

What is influencing the dropout behaviour of youth players from organised football? A systematised review

Introduction

The enthusiasm for football is unabated. In 2016 the German Football Federation (Deutscher Fußball-Bund, DFB) recorded 6.96 million members and the most recent expansion even indicates an upswing of organised football in Germany (DFB, member statistics 2016). In contrast to this figure, a differentiated analysis of statistical data by the DFB makes it clear that this positive trend is not spread equally among various target groups. On the one hand high entry numbers of children can be determined in club football, on the other hand stagnating or even declining numbers of members can be observed especially in the A + B junior sector (ages between 15 and 18) and correspondingly a reduced number of teams participating in the competition system. The DFB member statistics between 2010 and 2015 indicate a decrease of 22,556 memberships among young male adults between 15 and 18 years of age. However regional differences are existing (DFB, member statistics 2010–2015; see figure 1). The declining membership numbers in this age groups during this period leads to a decreasing number of teams participating in the A + B junior sector by a total of 2,717, this corresponds to 10%. A study by Emrich, Pitsch and Rullang (2012) shows that declining population numbers among adolescence due to the demographic change can be compensated by a positive prevalence¹ by the sport of football. Nevertheless, the DFB statistics indicate that some football clubs are confronted with the exit of youth football players, and an increasing proportion of adolescence who dropout from organised football. An international comparison of dropout rates in youth football provided by Møllerløgken, Lorås, and Pedersen (2015) reveal a dropout of 23.9% in organised youth football, illustrating a fundamental problem in football clubs in various European countries. In this context the term `dropout` is conceptualised as a withdrawal at an early stage from regular practice or competition related to

¹ Prevalence describes the likelihood that an individual will perform a particular sport (e.g., football) at a particular age and gender. The prevalence is influenced mainly by the popularity of a sport (such as media presence, income opportunities, sporting achievements of national teams, major sporting events in their own country), but also by (sports) political control (such as the preference of the sport in school sport, specific support measures etc.).

football, under the condition that such activities have been carried out for a minimum of one year and at least at the leisure sport level (Würth, Saborowski, & Alfermann, 2000).

[Insert Figure 1 about here]

Given the fact that team sports such as football require a minimum of players in order to compete, the dropout of individuals also puts the existence of the team as a whole at risk. Declining numbers of young football players inevitably lead to a decline in the team numbers in an unchanged league and competition system. The DFB reports a decline of 2,717 junior teams over the last five years, representing a decrease of 15% (DFB, member statistics 2010–2015). Fewer teams not only imply fewer playing and training opportunities in youth clubs, but also make the recruitment of new players more difficult and therefore the dropout rate may further increase. Moreover, this trend results in fewer competition opportunities for young players because teams from different places have to be put together or leagues must be scaled down. The consequences of declining numbers of football players are addressed in different studies (e.g., Büch & Pitsch, 2007; Büch & Schellhaaß, 2005; Büch, Emrich, & Pitsch, 2003; Emrich, Pitsch, & Rullang, 2012; Schellhaaß, 2005). As a result of the necessary spatial expansion of football leagues to maintain competition opportunities, a considerable number of teams have simultaneously seen travel expenses and time costs rise for players and club or teams as they face longer journeys to practice sessions and competition venues (Sterzenbach, 2003).

One of the major tasks for football clubs in future will be to take appropriate measures to inspire youth and establish a long-lasting bond that will prevent early dropout and ensure a competitive environment in football leagues. To design and implement such measures, a proper methodical diagnosis for reasons and symptoms of early dropout of young players is required. A validated data base will not only prevent misjudgement, but will also form the basis for the development of core knowledge that can be transformed to enrich future concepts as well as the formulation of specific measures (e.g., DFB 2017; “DFB-Masterplan 2017-2019”).

The aim of this study is to provide an overview of the current literature and empirical studies that focus on the dropout behaviour of adolescent players in football. Systematised reviews offer a promising opportunity for analysing and critical reflecting of current primary studies about the dropout phenomenon in club football. This allows to extract and systematise relevant influencing factors why adolescents dropout from football (What is known?), to identify limitations or research gaps, and to provide recommendations for practice. As far as can be seen, there are two reviews for the dropout in football: The study of Møllerløgken et al. (2015) provides an overview about the dropout rates in youth football in different countries (without Germany), without reflecting factors of influence. A further review provided by Temple and Crane (2016) gives an overview about different factors influencing dropout behaviour of youth football players. However, this review is focusing only on anglophone studies, and ignores numerous dropout studies which were realised and published in Germany. This should take particularly into account the circumstance, that in recent years the youth development in club-organised football in Germany has changed. Furthermore, this issue was addressed in different empirical studies, which also should be considered to understand dropout with regard to its general aspects as well as its (possibly existing) German specific perspective. Taking this objective into consideration, the study focuses on the following question: *What factors influence the dropout behaviour of youth players from organised football? In which areas is further research needed concerning dropout of adolescents in football, and which practical implications can be derived from current findings?*

Multilevel framework

Recent studies have analysed the dropout phenomenon in sports from the perspective of different disciplines – especially psychology, socio-ecology, pedagogy and sociology. Accordingly, it is clear that the causes of and reasons for dropout have frequently been examined, interpreted and classified in discipline-specific ways. Current studies concerning dropout and maintenance in sporting activity indicate that the demand among adolescents, or their preference,

for a certain kind of sport is influenced by a variety of factors (Temple & Crane, 2015; Ullrich-French & Smith, 2009). Therefore, several measurements have to be analysed over a period of time to study the dynamics of development, and the identification of conditional terms has to include sports-related competences as well as psychological determinants and the social environment. Thus, integrative socio-ecological research approaches have recently been developed. This research approach aims to merge more static structural models and dynamic stage models from the psychological perspective, without neglecting distal factors (Casey, Eime, Payne, & Harvey, 2009; Spence & Lee, 2003). This takes circumstances more carefully into account, namely that individuals' behaviours are not located in an isolated space unrelated to the environment surrounding them. Individual behaviour cannot be traced back to the individual characteristics of persons alone, but should also be considered as an outcome of the conditions of the environment in which a person is socially embedded (Barton, 1968; Esser, 1999; sport specific see Schlesinger & Nagel, 2013, 2015; Wicker, Hallmann & Breuer, 2013). Thus, young football players are "nested" within their club and members of each club share certain similarities that are distinctive for only this club and might not be shared with those in other clubs (Schlesinger, Klenk & Nagel, 2017). These specific characteristics distinguish them as a group from members of other clubs. Hereby contextual influences do not just take place in personal interactions (face to face, for instance with teammate or coaches). It also takes place through observation and the reconstruction of signs by which other people express their (sporting and social) action orientation within the club, by perception of (sport club-)political activities, up to the access to club services or facilities etc.

Thus, evidence suggests that broader social forces influence dropout behaviour and therefore this aspect should to be considered more carefully (Temple & Crane, 2015). To gain a systematic and interdisciplinary overview of the dropout phenomenon, a multilevel framework has been adopted for the present review (Spence & Lee, 2003). This approach seems to be appropriate, because it provides the possibility for considering multiple levels and perspectives of

influencing factors associated with dropout from organised football among adolescence.

