

Predictors of Wellbeing and Burnout in Dutch female Professional Footballers

UEFA Project Report

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Executive Summary

The purpose of the research project was to examine levels of psychological wellbeing and burnout in female professional footballers in the Netherlands; as well as to examine a range of environmental and psychological factors relevant to professional sport that may predict these outcomes. Quantitative self-report measures were selected that had previously been shown to be relevant in a professional context. These assessed Perceived Coach Autonomy Support, Work-life Conflict, three basic needs (for autonomy, competence and relatedness), subjective vitality and burnout on scales specific to elite athletes. All questions, including some demographic questions, were administered using an online bespoke survey tool that could be accessed flexibly by smartphone, tablet or computer. 67 participants accessed the survey and completed all questions.

The following conclusions were drawn from analysis of the questionnaire data.

1. The environment in terms of coaching is broadly supportive for most individuals. As a factor this is not leading to burnout and poor wellbeing across the sample. However, low perceived coaching support was related to unmet needs for acceptance and autonomy.
2. A minority of players have significantly poor wellbeing and high levels of burnout.
3. Levels of work-life stress are on average fairly high. This is contributing significantly to burnout and poor wellbeing in the sample.
4. While most basic needs are, on average, being satisfactorily met across the sample there is variability here. Those perceiving their basic needs for autonomy, acceptance and competence to not to be met within the football domain show higher levels of burnout and poorer wellbeing.

The Global Picture

Women's football has experienced significant growth across the globe in recent years. The number of females playing the sport worldwide has grown to over twenty nine million. Additionally, in 2014 the Union of European Football Associations (UEFA) reported that the number of players across Europe has increased five-fold since 1985 (UEFA, 2014). In the UK, it has become the largest participation sport for females with increasing uptake at a young age (Sport England, 2012). On a global level, the growth of women's soccer worldwide is underscored by the success of the UEFA Women's Championship and the Fédération Internationale de Football Association Women's World Cup over recent years. Audience attendance figures for these tournaments have soared over recent years: UEFA's 2017 European Championship tournament brought in a worldwide audience of 178 million viewers, as well as record attendance figures of over 240,000. The cup final alone was viewed by in excess of 13M globally, with over 4M from the Netherlands watching their team eventually triumph. Those for the Women's World Cup are now higher than any other FIFA tournament with the exception of the men's equivalent (FIFA, 2014). These and other more local developments underline the significant growth in popularity of women's football worldwide, which is – in part – a result of the specific women's football development strategies that have been produced by some national and international football bodies such as UEFA.

Supporting the Women's professional game.

UEFA's women's football development programme (WFDP) has supported the game for nearly a decade on behalf of the UEFA member national associations. The programme provides guidance, expertise, advice and resources so as to give UEFA and its national FAs each of which has different circumstances and needs. Supporting the professional development of the female game is one key objective of WFDP, and the well-being of players in an increasingly professionalised game has been identified as one element of this.

In much the same vein, FIFA's (2014) women's soccer development programme

outlined ten key principles for the development of the game; including sustainable and professionalised competitions, and the growth and development of appropriate organisational structures. In particular, they noted that there is a need for more “well-prepared professionals working at women’s football clubs and with national teams” (p.16). Developing, nurturing and supporting players is the remit both of national associations and professional clubs. While football development is their main focus, there is increasingly awareness of the wellbeing of players in the female game – perhaps aware of the negative consequences of its relative neglect in the male game. Several high profile untimely deaths of female professionals in both the UK and Germany in the past five years have also served to highlight the stresses in the lives of those in the game. Kelly Smith, the all-time leading scorer in English women's football history, revealed upon retirement in 2017 that she considered ending her own life when injury threatened her playing career.

National Scenes in the Women’s game

Many national football associations have developed differing development strategies for the female professional game. The English Football Association (FA, 2012) launched their ‘Game Changer’ strategy for developing women’s soccer over the subsequent five years. Within this strategy, they cited the effective transition of youth players to adult players as an important part of the strategy. Similar strategies implemented in various ways characterise the more developed programmes such as in Germany and the Netherlands.

In the Netherlands too, women’s football is gaining huge momentum, and has had a professional league since 2007. Participation and support is widely increasing, particularly following success in the European Championship in 2017. The Royal Netherlands Football Association KNVB considers mixed football the best for girls and boys up to 11. However, the KNVB recommends to play mixed as long as possible. Beside club activities the KNVB has talent teams for the best players that operate beside the clubs. This program is called JPN (Jeugd Plan Nederland) and exist of teams for age groups up from 11 divided over different regions. The first girls’ national team the KNVB runs is u15. After

that there are u16, u17, u19 teams, and starting from this year an u23 national team. And of course an A-national team. On the club sides there are coming more and more elite level possibilities for talents. Since this year for example, there is a “beloftencompetitie”, a national league for the age group right under our top league. The KNVB and the clubs are working on progressing the possibilities for womens football daily.

Overall, developments in several European countries with increasingly professionalised leagues are seen to aid growth in nationwide exposure through television agreements, fiscal growth through increased sponsorship and crowd attendances, and performance levels due to the professional nature of training structures.

The need for evidence – research in sport psychology

How best to nurture and support professionals in sport, and women in football in particular? To support these objectives, there is a clear need for a strong evidence base for practitioners to draw upon, and such evidence needs to be directly relevant to the gender and sport involved. There is a widely held notion that the type of sport played may influence the developmental trajectory of an athlete (e.g., Côté, Baker & Abernathy, 2007), suggesting that findings from one sport are unlikely to be directly applicable to another. Practitioners require a contextually and culturally specific (Greenfield & Keller, 2004) evidence-base to inform their practice in order to best meet the needs of their clients, with particular attention needed within marginalised research populations (Stambulova, Alfermann, Statler & Côté, 2009; Stambulova & Ryba, 2014). This is of note in women’s soccer as the general trend in sport psychology research is that females are disproportionately under-represented against their male counterparts. This is definitely the case with respect to understanding determinants of well-being and related psychosocial factors in female football players: the majority of evidence that can be brought to bear is either from another sport, and/or in male players. Whilst there has been growth in research in aspects of women’s football such as physical demands and characteristics (e.g. Gabbett & Mulvey, 2008; Vescovi, Rupf, Brown & Marques, 2011), the

consideration afforded to psychosocial factors associated with talent and career development in talented and elite women's football remains behind other aspects of sport science: furthering the female soccer-specific evidence-base is a central consideration for the continued growth and development of female soccer. Some of the limited evidence concerning this is discussed below.

