaustion over time.

16         Irrational beliefs left unchecked can lead to various psychological and behavioural  
17 dysfunctions (e.g., Browne et al., 2010; Szentagotai & Jones, 2010), and on the evidence of  
18 this paper and past research (e.g., Balevre et al., 2012), may contribute to burnout. But the  
19 presence of irrational beliefs can be managed through the structured application of REBT,  
20 which involves facilitating individuals and teams through a process whereby irrational beliefs  
21 are first recognised and then systematically disputed (Ellis & Dryden, 1997; Turner &  
22 Barker, 2014). Then, rational beliefs are promoted, thus encouraging more healthier and  
23 adaptive emotions and behaviours (Dryden, 2009). The results of this study and past research  
24 (e.g., Ndika et al., 2012) suggest that athletes should be educated in the principles of REBT at  
25 an early stage in their careers in order to reduce likelihood of burnout and to enhance sport

1 adherence. This may involve educational approaches or one to one support at key stages in  
2 the adolescents' athletic development. It should also be recognised that irrational beliefs can  
3 be socialised into athletes by significant others such as parents, coaches, and teammates  
4 (Ellis, 1976). Therefore, the principles of REBT can be applied to significant others to help  
5 them to remove the portrayal of irrational philosophies through language such as "you must  
6 win" or "today's performance was terrible", for example. The impact of significant others on  
7 the thoughts and emotions of children has long since been recognised (e.g., Fredricks &  
8 Eccles, 2004), and therefore could be a major factor in the development, and indeed the  
9 discouragement, of irrational beliefs in young athletes.

10         In this study inferential statistics indicated that, in contrast to past research (Cresswell  
11 & Eklund, 2005), burnout did not fluctuated over time. Across the data collection period  
12 there is a decrease in emotional and physical exhaustion at timepoints 4 and 5 from timepoint  
13 two, with an increase back to baseline in the final time point. It is difficult to explain this rise  
14 and fall in emotional and physical exhaustion without specific contextual information about  
15 the athletes. Further, it is not known how prevalent burnout was at the start of the season and  
16 how this had already changed at baseline. That is, it is now known what led to the burnout  
17 levels reported at baseline. It could be that certain parts of the season are heavier in terms of  
18 training load and competition frequency, as is common in many sports including Gaelic  
19 football. These limitations may partially explain the lack of fluctuation in burnout found in  
20 the present paper. However, the finding that emotional and physical exhaustion was higher  
21 for some part of the data collection period and lower in others may encourage psychologists  
22 to ensure that at these key periods of time, sufficient and structured support is given to the  
23 athletes, whether this is in the form of REBT or other interventions that have been shown to  
24 reduce burnout (e.g., see Awa, Plaumann, & Walter, 2010, for a review).

1           Based on the report by the ESRI (Lunn et al., 2013) that revealed 51% of Gaelic  
2 footballers drop out, in this study we set out to investigate possible psychological reasons that  
3 young athletes might be dropping out of Gaelic football. Burnout is one potential reason for  
4 dropout in this population of athletes (Taskforce on Player Burnout, 2007), and irrational  
5 beliefs may be an important determinant of burnout in athletes. But there are a range of  
6 factors that determines dropout, not just psychological aspects, such as moving house, losing  
7 touch with other players, losing interest in the sport, and undertaking school exams. Indeed,  
8 athletes may experience burnout but remain in the sport due to financial or parental pressures.  
9 In this paper a potential psychological explanation for increased emotional and physical  
10 exhaustion is offered but it is important that a holistic approach is taken for future research  
11 that considers the many sport and life factors that contribute to dropout. Future researchers  
12 should also investigate how specific irrational beliefs (e.g., demands, awfulizing, low-  
13 frustration tolerance, and self-depreciation) may determine burnout accumulatively and  
14 differentially. It may be that certain beliefs are associated with burnout more strongly than  
15 others. Future researchers should also examine longitudinal changes in burnout similar to past  
16 research to ascertain how and importantly why burnout fluctuates over time as also evidenced  
17 in the current paper. For example, Quested and Duda (2011) burnout was measured over a  
18 12-week period alongside basic psychological needs constructs, indicating that lower-levels  
19 of basic psychological needs was related to increased burnout over time. Similarly adopting a  
20 self-determination theory approach, Isoard et al. (2012) found that lower intrinsic motivation  
21 and higher amotivation was related to increased reduced sense of accomplishment over time  
22 in student athletes. More recently, Madigan et al. (in press) showed that higher perfectionistic  
23 concerns (considered maladaptive) predicted increased burnout over a three-month period in  
24 junior athletes. Irrational beliefs about perfectionism (i.e., I must be perfect) are thought to  
25 contribute to dysfunctional anxiety and depression (Ellis, 2002), and therefore researchers



1 should examine the interactive effects of irrational beliefs perfectionism and irrational beliefs  
2 in relation to burnout over time.

3 In conclusion, this study adds to the extant literature (e.g., Balevire et al., 2012)  
4 indicating a relationship between irrational beliefs and increased emotional and physical  
5 exhaustion (a dimension of burnout). That is, higher irrational beliefs are related to larger  
6 increases in emotional and physical exhaustion. The study did not fully support past research  
7 suggesting that burnout fluctuates over time (e.g., Cresswell & Eklund, 2005) although some  
8 variation can be seen in the Mean levels, as burnout remained stable, with the exception of  
9 emotional exhaustion at two timepoints. These findings do however support some recent  
10 research indicating that burnout can remain stable over a short period of time in athletes (e.g.,  
11 Madigan et al., in press). This is the first study to investigate the association between  
12 irrational beliefs and burnout in athletes, and we were able to do so in a unique sample of  
13 athletes that are under-researched in sport psychology literature. We aimed to investigate one  
14 potential psychological factor, namely irrational beliefs, that could contribute to high dropout  
15 rates in Gaelic football athletes by using REBT as a theoretical framework. Researcher  
16 should explore specific irrational beliefs in relation to burnout, and collect data over a longer  
17 period of time than in the current paper. In light of the findings, it is recommended that  
18 Gaelic football athletes at ages 15-16 are screened for irrational beliefs at the start of a  
19 competitive season, and those scoring highly are introduced to and educated in REBT.

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