Therefore, both personal factors (e.g., motives, preferences and competences) and direct (club related) as well as indirect (non-club related) contextual conditions have been included within this approach (Figure 2). Different dimensions have been defined to clarify the hierarchical levels of analysis (micro-, meso- and macro-levels), which affect each other reciprocally.

Intrapersonal conditions include internal states and characteristics that are accountable for the development of sporting preferences and priorities. Moreover, the intrapersonal conditions (such as competencies, motivation, sporting success) contain attitudes towards the fit between the attractiveness of football-related activities and the goal intention or perception of one's own activity-related abilities. *Interpersonal conditions* include preferences for recreation based on an underlying constellation of interactions within the immediate social environment. This constellation of interactions can refer to both external and internal club factors. For example, the external club perspective signifies that the people within the social environment (e.g., peers or family members) support or inhibit certain sports activities. In addition, social relationships with other club members, teammates or coaches within a football club also influence the kind of participation in the club. *Structural conditions* relate both to an external perspective and to an internal organisational dimension. While the external perspective affects preferences and participation by way of insufficient financial resources or time, the internal factors contain, in a narrow sense, several terms of the football club such as infrastructure, personal resources and quality of sport or social services. *Societal conditions* include overlapping aspects and developments at a macro level, such as the societal importance and popularity of football, which is expressed in the media presence, income opportunities for athletes, or sporting achievements of national teams. Furthermore, the processes of individualisation and changes in values that occur via the influence of leisure activities on adolescents (e.g., Baur & Burrmann, 2003).

It can be assumed that a successful fit between the different levels of conditions has an influence on the stability of recreation and especially on sports participation (Casey et al., 2009). This multilevel approach enables both categorisation and synthesis of recent findings.

[Insert Figure 2 about here]

Method

The present review is conceptualised as a systematised review appropriate to the classification of typology of reviews developed by Grant & Booth (2009). Systematised reviews attempt to include one or more elements of the systematic review process while stopping short of claiming the resultant output as a systematic review. Nevertheless, the present systematised review was conducted according to the recommendations for systematic review procedures stated in the “Cochrane Study Quality Guide” (Higgins & Green, 2008) and the basic considerations for systematic reviews in social sciences (Jesson, Matheson, & Lacey, 2011; Petticrew & Roberts, 2006).

Eligibility criteria

A study was selected for inclusion in this review if it met the following criteria: (a) the research was empirical (quantitative and/or qualitative, primary data), (b) the focus was on children and/or adolescents aged between 6 and 19 years, (c) the context was organised football at different competitive levels (however studies that deal with specific aspects of talent selection as process of external exclusion were not considered), (d) drop-out or intention to dropout was assessed, and (e) it was published in English or German. However, peer reviewed publication was not required, nevertheless underlying quality criteria had to be met.

Data sources and search strategy

The following keywords were (a priori) formulated for the *subject matter*: The population keywords were: child*, adolescent* or youth. The context keywords were soccer or football, and construct of interest keywords were: drop-out, withdrawal, quit, member commitment, attrition, and disengagement. The studies were retrieved through computerised searches (independently by two researchers) in the databases PsycINFO, SPORTDiscus, MEDLINE and SPOLIT. The literature searches were not limited to a specific time period, which means that the search in the databases looked for any study published within the scope of the database up until August 2015.

Selection process and assessment of study quality

The selection of relevant studies were standardised on a three-step process: (1) reviewing the publication titles, (2) analysing the abstracts and (3) the analysis and evaluation of the full text. The first stage of the research classified 482 potential studies with addressing the topic of dropout behaviour (see Figure 3). By title- and abstract-screening 416 of these studies had to be excluded from further research for the following reasons: there were 95 duplicates and 321 studies did not correspond to the target group (football players) or the analytic context was not based on organised sport. Another 43 studies did not consider the sport of football or broach the issue of dropout behaviour at elite levels or in the process of talent selection exclusively. Consideration of the following career course and former withdrawal were not part of this investigation (e.g., Adie, Duda, & Ntoumanis, 2012). After the literature searches had been completed, all reference lists of included articles were hand-searched for additional articles with the result that six additional studies, which met the selection criteria were also added to the dataset. In total, the entire procedure of the subsequent continuous review process was based on 30 studies.

[Insert Figure 3 about here]

Assessment of study quality

The Assessment of quality of the studies was based on different quality criteria (Kunz et al., 2009; for the dropout issue: Crane & Temple, 2015), evaluated dichotomously with 1 = “criterion is met” or 0 = “criterion is not met”. The following criteria were examined:

1. Does the study have a clear subject of investigation?
2. Does the study focus on the target group?
3. Is the construct dropout clearly defined?
4. Does the study apply the relevant factors to a theoretical framework?
5. Are the source of the sample and approach to acquisition and selection documented clearly?
6. Are the research tools used valid and reliable? With regard to qualitative studies: is the approach to data collection appropriate for the underlying research question?
7. Are the analysis procedures appropriate?
8. Are the central results consistent with the goals and hypothesis of the study?

The review and rating of the identified studies was separately realised by two researchers to ensure objectivity in the analysis process. The review agreement of selected studies was satisfying, so that a good inter-rating reliability of the review process was given. In general, the selected studies show an appropriate theoretical embedding and an appealing research design.

Table 1 provides an overview of the studies considered concerning the following aspects: study design, quality criteria attained and main findings.

[Insert Table 1 about here]

Data extraction and synthesis

A data extraction form was used to obtain: (i) general information: study title, journal or book title and publication date; (ii) specific study characteristics: recruitments procedures, participant characteristics (age, sex, level of football played), study design, variables examined, validity and reliability measures and methods of analysis and the definition of `dropout` or `intention to

dropout` was used. Key study characteristics and findings of each study were tabulated (Table 1). Overall proportion of studies exhibiting key characteristics such as publication year, world region, participant age and sex, sample size, and study design were computed (Table 2). Consistent with the underlying multilevel approach, the individual, interpersonal and structural factors of dropout or intention to dropout were assigned and synthesised (Table 3). On that basis, a content analysis was undertaken to systematise the different categories and summarise the results descriptively. However, findings were not generalised by using quantitative statistical methods (as this is typically practised in meta-analysis).

Results

Most of the studies, regarded in the review, were conducted in Europe (n = 24), with six of them in Germany (Table 2). The studies considered show a clear setting of priorities in surveys concerning the dropout behaviour of adolescents based on a quantitative alignment of the research design (n = 27). Regarding the design of the studies, it is also the case that most studies that are purely cross-sectional are constituted with one measurement point. Only four studies exhibit two points of measurement or inquiry. In most studies, both children as well as adolescents were examined (n = 18); those studies exclusively involving adolescents were the topic of research in ten studies, whereas two studies focused exclusively on children. Moreover, the parents and coaches of the players were considered as subjects in five studies. With regard to gender, it is notable that the studies predominantly focused on the behaviour of male players (n = 15). Furthermore, 11 studies included both genders, whereas 4 exclusively concerned girls and young women.

[Insert Table 2 about here]

At first glance, the studies analysed show that the results can be assigned to three defined levels of analysis. These levels can be matched as analogues to the theoretical framework of intrapersonal, interpersonal and structural factors influencing dropout behaviour (Table 3).

Societal aspects were not considered empirically within the studies, but were sometimes included in the discussion of findings. The majority of the studies adopted a psychological perspective and accordingly most focused on intrapersonal and interpersonal requirements (n = 22), whereas structural factors were rarely central (n=6).