From Youth to Professional

The transition from talented youth to a senior player is a critical normative development for elite female soccer players as this will often be the start of their progress towards a professional career. It is common for athletes to highlight that this junior to senior career transition is the most difficult challenge during their sporting career (Alfermann & Stambulova, 2007). This presents a quandary for practitioners and athletes alike as this is also the most critical transition point during the overall football career (Stambulova et al., 2009) but does not occur in isolation of other lifestyle issues and choices. In order to fully understand the needs of female soccer players during their careers there is a need to adopt a holistic, lifespan perspective to research (cf. Stambulova et al. 2009). Dual career demands during the investment years (Wylleman & Lavallee, 2004) appear to be a threat to holistic player development, can impact on junior-to senior career transitions, and impact negatively on player wellbeing (Christensen & Sørensen, 2009). A rare study of seven professional female players in Sweden (Andersson & Barker-Ruchti, 2018) highlighted that the dual career concept 'needs further reflection and adjustment' because of its demands. Overall, it is important to understand the experiences of talented and elite female players as they tackle various career transitions so as to better inform professional practice in this area. Ultimately, this will support national and international bodies in football in their objective of increasing the chances that talented female soccer players will be able to experience a more fulsome and productive career in the sport. A wide range of psychological and social factors, at the individual, situational, and environmental level positively and negatively influence well-being in elite female players. The following sections give an outline of well-being in this context; and a model for understanding the role of the perceived social environment (Basic Needs Theory).

Well-being in the game: positive and negative.

Well-being is a potentially very broad psychological construct with a wealth of definitions. An encompassing and positively defined perspective is that of 'Eudaimonism'; characterized by personal development, meaningful engagement and optimal functioning (see Ryan & Deci, 2001). According to this perspective, eudaimonia is realised in the pursuit of actualising human potential. Footballers might be considered fully functioning when reporting a heightened sense of positive energy, and likewise lacking well-being when reporting a perceived loss of energy, or feeling emotionally and physically exhausted. A common measure is of subjective vitality (Ryan & Frederick, 1997) as an indicator of eudaimonic well-being.

The converse of well-being - 'burnout' - is a maladaptive psychological outcome that can result from the pressures of elite sport. Consequently, preventing, or at least minimizing, the occurrence of burnout has been viewed as an important issue in the sport psychology literature (Eklund & Cresswell, 2007; Goodger, Gorely, Harwood, & Lavallee, 2007). The current consensus undoubtedly is in support of Raedeke's (1997) definition of *athlete burnout* as a syndrome characterized by: (i) emotional and physical exhaustion; (ii) sport devaluation; and (iii) a reduced sense of accomplishment (e.g. Cresswell & Eklund, 2006b; Raedeke, Lunney, & Venables, 2002). This symptom-based definition provides a means by which the potential causes and consequences of burnout, such as illness, injury, dropout (Cresswell & Eklund, 2003), can be examined, often but not exclusively using the Athlete Burnout Questionnaire which measures these three aspects with sub-scales (Raedeke & Smith, 2001).

A related area is that of work-life balance (or its converse, *work-life conflict*). Several authors have advanced notions that a conflict between a professional role and one's personal life are important determinants of health and well-being, and that a balance, whereby these can be coordinated or mutually supportive of one another, is healthier. The consequences of a lack of balance have been extensively studied both for the individual personally, and for the work context. These can include lower family satisfaction, relationship stress, negative affect

and drug/alcohol use. In the workplace, job dissatisfaction, work stress, absenteeism and 'presenteeism' may result and organizational commitment may suffer. In a team context these may translate as poorer performance, team cohesion and so forth. The gender perspective is particularly relevant to work-life balance (Seierstad and Kirton, 1915). If women are to 'have it all' – a high commitment career, and family or partnered lifestyle, how is this best achieved? The global picture is that persistent gendered cultural norms and assumptions underpin the work-family articulation (Crompton and Lyonette, 2005); women remain under-represented in many areas of the economy and society in most countries (WEF, 2013), at least partly because high demand jobs are difficult to combine with family responsibilities. This is even the case in the most gender equal countries as outlined by Seierstad and Kirton (1915) in the Scandinavian context.

Understanding Players' needs: Basic Needs Theory

Basic Needs Theory (e.g., Ryan & Deci, 2002), a more limited version of self-determination theory (SDT; Deci & Ryan, 1985), is a conceptual framework useful for understanding the implications of the perceived social environment on player well-being. In detail, the theory outlines that we possess three given psychological needs which, when met, allow for personal growth and positive self-development (Deci & Ryan, 2000). The first of these needs, *autonomy*, occurs when people feel a sense of volition regarding their choices and decision-making in the context at hand (Deci & Ryan, 1985). The need for *competence* is satisfied when individuals perceive the capacity to assert influence, and master tasks within their social or occupational environment. Finally, the need for *relatedness* is met when humans feel a sense of belongingness to a social group, or team.

Applied to footballers, satisfaction of players' needs for autonomy, competence, and relatedness via their team environment should lead to higher levels of well-being. The concept of need satisfaction allows researchers to identify the environmental conditions under which these can be satisfied and so, in turn, promote well-being. One important social environmental factor assumed to nurture the fundamental needs is the motivational climate created by the coach

(Ntoumanis, 2001; Reinboth, Duda, & Ntoumanis, 2004; Sarrazin, Guillet, & Cury, 2001). Coaches may set activities and targets, give recognition, evaluate performance, share their authority and shape the environment. Ideally this creates a motivational climate based on task mastery, learning, effort exertion and improvement (a task involving climate that can lead to increased perceived competence as an end in its own right). This is sometimes termed 'autonomy support'. In contrast, the less helpful ego-involving climate is characterized by interpersonal competition, social comparison and public evaluation, with potentially well-being harming consequences.

Overall, Basic Needs Theory suggests that optimal functioning is promoted by satisfaction of the three basic needs via interactions with the social environment such as other players, staff and coaches (Deci & Vansteenkiste, 2004). In contrast, frustration of one or all of these needs is postulated to undermine well-being and can lead to the deterioration of psychological and even physical health (Ryan & Deci, 2000; 2002). Expressed quantitatively, Basic Needs Theory outlines how the three psychological needs act to mediate the links between facets of the perceived football environment (such as the team and its coach) and player well-being.

Though the majority of studies have explored male or predominantly male samples, both Reinboth and colleagues (2004) and Adie et al. (2008) demonstrated reasonably similar relationships regardless of gender between perceptions of coaching support, basic need satisfaction and indices of well-being among young adult sport participants. There is no reason to think that in broad terms, results from this literature wouldn't apply in the present context, though some specific findings may of course differ.

Aims of the present study

Within this theoretical framework, this study aimed to measure players' perceived autonomy, intrinsic motivation, and team relatedness (their 'basic needs'); their positive and negative well-being; aspects of work-life conflict; alongside their perceptions of both coach and team climate. This will enable detailed characterization of the degree to which players perceive their basic

needs to be met, their degree of well-being and their perception of the wider motivational/coaching context, on measures that have been used in other elite sport settings including youth football.

In addition, the study will test the prediction that greater perceived unmet needs and a poorer environment (*perceived team/coach, work-life balance, uncertainty about the future as a professional football player, and performance pressure*) are associated with lower well-being and greater burnout. Further mediation analysis will test whether unmet needs mediates the relationship between the environment and well-being/ burnout (Baron and Kenny, 1986).

What is measured?

The survey starts with several demographic measures including age, education, and years playing professional football. Players are also asked to estimate hours per week playing football, in education, in work, and for social life. For the complete survey see appendix 1.

Psychosocial Environment

a) Basic needs

Drawing from a previous study of needs satisfaction in team sport athletes (Reinboth & Duda, 2006) ten items were used to tap into *autonomy* (e.g. “I feel I can give a lot of inputs to deciding how the practice/training is being carried out”). This questionnaire was translated into Dutch by collaborators at KNVB, and back translated for accuracy checks.

Need for *competence* has previously been assessed in a sport context using the perceived ability sub-scale of the Intrinsic Motivation Inventory (McAuley, Duncan, & Tammen, 1989) adapted to suit football (e.g. “I am pretty skilled at football”). The competence subscale of the IMI has demonstrated acceptable reliability with young British athletes (Ntoumanis, 2001). This questionnaire was translated into Dutch by collaborators at KNVB, and back translated for accuracy checks.

Satisfaction of the need for *relatedness* has previously been measured with the five-item Acceptance subscale of the Need for Relatedness Scale (Richer & Vallerand, 1998), which has been adapted to the context of team sport (Sarrazin et al., 2002; Standage et al., 2003). To assess team relatedness, the stem for this scale is “With the other members of my team, I feel...”. To tap into perceived relatedness with respect to the coach, the stem was changed to “In terms of my coach specifically, I feel.” The items used to assess perceived relatedness were: supported, understood, listened to, safe, and valued. This questionnaire was translated into Dutch by collaborators at KNVB, and back translated for accuracy checks.

b) Perceived coach autonomy support.

Seven items from the Health Care Climate Questionnaire (HCCQ; Williams, Grow, Freedman, Ryan, & Deci, 1996) have been adapted to tap the degree to which players perceived their head coach to be autonomy supportive. Participants responded to the stem, “On this football team...” Example items are “I feel that my coach provides me with choices and options”, and “My coach listens to how I would like to do things”. The responses were anchored on a scale of 1 (strongly disagree) to 7 (strongly agree). Previous research conducted in the physical domain has supported the internal reliability and predictive validity of the adapted seven-item version of the HCCQ (e.g., Reinboth et al., 2004; Smith et al., 2007). This questionnaire was translated into Dutch by collaborators at KNVB, and back translated for accuracy checks.

c) Work-Life balance/ conflict

This was measured by three items taken from Copenhagen Psychosocial Questionnaire (COPSOQ III). These were kindly supplied in Dutch language version by Gerard Näring, a Dutch author from the COPSOQ group.

1. Do you feel that your work drains so much of your **energy** that it has a negative effect on your private life?

2. Do you feel that your work takes so much of your **time** that it has a negative effect on your private life?
3. Are there times when you need to be at work and at home at the same time?

Answers: 4 always; 3 to a large extent; 2 somewhat; 1 to a small extent; 0 to a very small extent.

Well-being outcomes.

The six-item Subjective Vitality Scale (SVS; Ryan & Frederick, 1997) has previously been employed to measure the players' feelings of possessing positive energy. This aims to capture the extent to which players felt alive and energetic in their football participation (e.g., "I feel alive and full of energy"). Responses are given on a seven-point scale (1 = strongly disagree; 7 = strongly agree). Sport research has supported the predictive validity as well as the internal reliability of this scale (e.g., Gagné et al., 2003; Reinboth et al., 2004). This questionnaire was translated into Dutch by collaborators at KNVB, and back translated for accuracy checks.

The emotional and physical exhaustion facet of the Athlete Burnout Questionnaire (ABQ; Raedeke & Smith, 2001) has been used to measure the frequency by which players perceived very low energy levels in football. A sample item is "I feel so tired from training that I have trouble finding energy to do other things". Participants answered on a five-point scale (1 = almost never; 5 = almost always). Previous research has provided evidence for the construct validity and internal reliability of this measure (e.g., Lemyre, Roberts & Treasure, 2006). ABQ; Raedeke & Smith, 2001 Raedeke, 1997). A Dutch language version was kindly supplied by Dr. Kirsten Verkooijen from Wageningen University.

Research Ethics.

The study was approved by the Health and Medical Sciences Faculty Ethics Committee at the University of Surrey, United Kingdom. All data was collected anonymously and with informed consent from all participants. The questions

were developed in collaboration with KNVB.

Approach to Professional Clubs

Via KNVB, players over the age of 18 of the 9 Eredivisie Clubs, both the youth team and the A team, were invited to take part via a weblink to an online survey in Dutch. The survey was hosted by Qualtrics (Provo, Utah, United States), a flexible software platform that enables secure and confidential online data collection, automatically adapted to the computer, tablet or smartphone used, for academic and market research purposes. In the professional Dutch league there are nine senior teams, with about 20 players each. In addition a small minority of the players of the 7 youth teams of these clubs also met criteria. Overall KNVB estimated around 200 eligible adult players to have been invited by clubs to participate. 69 individuals accessed the weblink and all completed the online survey; this is just over a third of those invited.

The Sample of players

Participants indicated their age band: The majority (64%) were aged between 18 and 21; 17% were aged between 22 and 25; and just 7% were aged between 26 and 30. In terms of educational attainment, 3 at University level, 7 at HBO; 19 at MBO; 13 at VWO; 17 at HAVO; 8 at VMBO. The majority live alone (72%), 27% cohabit, and one person was married/registered partner. 63% are students, 30% are in employment whether as a professional footballer or in another capacity, 3% are housewives, and 4.5% are currently not employed.

The spread of time spent playing professional football is given in the table 1 below.

Table 1. Years playing professional football

How long have you played professional football?	Frequency	%
1 year	8	12
2-3 years	19	28
3-4 years	15	22
4-5 years	11	16
Over 5 years	14	21

Estimates of hours per week engaged in various activities varied widely, with some individuals giving quite wide estimates ('5-15 hours'), omitting an answer or indicating it was difficult to estimate. It appears that participants interpreted the questions in various ways. As a result, it is perhaps unsurprising that no significant relationships emerged with work-life conflict, burnout or subjective vitality. As no objective measures of activity levels were possible, this is not to say that these would not be relevant to wellbeing outcomes, and a small minority of individuals did indicate that they were spending over 60 hours a week on work or education and football combined.