Regarding dropout, there were two aspects to be established in the studies: (1) the intention to dropout of the sport club was recorded (Nagel & Schreiner, 2007), (2) players who had actually resigned were surveyed either prospectively (Figueiredo, Gonçalves, Carlos, Coelho-Silva, & Malina, 2009) or retrospectively (Nagel & Vogel, 2012; Roschmann & Löbig, 2014). The majority of studies contrasted dropout with the idea of commitment; here commitment is understood as the maintenance of regular practice and competition (in this case in football as a club sport). Thus, the operationalisation concerned the fact that football players were surveyed with respect to their membership status in a club, or more precisely were directly linked to active exertion in the sport.

[Insert Table 3 about here]

Intrapersonal conditions

Intrapersonal factors are the most analysed aspects in researching dropout in football. In recent psychological studies, similar constructs with different notations and different types of operationalisation are used. Hence, a distinct demarcation proved to be difficult, as did comparison of the results. For the purposes of reducing complexity and achieving a better overview, the identified influencing factors of dropout behaviour were associated and synthesised to five intrapersonal categories, which can be content-related distinguished (Table 3).

Firstly, findings reveal that dropout behaviour of adolescents is linked to the *change of interests and preferences* (for the purpose of “seeking variety”) and corresponding, participation in other sporting and non-sporting alternatives. In the individual’s concept of life, alternative leisure and sport activities can provide incentives for adolescents and become more attractive or

beneficial than football in organised structures with a club membership. Accordingly, alternative (sport and non-sport related) leisure activities gain importance. Studies that focuses on reasons for attrition confirm the significance of the reasoning “Having other things to do!“, „Other social priorities!“ or „Pursuit other sport!“. These reasons for withdrawal received the highest ratings by the dropouts (Molinero, Salguero, Álvarez, & Márquez, 2009; Rottensteiner, Laakso, Pihlaja, & Kontinen, 2013).²

Furthermore, it becomes clear that subjectively perceived *sport and football-based skills and competences* are most frequently analysed (n = 14 studies), however, the operationalization of the construct differs in (subjective) perceived football competence, self-efficacy, beliefs about competency or self-control. Findings reveal, there are considerable differences in the assessment of personal competence between active and former adolescent players. Thus, adolescents who rate their football-related abilities and competencies lower than others favours the intention to dropout (Pahmeier, 2007, 2012; van Yperen, 1997). The relation of low perceptions of competence and dropout was confirmed more consistently for older adolescents. Furthermore, the study by Ommundsen and Vaglum (1997) revealed that there are high correlations between subjectively perceived competences (rate by the athletes), and objectively measured football-related abilities and skills. Their findings also reveal that the combined effect of low perceptions of competence and lower football skill measure on dropout was higher than for either of these factors independently.

Other intrapersonal factors concerning the maintenance of football activity in adolescents are *motivational aspects*, which are closely associated with other parameters such as satisfaction, enjoyment and goal intention. There is a negative impact on the maintenance of an activity when adolescents no longer connect the satisfaction of their needs with playing football in a club, and therefore, a lack of motivation. Dropouts attain comparatively high ratings in this category (Calvo,

² Secondary studies of data from representative population and youth surveys such as Shell Study, PISA, DJI (e.g., Baur & Burrmann, 2003, Burrmann & Baur, 2004, Mutz & Burrmann, 2015), available youth sport surveys such as SPRINT, The German Youth Sport Survey (e.g., Mutz & Burrmann, 2011; Wattie et al., 2014) show that organised sport has lost little of its attractiveness for young people over time (Baur & Burrmann, 2003).

Cervello, Jiménez, Iglesias, & Murcia, 2010). Moreover, dropouts are characterised by higher manifestations of introjected and external regulation. Accordingly, these adolescents increasingly see themselves as forced from the outside to play football and more frequently connect playing with a constraint on their scope and possibilities (loss of autonomy) (Calvo et al., 2010).

Furthermore, activity-oriented motive structures such as associating fun with movement and performance are less pronounced for adolescents with the intention to dropout (Pahmeier, 2007, 2012). In addition, studies show a positive connection between intrinsic motives (self-determined motives), the manifestation of commitment to the football club and enjoyment in football (García-Mas et al., 2010). Positive emotional connotations, such as fun, excitement and enjoyment as an omnibus term for positive affective responses, have been associated with motivation and the desire to continue participation in football (Ommundsen & Vaglum, 1992). Thus, active football players who rate higher for enjoyment, infrequently think about withdrawing from their club (Ommundsen & Vaglum, 1991a, 1991b; Quested et al., 2013). Hence, dropout intention of adolescents is closely linked with their *lack of enjoyment*. However, with regard to lack of enjoyment as a dropout predictor, it should be noted that the underlying content dimensions have not been adequately mapped empirically yet. Furthermore, *goal intentions* are linked to maintaining the sports activity. The study by Fritz (2014), based on a group comparison, clarifies that active female players with higher levels of practice and a higher level of performance also have a higher self-concordance and therefore exhibit goals corresponding to their own interests. Thus, it appears that the fulfilment of personal intentions with regard to football practice promotes a higher rate of activity for adolescent female players. In addition to athletic talent, personally achieved athletic success is an important binding factor. In this case, the subjective assessment of the achievement of personal athletic goals, as well as the achievement of team goals, is primarily of interest. Existing results concerning adolescent football players indicate that young players less frequently concern themselves with dropping out if they rate highly in the assessment of achieving

personal and team-orientated goals. In comparison to active football players, dropouts evaluate team success lower (Nagel & Vogel, 2012).

As a further influencing parameter *pressure* were identified as intrapersonal constraint, where different causes are based as studies show. Pressure often manifests itself in the form of performance anxiety (in the sense of afraid of sporting failure, or sporting failure as athlete) or negatively perceived stress resulting from subjectively perceived competence deficits and low self-efficacy (Pahmeier, 2012). Furthermore, adolescents feel pressure to satisfy the needs of family, friends (Babkes & Weiss, 1999; Ullrich-French & Smith, 2009) and coaches (Theis, 2009). Dropout was associated with children's feelings that parents interfered too often by criticising performances or offering rewards for performance (Babkes & Weiss, 1999). Social pressure, particularly for adolescents, also results from the relationship with the peer group (peer status vs. sports-related status) (Ullrich-French & Smith, 2009). Additionally, subjectively perceived disadvantage or unequal treatment can exacerbate stress and force a dropout behaviour as an avoidance strategy (van Yperen, 1997). In sum, some degree of sport-related stress and pressure may be necessary to elicit a positive effect on training and performance. Nevertheless, the findings also indicate that children and adolescents can feel these pressures to such extent that it contributes to football attrition.

The factor *growth/maturity* is predominantly related to a disadvantage that originates from problematic age-related aggregations (Delorme, Boiche, & Raspaud, 2010a; Helsen, Starkes, & van Winckel, 1998). In football clubs with two birth years put together in one age group, age differences between the youngest and oldest player of up to 23 months arise and differences in the biological age can be up to five years (Delorme et al., 2010a). Particularly in the sensitive period of development during puberty, considerable physical and psychological disadvantages occasionally reveal themselves. Concerning dropouts, it is clear that players, born in the second half of the underlying year of selection (mostly July to December; although the date of the

selection varies in the studies), exhibit a higher dropout rate (Delorme et al., 2010a; Delorme, Boiche, & Raspaud, 2010b).