Questionnaire Results

The distribution of questionnaire scores, including their means, are given in table 2. In general Coach support was reasonably highly rated, producing a mean of 34.2 out of maximum on the scale of 49. This translates that on average across all items, players chose 'agree' responses rather than 'disagree' in relation to whether coaches are supportive. However, perceptions of coach support varied widely from almost the minimum on the scale to the maximum score. The distribution can be seen in figure 1.

Figure 1. Coach support out of a total of 49.

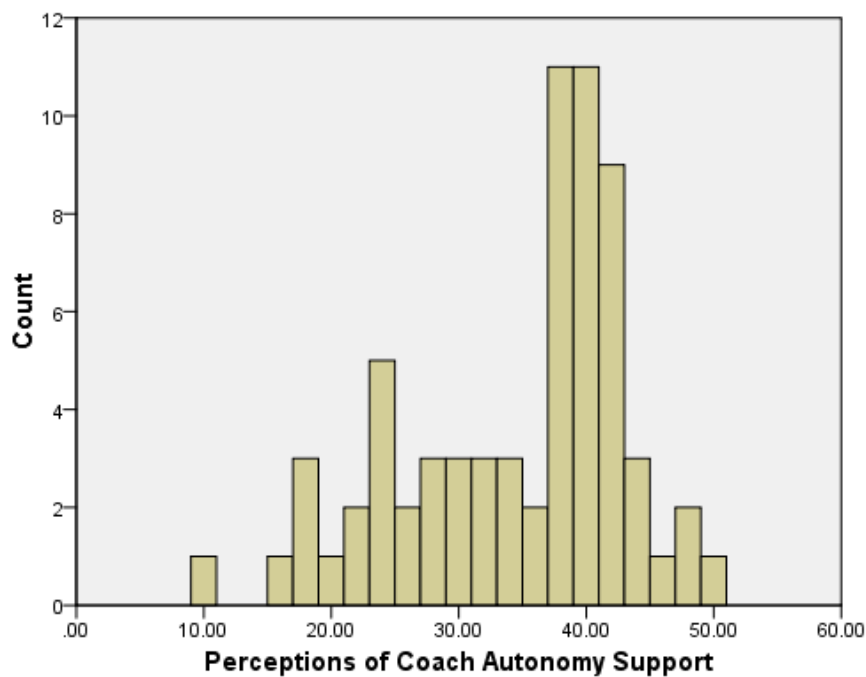


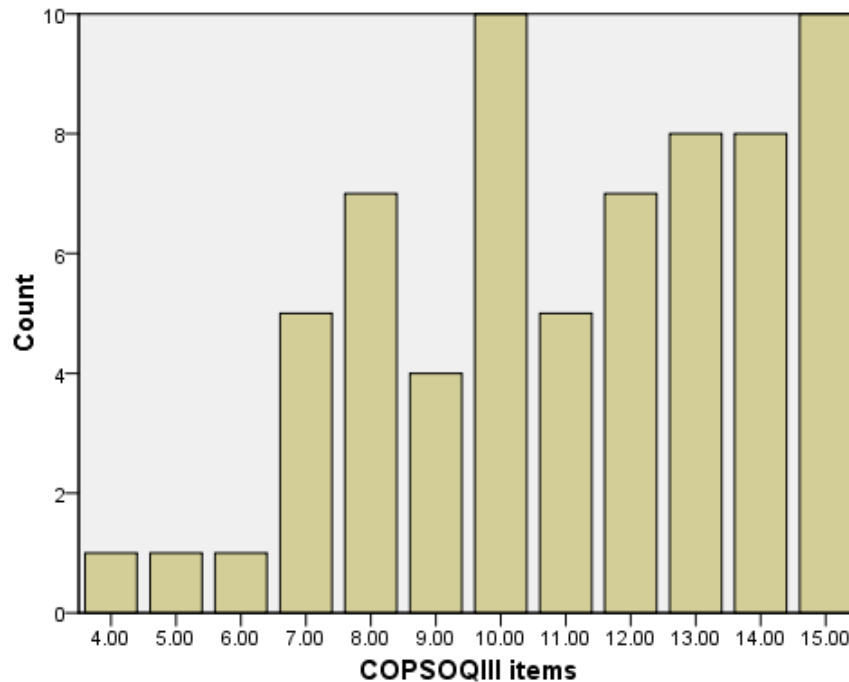
Table 2. Descriptive Statistics on Questionnaires

	Range	Minimum	Maximum	Mean	Std. Dev.
Perceptions of Coach Autonomy Support	39	10	49	34.19	8.91
Work-Life Conflict	11	4	15	11.14	2.88
Need for Acceptance	20	5	25	18.85	3.94
Need for Autonomy	12	13	25	19.13	2.90
Need for Competence	30	5	35	27.86	4.17
Subjective Vitality Scale	11	7	18	13.03	2.69
Physical/Emotional Exhaustion (ABQ 1)	3.60	1	4.60	2.38	.86
Reduced sense of Accomplishment (ABQ 2)	4.00	1	5.00	2.45	.66
Sport Devaluation (ABQ 3)	3.20	1	4.20	2.19	.73
Athletic Burnout Questionnaire Total	9.40	3.2	12.6	7.03	1.84

Much more concerning was the very extensive degree of Work/Life Conflict reported by players: this produced a mean of 11.1 out of maximum 15. This score is equivalent to conflict of a 'large' to 'very large' extent for the majority of players. The breakdown of scores is illustrated in figure 2. It should be added that of course some may have interpreted 'work' as including football and other

not done so.

Figure 2. Players' Work-Life Conflict out of a possible 15 points.

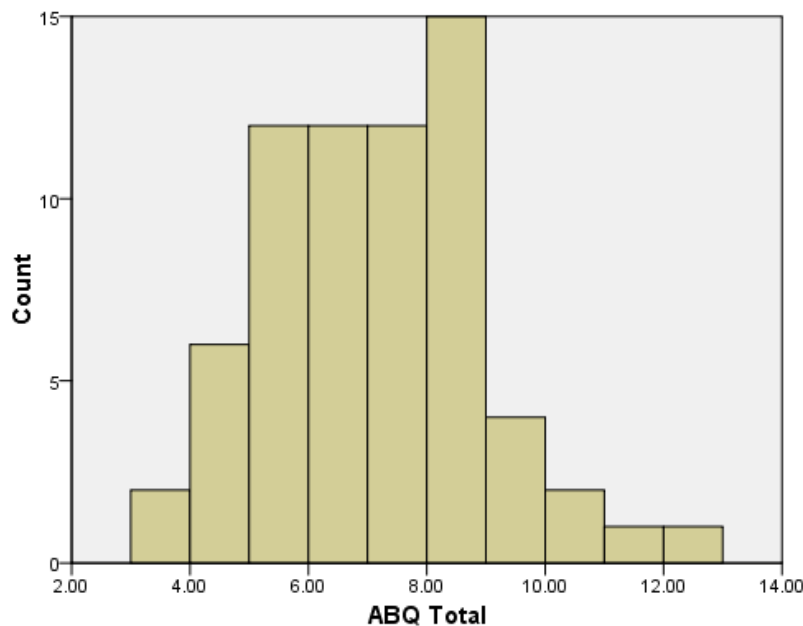


In terms of needs being met, on average scores reflected that most players agreed that all three needs are being met. However, again there is wide variation with a minority of players reporting that they don't feel satisfied in one or more ways in their role within football.

Wellbeing and Burnout

Scores on the Athletic Burnout Questionnaire were similar to those seen in other sport samples such as a recent study of how the measure performed in 257 young Swiss Olympic sport class attenders (Gerber et al. 2019). The majority of players 'rarely' or 'sometimes' experience exhaustion, a reduced sense of accomplishment or feel devalued in the sport. The breakdown of scores is shown in figure 3.

Figure 3. Breakdown of players' Burnout scores out of a total of 15.



As the pattern of areas contributing to burnout may be specific to this sample, the individual items were further investigated and are shown in table 3 below. Performance on these items can be compared to a recent large sample of Swiss Olympic class athletes and suggest that the present sample is fairly similar to this larger recent study. As a score of 9 and above can be taken as indicative of significant burnout, it can be estimated that this describes 8 out of 67 (12%).

Scores on the Subjective Vitality Scale produced a mean of 13.0 out of a total 18 suggesting that the majority have reasonable well-being/energy levels in their daily life. As for burnout, there is a spread of scores suggesting that poor wellbeing characterizes a minority of players.

Table 3. ABQ Items

	Mean	S.D
- Ik bereik veel waardevolle dingen in mijn sport	2.24	.780
- Ik voel me zo moe door mijn training dat ik moeite heb energie te vinden voor andere dingen	2.79	1.023
- De moeite die ik in mijn sport steek zou ik beter in andere zaken kunnen steken	2.33	.894
- Ik voel me oververmoeid vanwege mijn sport	2.36	.965
- Ik bereik niet veel in mijn sport	2.27	.947
- Ik geef niet meer zo veel om mijn sport prestaties als ik deed	1.93	1.105
- Ik presteer niet wat ik, gezien mijn bekwaamheden, zou moeten presteren in mijn sport	2.85	.989
- Ik voel me “opgebrand” vanwege mijn sport	2.15	1.048
- Ik ben niet zo betrokken in mijn sport als ik was	2.00	.953
- Ik voel me fysiek opgebrand door mijn sport	2.24	.939
- Ik maak me minder druk over het feit dat ik succesvol moet zijn in mijn sport dan voorheen	2.43	1.131
- Ik ben uitgeput door de mentale en fysieke verplichting van mijn sport	2.39	1.072
- Het lijkt wel dat het niet uit maakt wat ik doe, ik presteer niet zo goed als dat ik zou moeten doen	2.36	.980
- Ik voel me succesvol in mijn sport	2.54	.823
- Ik heb negatieve gevoelens ten opzichten van mijn sport	2.27	.994

Predicting Wellbeing and Burnout.

Statistical analyses were conducted using linear regression to further investigate factors that might be implicated in burnout and reduced wellbeing. Firstly demographic factors such as age, education, living circumstances and years as a professional were investigated. None of these factors predicted wellbeing or burnout. For example, burnout was not associated with being younger/older, in the first year of turning professional or being employed. Neither was work-life conflict associated with living with a partner, having work rather than study, or being in the first year of turning professional.

From inspection of the correlations with ABQ scores, work-life conflict and all basic needs measures were entered in stepwise regression. This led to a final model whereby 48% of the variance could be explained by a model with three

predictor variables: Work-life conflict, need for acceptance and need for competence. This model is shown in table 4.

Table 4. Regression predicting ABQ Total

	Unstandardized Coefficients		Standardized	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.294	1.275		12.779	.000
Work-Life Conflict	-.285	.058	-.447	-4.902	.000
Need for Competence	-.136	.045	-.308	-3.013	.004
Need for Acceptance	-.123	.047	-.263	-2.586	.012

Further analysis of each of the ABQ subscales also identified the same factors as predictive. Physical/Emotional Exhaustion was predicted by Work-life Conflict and Need for Acceptance. Sport Devaluation was predicted by Work-life Conflict and Need for Acceptance. Reduced sense of accomplishment was predicted by Need for Acceptance and Need for Competence.

Subjective Vitality/Wellbeing was also investigated with stepwise regression. Perhaps because this is less specifically related to football than the ABQ a lower proportion of variance was explained by the final model (20%) which included Need for Autonomy and Need for Acceptance (see table 5 below).

Table 5. Regression predicting Subjective Vitality/Wellbeing

	Unstandardized Coefficients		Standardized	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.619	2.117		2.182	.033
Need for Autonomy	.259	.113	.279	2.301	.025
Need for Acceptance	.183	.083	.268	2.207	.031

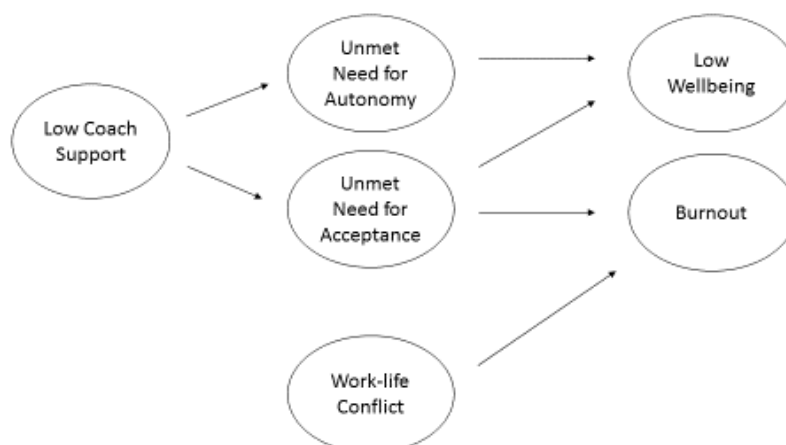
Potential mediation effects

Checks were performed to investigate whether basic needs might play a role in mediating the effect of work-life conflict. However, the necessary relationship between these variables required for mediation was lacking suggesting that all the above effects are direct or are mediated/moderated by factors not measured in the current study.