Interpersonal relations

Interpersonal conditions are defined as the social interaction constellations to which adolescents are exposed. With regard to dropout behaviour we separate social interrelations inside and outside the club. The results reveal that 18 studies considered interpersonal factors.

The essential factor outside the club that most studies discuss is the *support of significant others*, such as parents, but also friends and peers. A lack of support destabilises the maintenance of participation in football. Dropouts rate the support of significant others significantly lower than active players (Pahmeier, 2012; Roschmann & Löbig, 2014). Furthermore, it can be seen that the influence of peer groups rises with increasing age, while the influencing importance of relationships with parents decreases (Ullrich-French & Smith, 2009).

Factors that are classified as being inside the football club primarily concern *team-specific relations* with significant others such as coaches and teammates. (1) The *coach behaviour* plays a central role for the maintenance of playing football because he/she directly and indirectly influences the process of binding players to the club both internally and externally. According to existing research, low appeal in terms of how practice is designed and unfavourable coach behaviour in particular increase the possibility of dropping out. In relation to age and the development of appropriate training design, dropouts identify aspects of practice such as monotony, lack of choice and the organisation of practical content (Rottensteiner et al., 2013; Theis, 2009). The subjective sense of appeal for the players is influenced by these features of participation. Moreover, the behaviour of the coach in practice plays a central role. In this regard, domain-specific, professional and social or pedagogical competences are identified as reasons for problems. Studies suggest that adolescents who quit their football participation ahead of schedule perceive a lower extent of social support (including enthusiasm, help in dealing with problems

and skills deficits) as well as deficits in leadership behaviour (equal treatment, help in dealing with conflicts) on the part of their coach (Pahmeier, 2012; Roschmann & Löbig, 2014; Rottensteiner et al., 2013; Skard & Vaglum, 1989). There are also gender-related differences, as pointed out by Keathley, Himeleinn and Srigley's (2013) qualitative study, with girls being more likely than boys to attribute the decision to leave football to negative coaching experiences.

(2) In addition to relationships with the coach, the *relations with teammates* are shown to be important factors pertaining to commitment. In this regard, poor relations and friendships to teammates or disagreements within the team, and conflicts that may include mobbing and verbal and physical attacks by teammates are identified as important reasons for withdrawal (Theis, 2009). Furthermore, the *atmosphere and cohesion within the team*, which characterise the sense of a community feeling of the team as a social group, seems to be important. Dropouts show lacks regarding sense of belongingness, because they rate lower in terms of feeling that they belong to the team and feeling socially integrated (social cohesion) (Ommundsem & Vaglum, 1991b; Ullrich-French & Smith, 2009). In this context dropouts doubted more often that they are working to achieve a shared goal and being an important part of achieving that goal (task-related cohesion) (Roschmann & Löbig, 2014).

Besides these team-related properties inside a club, two studies also analyse *organisational commitment within football clubs*. The reason for this is that membership in a club as an interest community is significantly dependent on social and normative inclusion, as well as solidary relationships. The results show that lower social and emotional commitment of adolescent increases the risk of dropping out as club member (Nagel & Schreiner, 2007; Nagel & Vogel, 2012).

Structural conditions

Analysis of the structural restrictions that determine the dropout behaviour of young football players has been very limited to date. The following characteristics have been analysed that concern the current dropout situation.

Main aspects with regard to the dropout behaviour of young players are resources of time and money. With regard to the *time* factor, internal and external factors can be distinguished with respect to football clubs. External reasons, such as relationships with family and friends, hobbies, school and job requirements compete with football club activity. Due to limited time budgets, conflicts arise between other leisure interests and participation in football. Adolescents reported internal conflicts to participate in other leisure activities or social gatherings while still meeting the needs of football (e.g., regular training and competition). For young people, it seems to be very difficult to find the right balance between these different factors in terms of time (Molinero et al., 2009). The factors internal to the club mainly concern fixed training sessions, as well as competitions and the time-intensive travel needed to attend. These factors constraining the need of young players to want more flexibility and self-determination, which are more easily achieved in informal sports activities (e.g., playing football just for fun in a football hall).

Financial restrictions were mentioned in only one study (Ferreira & Armstrong, 2002), in which the analysis was conducted with a focus on commercial football camps. The money factor is essentially a minor impediment in typical football club organisations as the club fees are comparatively low.

Several studies are more contextually focused, considering the *organisational features within football clubs* with regard to the bond their members maintain (Nagel & Schreiner, 2007; Nagel & Vogel, 2012). Following the approach of research on satisfaction, the problems identified were mainly related to the quality of service. Usually a bad reputation for service quality was ascribed by parents and this was a trigger leading to quit participation in the football club (Ferreira & Armstrong, 2002). In addition, deficits within the sports facility, infrastructural problems (such as accessibility, facilities, quality) or staff issues (lack of coaches, competencies and association guidance) increase the intention to dropout (Nagel & Vogel, 2012). The study by Nagel and Schreiner (2007) reveals that the possibility of improving one's individual sporting prospects

increases the probability to join another club (however, this cannot be considered as a dropout in the narrow sense).

[Insert Table 3 about here]

Interrelations between several factors and levels

The arguments illustrate the relevance of the previously mentioned influences that lead to dropout behaviour among young football players from organised football clubs. Furthermore, it should be noted that in the underlying studies relevant factors of dropout behaviour do not act separately and independently of each other, which correspond with the multidimensional manner of the dropout phenomenon. Thus, several studies show football-related competences correlate with other factors, such as individual motivation (Calvo et al., 2010), competition anxiety (Ommundsen & Vaglum, 1991a) and enjoyment (McCarthy, Jones, & Clark-Carter, 2008). Recent studies have clearly shown that youth players exhibit demotivated behaviour as soon as football no longer seems attractive (Calvo et al., 2010). There is an indisputable relationship between enjoyment and perceived football-related competences (Ommundsen & Vaglum, 1991a, 1991b). Considering the concept of competence-related motivated achievements, success in defined sport-related tasks should increase the individual's perception of competence as well as enthusiasm (Harter, 1981). However, football enjoyment decreases in combination with the decline in perceived competences and lack of opportunity to play, as well as with individual problems concerning the coach and the team, or increased training efforts (Garcia-Mas et al., 2010). As soon as football is overly dominated by competition, there is a loss of autonomy and increased pressure to perform, which may be experienced as unattractive (Calvo et al., 2010; Skard & Vaglum, 1989). Furthermore, interactions between motivation and determinants such as pleasure and their possible interconversion should be taken into account. The results of the study conducted by Garcia-Mas et al. (2010) in particular illustrate how intrinsic motivation influences the pleasure and enthusiasm in playing football, whereas demotivation enhances the process of searching for other (more attractive) alternative sports.

Furthermore, there are effects on development-related differences pertaining to the range of youth football players' maturity that should be considered in relation to other determinants of dropping out. The progressive developmental disadvantages lead to constraints and impairments during daily training and competition practice and result in negative skill experiences and self-efficacy. Furthermore, enjoyment to play football reduces and demotivation increases, particularly if there are lacks of support by parents and coaches (Figueiredo et al., 2009).