Further analysis of Coaching Autonomy Support

Although coach support did not correlate significantly with any outcomes as reported above, it did correlate significantly with Need for Autonomy and Need for Acceptance. This supports the idea that while across the sample, a lack of coach support did not itself lead to burnout, it does predict some areas of basic need not being met (need for acceptance $r=.25$, $p<.05$; need for autonomy $r=.35$, $p<.05$). As for the results above, it is not possible to say whether coaching support causes these perceived needs to be unmet.

The diagram below illustrates the relationships uncovered by statistical analysis, though it should be noted that this is not a formal statistical model, and no causality is implied by the arrowed relationships.



Headline Findings

- The environment in terms of coaching is broadly supportive for most individuals. As a factor this is not leading to burnout and poor wellbeing across the sample. However, low perceived coaching support was related to unmet needs for acceptance and autonomy.
- A minority of players estimated at 12% have significantly poor wellbeing and high levels of burnout.
- Levels of work-life stress are on average fairly high. This is contributing significantly to burnout and poor wellbeing in the sample.
- While most basic needs are, on average, being satisfactorily met across the sample there is variability here. Those perceiving their basic needs for autonomy, acceptance and competence to not to be met within the football domain show higher levels of burnout and poorer wellbeing.

Discussion

The evidence provided by this study is clearly specific to its context and it is unsurprising that the findings are in some ways consistent with prior research, and in some ways unique. While coaching support is quite frequently found to be related to burnout, this was not the case here. However, the levels of coach autonomy support (which rates the overall support from a coach and team) were reasonably high which may have mitigated against its effects. This is encouraging for the local context. However, this does not imply that all is well for all in the study, or by implication, for professional Dutch female football players in general. Levels of work-life conflict in particular, and for some, professional burnout were high, and quite strongly related to each other. This was true regardless of work status (most were either students or in employment), age, years playing football, or weekly hours spent playing, working or studying. There was no evidence that the first year at a professional club sees greater conflict or levels of burnout. Though the study is cross-sectional and thus the nature of predictive relationships is statistical, and not temporal, the strong implication of results is that work-life conflict is a major contributor to burnout in this context.

The other main, and largely independent, contributors to both burnout and low wellbeing are relative deficiencies in all three basic needs - for autonomy, competence and acceptance. These are consistent with Basic Needs Theory, and in tune a wide range of earlier research, as outlined in the introduction. While levels of these were broadly consistent with other young elite athletes such as Olympic class attenders, some scores fell at or near the ceiling for these measures which should clearly be concerning for those involved in supporting the sport. It is worth emphasizing that basic needs are not straightforwardly aspects of the environment, but a *perceived* lack of support, autonomy, mastery, satisfaction and so forth in their role within football. It is not possible from the results to attribute a cause to these feelings. As the data is cross-sectional, it is certainly possible that they are consequences of burnout as well as causes. Nevertheless, in other sports and non-sports occupational settings longitudinal data supports the direction of effects of 'frustration of basic needs' as causal of burnout (eg. Trépanier et al. 2016).

Compared to other literature, it is interesting to note the lack of an effect of coach autonomy support on wellbeing and burnout as the role for this factor has been repeatedly found elsewhere. Nevertheless coach support did modestly predict several unmet needs reflecting some findings elsewhere. In one study of male Mexican footballers (15-24 years old), players perceived a more 'authoritarian style' to coaching than 'autonomy supportive' and this strongly predicted frustration of basic psychological needs (Aguirre et al. 2016). It may be that the relative absence of authoritarian coaching styles in the present context mitigated this effect, however there were significant differences in how autonomy supportive coaches were.

The literature also tells us that personality factors such as perfectionism and resilience play a role in leading to, or mitigating, burnout. Though not measured here, it would have been interesting to explore why some, and not others, perceive basic needs to be frustrated as much prior evidence points to a range of personality traits as a starting point. Perfectionism can be a salient trait in those succeeding in sport at an elite level, but can have the downside of promoting self-criticism and perceived lack of competence, acceptance and so forth.

The relevance of gender

Turning to the relevance of gender, a key difference between studies such as Aguirre et al. (2016), Trépanier et al. (2016) and others is its exclusively female focus. Those few studies of elite female in sport highlight significant role conflict, even in relatively egalitarian societies such as the Nordic countries. The source of work-life conflict is probably highly varied in the present context as it spanned those in live-in relationships and those not, those in work and those in education, new professionals and established. The source of work-life conflict was not the topic of this study, but other work has highlighted the challenges of a high commitment career for women against the illusion of a 'have it all' lifestyle, that may leave some struggling with the burden (Seierstad & Kirton, 2015).

Might another cause of burnout and low wellbeing be a subtle bias against female sports professionals such as has been identified in the United States (Kaskan, 2016)? This thesis advances that common 'microaggression' themes occur in the media and elsewhere that assume inferior status to male professionals, are restrictive of gender role based on norms of femininity and generally objectify women. Such treatment may be associated with negative psychological consequences for female athletes. Clearly increasing coverage of women's professional football challenges masculine norms around sport, and football in particular, but its front line practitioners may be casualties in this cultural process. Football has long been seen as one of the most 'masculine' of sports with particular barriers and limitations to opportunities for women (Hardin & Greer, 2009; Scraton et al. 2018).

The consequences of burnout and poor wellbeing were also not a present focus, however these have been documented recently in a German context. A substantial study of German female football professionals (Prinz, Dvořák & Junge, 2016) identified that 32% had experienced depression at some point during their careers, and that 40% had wanted or needed psychological support, with only 10% receiving this. The situation is likely to be similar across the professional game, and highlights the need for increasing support outside of the coaching context here as elsewhere.

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Appendix 1. Survey

De KNVB voert, in samenwerking met dr. Oliver Mason van de Universiteit van Surrey, een onderzoek uit naar het welzijn van voetbalsters. Graag willen we jou uitnodigen om deel te nemen aan het onderzoek. Het invullen van de vragenlijst duurt ongeveer 15 minuten. Deelname aan het onderzoek is volledig vrijwillig en je hebt het recht om op elk moment met het onderzoek te stoppen. Jouw antwoorden worden volledig vertrouwelijk behandeld. We vragen niet naar je identiteit en alle data worden anoniem opgeslagen. Wanneer je vragen of opmerkingen hebt, kun je contact opnemen met Frederike Zwenk (frederike.zwenk@knvb.nl) of Oliver Mason (o.mason@surrey.ac.uk). Om deel te nemen aan dit onderzoek moet je tenminste 18 jaar oud zijn.