The analysis of interpersonal factors such as parental support is measured by different bivariate interactions: assessment of football-related skills and competences (Babkes & Weiss, 1999; Green & Chalip, 1997; Ullrich-French & Smith, 2009), the consequences for self-efficacy (Ommundsen & Vaglum, 1991a), or the enjoyment of children and youth athletes (Ommundsen & Vaglum, 1991b). Support for a significant other can be seen as a predictor for important parameters concerning continuance of football engagement and a long-term commitment to football. Moreover, there are differences between mothers and fathers regarding their individual manner of support. Averill and Power (1995) clearly indicate that in the case of difficulties appearing, the father in particular will tend to try to support the player, but this actually undermines the autonomy and enjoyment of the child.

The competence of a coach plays a central role in individual support focused on the players (such as special care, enthusiasm, the handling of problems and a focus on skill deficits) and leadership skills directed towards the whole team (equal treatment and handling of conflicts). In particular, a performance drill by the coach can lead to an excessive increase in pressure and accordingly a loss of autonomy from the player's point of view (Ommundsen, Lemyre, Abrahamsen, & Roberts, 2010; Quested et al., 2013). In addition, a conflict can be perceived between an increased performance orientation and a mismatched sporting ideal for young people, which results in the importance of a classic understanding of competition and performance measurement being steadily lost.

Discussion

Based on the findings of this systematic review regarding the topic of dropout among adolescent football players, in the following paragraphs existing research gaps are identified that should be addressed more thoroughly in the future research agenda of dropout research. Furthermore, the results will be used to derive practical implications for both football associations and clubs to address the dropout problem among youth football players in a more effective manner.

The results of this interdisciplinary and multilevel review regarding the issue dropout among adolescent football players clarify the variety and the interweaving of causes of the abandonment of football activities. Among these, intrapersonal, interpersonal and structural influences on dropout behaviour can be distinguished. Previously, psychological research has focused mainly on intrapersonal influences on dropout behaviour, with the negative appraisal of personal competences, low motivation, a lack of individual goals and attractions and a lower relative age identified as reasons promoting withdrawal from organised football (Calvo et al., 2010; Delorme et al., 2010a; Molinero et al., 2009; Pahmeier, 2012). A lack of support from significant persons and disadvantageous team constellations strengthen dropout behaviour on an interpersonal level (Theis, 2009; Ullrich-French & Smith, 2009). Furthermore, issues with timing and structural conditions encourage early dropout from organised football (Molinero et al., 2009; Nagel & Schreiner, 2007). Interactions among multiple levels can be noted, in which the interplay between intra- and interpersonal factors has particularly been investigated (e.g., interactions between enjoyment, motivation and coaching behaviours) (Garcia-Mas et al., 2010).

Although there is already a considerable body of findings concerning the dropout problem of youth football players available, there remain some research gaps that should be addressed in future studies. Research is needed in the following:

(1) *Analysing dropout behaviour as individual decision:* With regard to the analysis of dropout of young football players, in further studies, more attention should be paid to alternatives (“logic of selection”) to the membership in a football club (e.g., other recreational careers,

benefits of possible alternatives, costs of non-club membership etc.). In this context, particularly former football players (and club members) should be analysed in more detail with regard to their (unfulfilled) expectations and action orientations. Based on these considerations, underlying decision models of dropout behaviour can be further specified.

(2) *Contextual analysis of dropout behaviour as social acting:* With regard to dropout behaviour in football, interaction between the individual characteristics and corresponding structural conditions were rarely examined. Consequently, the “logic of the situation” has to be taken into account (basically Coleman, 1990; Esser, 1999). An increased focus on the relevance of club-specific structural features (a range of sporting and non-sporting factors, infrastructure, club culture etc.) could highlight the (controllable) structural requirements necessary to promote the long-term maintenance of adolescent football players. In this context, one conceivable approach can be found in theoretical approaches that conceptualise members’ behaviour in sport clubs (Schlesinger, Klink, & Nagel, 2017) as social behaviour. Members of football clubs are socially embedded within their clubs and members of each club share certain similarities that are distinctive only to this club and might not be shared by those in other clubs. Analysis that regard contextual features can contribute to a deeper understanding of individual behaviour. Therefore, multilevel analysis that take into account both individual and corresponding contextual factors influencing individual behaviour provide a better description of social reality than models that include only aspects of context or individual characteristics. Accordingly, it would be interesting to investigate the correlation between a favourable perception of structural features of the club and interpersonal factors: To what extent are specific changes in the selection of a club a factor affecting such membership by binding them to it, either cumulatively over time or acting as a replacement for other activities? How are measures undertaken to improve the membership commitment of youth players perceived by the members themselves? Further investigation could offer an explanation for dropout behaviour regarding the relationship between intrapersonal

determinants (e.g., motivation and excitement) and special structural requirements (e.g., club size, club goal orientation or services).

(3) Analysis the process of dropout from life course perspective: The process perspective of influencing factors on dropout behaviour has attracted little attention. Only a small number of studies address the assessment of sport activities from a longitudinal perspective. Moreover, the course of development of certain determinants promoting dropping out have scarcely been taken into account. Conceptual framework for an investigation of the process-focused development of club membership is life course resp. biographical research (Blossfeld & Huinink, 2006; in the sporting context Baur, 1998). According to this line of research, it can be expected that members' careers within a sports club are closely linked to other career paths (e.g., educational career in school), and therefore, marked by dynamic developments and interactions. In this respect, it has not been possible thus far to answer various scientific questions regarding dropout behaviour such as (i) how club-related career paths of members are determined, or (ii) whether there are typical career paths or patterns distinguishable? (iii) There are also questions arises to what extent certain "critical events" within individual career pathways can be identified that promote or hinder dropping out. In this context, (retrospective) longitudinal quantitative studies as well as qualitative research designs could be used more effectively to provide better insights into the time sequence of the cause-effect relation (endogeneity problem). In this context, the innovative concept of biographical mapping can be seen as promising strategy of analysis (Mayer, 2009; Thiel, Schubring, Schneider, Zipfel, & Mayer, 2015).

(4) Evaluation and intervention studies: Finally, intervention studies as a further analytical step are useful in order to obtain more detailed information to what extent specific measures dealing with the dropout problems of youths (implementing of good practice examples, advice programs) are effective or not. Not least on the basis of such interventions and their critical evaluation, club-related measures for membership retention management in football clubs should be defined in terms of content and concept. However, the underlying complexity of existing

structure and action relationships (interrelations and reciprocal effect between variables) in sports clubs can hardly be adequately investigated with conventional intervention study designs and their orientation towards a randomised controlled experimental arrangement. Rather, it is important to adapt future intervention study designs more closely to the particularities of club-specific structural conditions and the prerequisites for their change. In this regard, prospective longitudinal research designs are required to obtain more reliable findings about the sustainability of certain measures and instruments for retention of youth football players.

The systematic review provides a number of indications for developing measures to promote and maintain sporting activities in organised football. However, it should be noted that most of the causes for dropout that occur at the intra- and interpersonal level can often not be addressed directly. Therefore, these factors can only be managed indirectly by changing existing contextual conditions, processes and rules. This requires that clubs are able to identify “critical” factors influencing existing behavioural patterns and can then deal with them through specific measures. Against this background, the following recommendations are made:

(1) Strengthen and develop successive coaching competences. The coach plays a central role in the commitment of adolescents, being able to influence indirectly and directly both internal and external binding factors. Therefore, there should be a greater focus in the education of coaches concerning the tailoring of training content to the respective age in methodological and organisational terms. In this respect, supportive forms of communication should be more specifically anchored in the education of coaches. Particularly in the sensitive puberty phase, associated with developmental disadvantages (both physically and mentally), a lack of communicative support from the coach is a significant reason for dropout. In addition to teaching football-related competencies and playability, teaching team skills should also be pursued in football training. Moreover, dealing with parents, whose behaviour is one of the main causes of

dropout behaviour in children's should be paid more attention in education programmes for coaches.

(2) Promotion of identification with the football club. The current findings concerning member commitment indicate that long-term membership in a sports club is closely linked to cultural and solidarity relations with the club (Schlesinger & Nagel, 2015). Therefore, the promotion of identity-related aspects should be taken into account as a central issue concerning member management in football clubs. It is particularly club-specific socialisation processes that are important in this context – that is, processes that impart, promote and cultivate reciprocal obligations and individual beliefs encouraging solidarity. Such socialisation processes are formed especially through the length and intensity of the relationship between club and member. Therefore, younger club members should be acquainted with the values of the club and be made aware of the need for collective solidarity.

(3) Reflection of own club philosophy against the background of divergent expectations of adolescents. Football clubs are an ideal place for athletes to compete. Nevertheless, clubs should consider to what extent they will continue focusing on those youth members who want competition sport? Alternatively, whether the clubs want to provide a platform for those members who cannot (or do not want to) fulfil continuously the specific performance requirements of athletic training (in the sense of “breaking away from the traditional understanding of the performance oriented sports club”). On the one hand, it is necessary for a club to reflect its own club philosophy and sporting goals; on the other hand, it must carefully examine the changing expectations of young people regarding specific football offers. This is particularly relevant when the club understands itself as a modern sports service provider or a socially committed youth sports provider. There may well be potential for the expansion of services or the development of alternative (low-threshold) opportunities and thus the club will be more likely to integrate successfully such divergent expectations and interests. However, traditional and purely performance-oriented football clubs should deal with such alternative playing opportunities only

with caution. For these clubs, the risk of jeopardizing the stability of existing internal relations among other club members through the integration of alternative football-related game cultures is considerably greater.

(4) *Anchoring member orientation and the commitment of young players as a central objective in the club.* It is rare that football clubs deal with their members – especially young people – as their interests and needs actually require. First of all, this presupposes that the topic of the commitment of young players is the subject of communication processes within the club and thus the sports club actively and constructively addresses the topic. Only then will a club's efforts at binding have a chance. Therefore, the issue of member commitment should be anchored structurally in the programme of the club as the programming of binding targets is not only conducive to the club as a basis for further decisions, but also creates formal prerequisites for football clubs to concentrate substantively on matters related to the promotion of young players (Seiberth, Weigelt-Schlesinger, & Schlesinger, 2013). The extent to which the interests of younger players are perceived and addressed in decision-making processes within the club, or younger members assume responsibility in their club seem to be important aspects.

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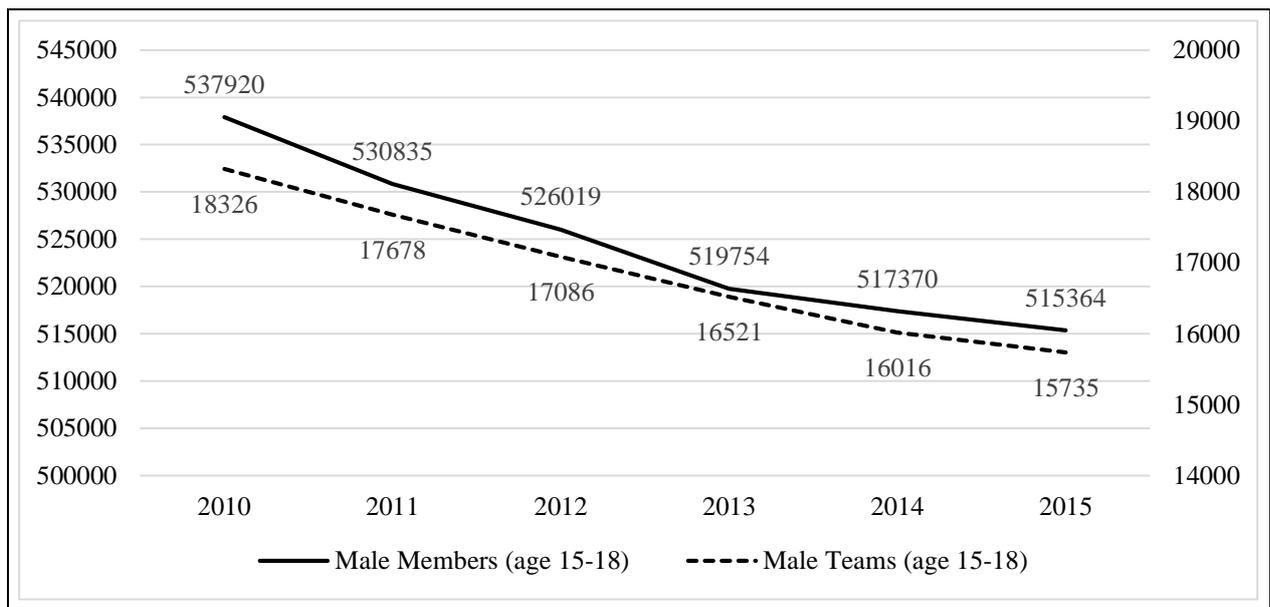


Figure 1: Statistics according the development of club memberships in organised football in Germany (age 15 – 18, male) and the number of teams (A + B junior sector, male) in the period of 2010 to 2015 (DFB member statistics from 2010 to 2015)