Als je het leuk vindt om deel te nemen, bevestig dan onderstaande:

- ☐ Ik bevestig dat ik de informatie over bovenstaand onderzoek heb gelezen en begrepen. (1)
 - ☐ Ik begrijp dat mijn deelname vrijwillig is en dat ik mij ieder moment kan terugtrekken zonder een reden op te geven. (2)
 - ☐ Ik begrijp dat mijn antwoorden vertrouwelijk zullen worden behandeld en dat elke publicatie die voortkomt uit dit onderzoek enkel gegevens zal rapporteren die niet te herleiden zijn tot individuele personen. (3)
 - ☐ Ik stem ermee in om deel te nemen aan dit onderzoek. (4)
-

Q1 Leeftijd

- ☐ 16-21 (1)
- ☐ 22-25 (2)
- ☐ 26-30 (3)
- ☐ 31-35 (4)
- ☐ 36-40 (5)
- ☐ 41+ (6)

Q17 Wat is het hoogste schoolniveau dat je in Nederland hebt afgerond?

- ☐ Universiteit (1)
 - ☐ HBO (2)
 - ☐ MBO (3)
 - ☐ VWO (4)
 - ☐ HAVO (5)
 - ☐ VMBO (6)
 - ☐ Praktijkonderwijs (7)
 - ☐ basisschool (8)
-

Q2 Hoe lang speel je al professioneel voetbal?

- ☐ 1 (1)
 - ☐ 1-2 (2)
 - ☐ 3-4 (3)
 - ☐ 4-5 (4)
 - ☐ 5+ (5)
-

Q3 Ben je momenteel...

- ☐ Alleenstaand (1)
 - ☐ Samenwonend (2)
 - ☐ Gehuwd of geregistreerd partner (3)
 - ☐ Weduwe (4)
 - ☐ Gescheiden (5)
-

Q18 Ben je momenteel...

- ☐ Werkzaam (1)
 - ☐ Werkloos (2)
 - ☐ Huisvrouw (3)
 - ☐ Student of scholier (4)
-

Q19 Hoeveel uur per week besteed je gemiddeld aan...

- ☐ Voetbal (11) _____
 - ☐ Je opleiding (12) _____
 - ☐ Je werk (13) _____
 - ☐ Je sociale leven (14) _____
-

Q20 Wat is jouw reisafstand van huis naar de club (in minuten)?

- ☐ 10 (1)
- ☐ 11-15 (2)
- ☐ 16-25 (3)
- ☐ 26-35 (4)
- ☐ 36+ (5)

Q21 Hoe ziet jouw thuissituatie eruit? Woon je...

- ☐ Alleen (1)
- ☐ Samen met vrienden (2)
- ☐ Samen met je partner (3)
- ☐ Samen met familie (4)

Q22 Hoeveel vertrouwen heb je in jouw toekomst als professionele voetballer?

Helemaal niet

Zeker wel

0 10 20 30 40 50 60 70 80 90 100

Click to write Choice 1 ()



Q4 Instructies: denk na over hoe de omgeving is ROND JOUW TEAM IN HET ALGEMEEN en geef vervolgens aan in hoeverre je het eens bent met wat er staat. Onthoud dat er geen goede of foute antwoorden zijn. Jouw antwoorden zijn vertrouwelijk. Wees alsjeblieft eerlijk en oprecht. In dit team...

Click to write Column 1

	Ze er mee oneens (1)	Mee oneens (2)	Enigzins mee oneens (3)	Niet mee eens, niet	Enigzins mee eens (5)	Mee eens (6)	Ze er mee eens (7)
--	----------------------------------	----------------------	----------------------------------	------------------------------	-----------------------------	--------------------	--------------------------------

	mee oneens (4)						
Geeft de coach de spelers keuzes en opties (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zorgt de coach ervoor dat alle spelers begrijpen wat ze moeten doen en waarom (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
moedigt de coach spelers aan om vragen te stellen (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
beantwoordt de coach vragen van spelers volledig en zorgvuldig (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
luistert de coach naar hoe de spelers dingen zouden willen doen (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
probeert de coach te begrijpen hoe de spelers de dingen zien, voordat hij,zij een nieuwe manier voorstelt om iets te doen. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
zijn spelers betrokken bij de besluitvorming (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 Voetbal-familie-conflict

De volgende vragen betreffen de manier waarop uw werk uw privé-leven beïnvloedt

	Altijd (1)	In grote mate (2)	Enigszins (3)	In een kleine mate (4)	In zeer kleine mate (5)
Heb je het gevoel dat jouw werk zoveel energie kost dat het een negatief effect heeft op jouw privéleven? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb je het gevoel dat jouw werk zoveel tijd kost dat het een negatief effect heeft op jouw privéleven? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zijn er momenten waarop je tegelijkertijd op het werk en thuis moet zijn? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 De volgende paar vragen gaan over hoe jij je voelt in je team. Geef aan in hoeverre jij het persoonlijk eens of oneens bent met wat er staat door het juiste antwoord te omcirkelen. In mijn team voel ik mij...

	Ze er mee oneens (1)	Oneens (2)	Neutraal (3)	Eens (4)	Ze er mee eens (5)
Gesteund (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Begrepen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gehoord (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gewaardeerd (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Veilig (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7 Instructies: Geef aan in welke mate de volgende stellingen waar zijn voor jou , gezien jouw ervaringen in DIT VOETBAL TEAM.
In het voetbal...

	Helemaal niet waar (1)	Enigszins waar (2)	Helemaal Waar (3)
Voel ik mij vrij om mijn ideeën en meningen te uiten (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voel ik mij vrij om dingen op mijn eigen manier te doen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb ik het gevoel dat ik behoorlijk mezelf kan zijn (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doe ik vaak dingen, omdat mij gezegd wordt dat te doen of omdat iemand anders wil dat ik dat doe (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb ik het gevoel dat ik veel inspraak heb bij de beslissing welke activiteiten/vaardigheden ik wil oefenen (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb ik de mogelijkheid mee te beslissen over welke strategieën moeten worden toegepast (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb ik een stem in wat er gebeurt en kan ik mijn mening geven (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leg ik mijzelf vaak druk op/ verplicht ik mijzelf dingen te doen om een schuldgevoel te voorkomen (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heb ik het gevoel dat ik veel inspraak heb bij de beslissing hoe de oefening/training wordt uitgevoerd (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8.

	Ze er mee oneens (1)	Mee oneens (2)	Enigszins mee oneens (3)	Niet mee eens, niet mee oneens (4)	Enigszins mee eens (5)	Mee eens (6)	Ze er mee eens (7)
Ik denk dat ik best goed kan voetballen (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben tevreden over hoe goed ik kan voetballen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben behoorlijk bedreven in voetbal (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik krijg voetbaloefeningen onder de knie als ik ze een tijdje heb geoefend (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik kan niet zo goed voetballen (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 Beantwoord elk van de volgende uitspraken door aan te geven in hoeverre de bewering waar is voor jou in het algemeen in jouw leven. Gebruik de volgende schaal:

	Helemaal niet waar (1)	Enigszins waar (2)	Helemaal Waar (3)
Ik voel me springlevend en vitaal (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me niet erg energiek (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soms barst ik haast uit elkaar van de energie (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb energie en levenskracht (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik kijk uit naar iedere nieuwe dag (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me bijna altijd alert en wakker (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me energiek (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 Hieronder staan een aantal stellingen over gevoelens die te maken hebben met sport. Graag een kruisje zetten bij het antwoord dat het beste bij u past.