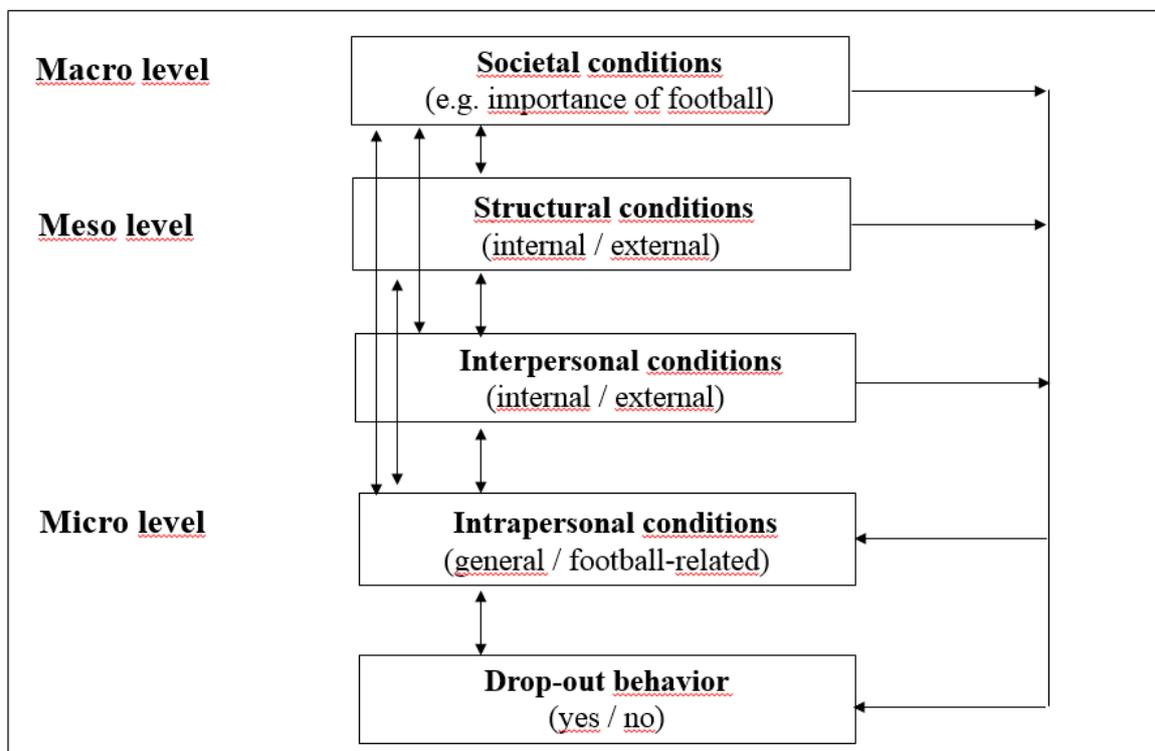


Figure 2: Multi-level perspective for analysing the drop-out behaviour of youth from organised football (own presentation based on Spence & Lee, 2003)

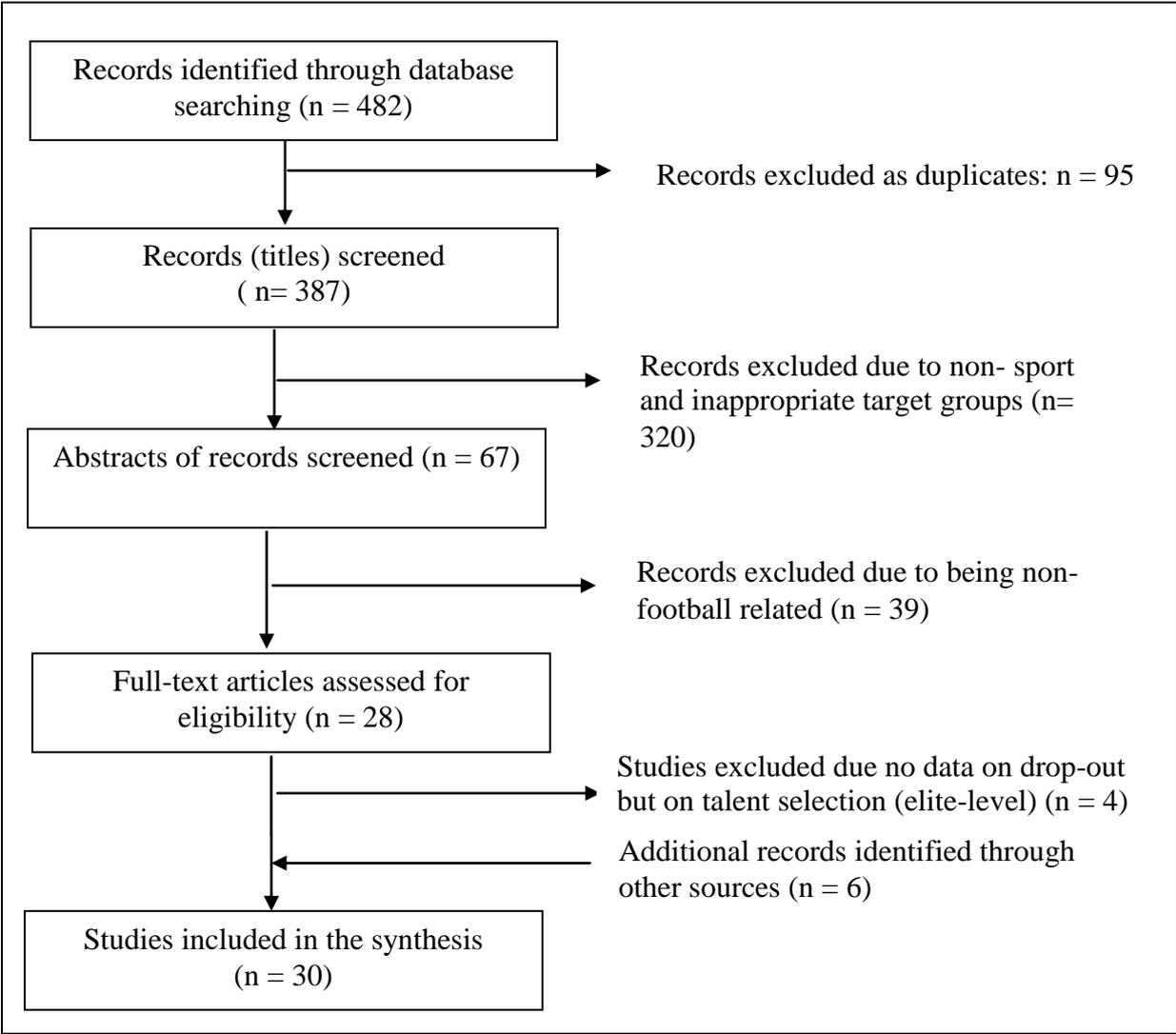


Figure 3: Flowchart of literature review and selection of studies

Table 1: Selected dropout studies in football (authors, design of the study, and study quality)

Author (Year)	Design of the study	Scores of quality of the included studies									Results	
		1	2	3	4	5	6	7	8	T		
1. Álvarez, Balaguer, Castillo, and Duda (2009)	Spain; quantitative; active male football players from 32 football schools; age: 12–16; n = 370	1	1	0	1	1	1	1	1	1	7	Positive relation between coach autonomy support and satisfaction of psychological needs (PNS), PNS and self-determined motivation (SDM), SDM and enjoyment (E), PNS and E. Negative relation between PNS and boredom (B), SDM and B.
2. Averill and Power (1995)	USA, quantitative, active male football players; age: 6–8; n = 49 (11 parents)	1	1	1	0	1	0	1	0	5	Mothers and fathers show different kinds of responsibility in helping their children.	
3. Babkes and Weiss (1999)	USA; quantitative; active male and female football players; age: 9–12; n = 227 athletes (+ 160 mothers & 123 fathers)	1	1	0	1	1	1	1	1	7	Moderate relationship between perceived parental behaviour (advocacy, beliefs about competency, positive contingent responses, involvement, role-modelling) and children's psychosocial responses (perceived football competence, enjoyment, challenge motivation, mastery motivation, criteria motivation).	
4. Calvo et al. (2010)	Spain; quantitative; active male football players; age: 13–17, n = 492 (among 178 dropouts)	1	0	0	1	1	1	1	1	6	Dropouts with higher levels of amotivation, external regulation, introjected regulation. Dropouts with lower levels of satisfaction with connection to needs for autonomy.	
5. Delorme et al. (2010a)	France; quantitative; male football dropouts; 7 age categories (under 7 to adults); secondary data of the French Football Federation; n = 363,590	1	1	0	0	0	1	1	1	5	Male dropouts aged under 9 to under 18 are overrepresented in quarters 3 and 4 (born relatively later in the competitive year).	
6. Delorme et al. (2010b)	France; quantitative; female football dropouts; 6 age categories (under 8 to adults); secondary data of the French Football Federation; n = 15,285	1	1	0	1	1	1	1	1	7	Female dropouts with an age under 10, under 14 and under 17 are overrepresented in quarter 3 and 4 (born relatively later in the competitive year).	
7. Ferreira and Armstrong (2002)	USA; quantitative; parents of male football dropouts; n = 102	1	0	0	1	1	1	1	1	6	Positive direct link between parents' attribution of service, the importance of football and switching football providers. Positive direct link between costs and	