	Bijna nooit (1)	Zelden (2)	Soms (3)	regelmatig (4)	Bijna altijd (5)
Ik bereik veel waardevolle dingen in mijn sport (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me zo moe door mijn training dat ik moeite heb energie te vinden voor andere dingen (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De moeite die ik in mijn sport steek zou ik beter in andere zaken kunnen steken (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me oververmoeid vanwege mijn sport (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik bereik niet veel in mijn sport (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik geef niet meer zo veel om mijn sport prestaties als ik deed (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik presteer niet wat ik, gezien mijn bekwaamheden, zou moeten presteren in mijn sport (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me “opgebrand” vanwege mijn sport (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben niet zo betrokken in mijn sport als ik was (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ik voel me fysiek opgebrand door mijn sport (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik maak me minder druk over het feit dat ik succesvol moet zijn in mijn sport dan voorheen (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben uitgeput door de mentale en fysieke verplichting van mijn sport (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het lijkt wel dat het niet uit maakt wat ik doe, ik presteer niet zo goed als dat ik zou moeten doen (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik voel me succesvol in mijn sport (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb negatieve gevoelen ten opzichten van mijn sport (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Dank voor je deelname. Voeg hieronder eventuele aanvullende opmerkingen toe

Appendix 2. Original Questionnaires in English

Perceptions of Coach Autonomy Support, from the Health-Care Climate Questionnaire
(Williams, Grow, Freedman, Ryan, & Deci, 1996)

Directions: Again, think about what the environment is like **ON YOUR TEAM IN GENERAL** and then indicate how much you agree or disagree with what is stated. Remember there are no wrong or right answers. Your responses are confidential. Please be honest and sincere.

ON THIS TEAM.....	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree
29. the coach provides players with choices and options.	1	2	3	4	5	6	7
30. the coach makes sure all players understand what they need to do and <i>why</i> .	1	2	3	4	5	6	7
31. the coach encourages players to ask questions.	1	2	3	4	5	6	7
32. the coach answers players' questions fully and carefully.	1	2	3	4	5	6	7
33. the coach listens to how the players would like to do things.	1	2	3	4	5	6	7
34. the coach tries to understand how the players see things, before suggesting a new way to do something.	1	2	3	4	5	6	7
35. players are involved in decision-making	1	2	3	4	5	6	7

Work-Life balance/ conflict (taken from Copenhagen Psychosocial Questionnaire (COPSOQ III), three items:

Do you feel that your work drains so much of your **energy** that it has a negative effect on your private life?

Do you feel that your work takes so much of your **time** that it has a negative effect on your private life?

Are there times when you need to be at work and at home at the same time?

Answers: 4 to a very large extent; 3 to a large extent; 2 somewhat; 1 to a small extent; 0 to a very small extent.

Acceptance subscale of the Need for Relatedness Scale (Richer & Vallerand, 1998)

The next few questions are about how you feel on your team. Please indicate how much you personally agree, or disagree, with what is stated by circling the appropriate response.

ON MY TEAM I FEEL.....	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
43. supported.	1	2	3	4	5
44. understood.	1	2	3	4	5
45. listened to.	1	2	3	4	5
46. valued.	1	2	3	4	5
47. safe.	1	2	3	4	5

Satisfaction of need for *autonomy in sport*, modified for the sport setting from the Need Satisfaction at Work Scale (Deci et al., 2001).

Directions: Please indicate how true each of the following statement is for you given your experiences on THIS FOOTBALL TEAM.

IN FOOTBALL.....	Not at all True		Somewhat True			Very True	
48. I feel free to express my ideas and opinions.	1	2	3	4	5	6	7
49. I feel free to do things my own way.	1	2	3	4	5	6	7
50. I feel like I can pretty much be myself.	1	2	3	4	5	6	7
51. I often do things, because I am told to, or because somebody else wants me to.	1	2	3	4	5	6	7
52. I feel I can give a lot of inputs to deciding what activities/skills I want to practice.	1	2	3	4	5	6	7
53. I have the opportunity to take part in deciding what strategies should be used.	1	2	3	4	5	6	7
54. I have a say in what happens, and I can voice my opinion.	1	2	3	4	5	6	7
55. I often pressure myself/make myself do things to avoid feeling guilty.	1	2	3	4	5	6	7
56. I feel I can give a lot of inputs to deciding how the practice/training is being carried out .	1	2	3	4	5	6	7

Five-item perceived ability sub-scale of the Intrinsic Motivation Inventory
(McAuley, Duncan & Tammen, 1989)

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree
57. I think I am pretty good at football.	1	2	3	4	5	6	7
58. I am satisfied with what I can do in football.	1	2	3	4	5	6	7
59. I am pretty skilled at football.	1	2	3	4	5	6	7
60. I can master football practice drills, after having practiced them for a while.	1	2	3	4	5	6	7
61. I <u>cannot</u> play football very well.	1	2	3	4	5	6	7

Subjective Vitality Scale

Please respond to each of the following statements by indicating the degree to which the statement is true for you in general in your life.

Use the following scale:

1 not at all true 2 - 3 - 4 somewhat true 5 - 6 - 7 very true

1. I feel alive and vital.
2. I don't feel very energetic.
3. Sometimes I feel so alive I just want to burst.
4. I have energy and spirit.
5. I look forward to each new day.
6. I nearly always feel alert and awake.
7. I feel energized.

Athletic Burnout Questionnaire

STEM: *How often do you feel this way?*

1. I am performing many worthwhile things in the sport.
2. I feel so tired from the training that I do not find the energy to do other things.
3. The effort I need to put into sport would be better used in another activity.
4. I feel extremely tired from the sport participation.
5. I am not meeting my personal interests with the sport.
6. I am not as concerned about my sport performance as I used to be.
7. I am not performing up to my ability in the sport.
8. I feel 'destroyed' by the sport.
9. I am not as interested in the sport as I used to be.
10. I feel physically exhausted from the sport.
11. I feel less concerned about being successful in the sport than I used to .
12. I am exhausted by the physical and mental demands of the sport.
13. No matter what I do in sport I do not perform as well as I should
14. I feel successful in the sport.
15. I have negative feelings towards the sport.

Answer options:

"almost never" (1), "rarely" (2), "sometimes" (3), "frequently" (4), "almost always" (5)