											upper management issues and pursuing other activities. Indirect link between coaches, peers, parents, team-mates, time of practice and games and post-dropout behaviour.
8. Figueiredo et al. (2009)	Portugal; quantitative; follow-up design; male football player and dropouts; age: 11–12/13–14; n = 159 (among 36 dropouts)	1	0	0	0	0	1	1	1	4	Age 11 to 12: elite players better than club players and dropouts in age and function, not consistently significant. Age 13 to 13: elite players older, taller and better than dropouts and club players, no differences between dropouts and club players. No differences between groups in task and ego orientation.
9. Fritz (2014)	Germany, quantitative, female active football players, age: 10–17, n = 298	1	1	0	1	1	1	1	1	7	Higher levels of self-efficacy and self-concordance lead to higher weekly football activity and higher levels of performance. Lower levels of situational barriers lead to higher weekly football activity, levels of performance and duration of membership. No differences between barrier management and continuing football.
10. Garcia-Mas et al. (2010)	Spain; quantitative; male football players; age: 14–16; n = 454	1	1	0	1	1	1	1	1	7	Positive contribution of intrinsic and extrinsic motivation to enjoyment and commitment. Positive contribution of amotivation to alternatives to sport. Negative contribution of amotivation to enjoyment and commitment.
11. Green and Chalip (1997)	USA, quantitative, male and female active football players; age: 5–13; n = 153 players (+ their parents)	1	1	0	0	1	1	1	1	6	Direct and indirect effect of parents' satisfaction with the programme, organisational commitment, encouragement and enduring football involvement compared to the childrens' perceived skill, satisfaction with the programme and enduring involvement.
12. Helsen et al. (1998)	Belgium; quantitative; male football players; age: 6–16; n = 1,745	1	1	0	0	1	1	1	1	6	Higher number of dropouts born towards the end of the selection year.
13. Keathley et al. (2013)	USA, qualitative, sample n = 22, former (11)	1	1	1	0	1	0	1	0	5	The most frequently cited reasons by

	and current (11) players; parents of participating athletes also interviewed										former players were time, the coach and conflicts with other sports. Girls were more likely than boys to attribute the decision to leave soccer to negative coaching experiences and to view the social rewards of playing soccer as a primary benefit, suggesting a stronger relational orientation among female than male athletes.
14. Molinero et al. (2009)	Spain, quantitative; female and male dropouts of different team sports (football, basketball, volleyball), age: 14–18, n = 309 (among 127 football dropouts)	1	1	1	0	1	1	1	1	7	Most important reasons for dropout: had other things to do, did not like the coach, not enough team spirit. Less important reasons: old age, rewards, competition. Some differences between sports, the three most important reasons equal.
15. Nache, Bar-Eli, Perrin, and Laurencelle (2005)	France; quantitative; active male football players and dropouts; age: 13–15; n = 55 study 1; n = 354 study 2 (among 31 dropouts)	1	0	0	1	1	1	1	1	6	Significant group differences with regard to intention, attitude, subjective norm and indirect subjective norm perseveres.
16. Nagel and Schreiner (2007)	Germany; quantitative & qualitative; active male football players; age > 14; n = 726 (+ 3 interviews with dropouts)	1	1	0	1	1	1	1	1	7	Negative relationship between risk of withdrawal and a) affective/normative satisfaction (community interest), b) continuance commitment (satisfaction with club leaders), c) duration of membership.
17. Nagel and Vogel (2012)	Swiss; quantitative; male and female football players and dropouts; age: 12–21; n = 160 (among 49 dropouts)	1	1	1	1	1	1	1	1	8	Significant differences between club “loyals” and potential dropouts/real dropouts in terms of member satisfaction, individual success and common action orientation; no significant differences between potential dropouts and real dropouts. Negative relationship between member satisfaction, individual success, common action orientation and the risk of withdrawal.
18. Ommundsen and Vaglum (1991a, 1991b)	Norway; quantitative; longitudinal design; active male football players and dropouts;	1	0	1	1	1	1	1	1	7	Higher levels of perceived football competence; parents’ and coaches’

	age: 12–16; n = 223 (among 22 % dropouts)										positive emotional involvement leads to enjoyment of football. Lower levels of self-esteem lead to competition anxiety.
19. Ommundsen and Vaglum (1992)	Norway; quantitative; longitudinal design; active male football players and dropouts; age: 12–16; n = 223 (among whom 22% dropouts)	1	0	1	1	1	1	1	1	7	Dropout frequency increases with higher levels of poor relationships and aggressive emotions for young boys (12–13). Significant relationship between antisocial behaviour and dropout for older boys (14–16). Dropout frequency increases with lower levels of enjoyment and perceived football competence for older boys.
20. Ommundsen and Vaglum (1997)	Norway; quantitative; longitudinal design; active male football players and dropouts; age: 12–16; n = 223 (among whom 22% dropouts)	1	0	1	1	1	1	1	1	7	Mediated by lower perceived competence; a low level of actual competence increases the dropout rate for older players.
21. Ommundsen et al. (2010)	Norway; quantitative: male and female participants of an international tournament; age: 12–16; n = 283	1	1	0	1	1	1	1	1	7	Mastery climate, satisfaction of need for autonomy and intrinsic motivation lead to higher subjective vitality in football.
22. Pahmeier (2007)	Germany; quantitative; active male and female players and dropouts; mean age = 15.4; n = 733 active players (M = 549, F = 184) and n = 373 dropouts (M = 296, F = 77)	1	1	1	1	1	1	1	1	8	Dropouts show lower levels of sports self-ability perception, sports-related motives, football-based self-efficacy, coach support and team cohesion.
23. Pahmeier (2012)	Germany; quantitative; active female football players and dropouts; age: 11–23; n = 261 (among 77 dropouts)	1	1	1	0	1	0	0	1	5	Dropouts have lower levels of sports self-ability perception, task orientation in motives, trust in their ability to overcome barriers, parental and peer group support, team cohesion.
24. Quedstedt et al. (2013)	Five nations (England, France, Norway, Greece, Spain); quantitative; active male and female football players; age: 9–15; n = 7,769 (M = 6641, F = 1020)	1	1	1	1	1	1	1	1	8	Confirms the path model: coach autonomy support → basic needs (+) → enjoyment (+) → intentions to drop out of football (-).
25. Roschmann and Löbig (2014)	Germany; quantitative; active female football players and dropouts; mean age =	1	0	1	1	1	1	0	1	6	Differences between those who persevere and dropouts in motives

	22; n = 71 (among whom 22 dropouts)										concerning social cooperation, team cohesion, support of significant other, professional and pedagogical coach competences.
26. Rottensteiner et al. (2013)	Finland; quantitative; male and female dropouts from different team sports (football, ice hockey, basketball); age: 15–16; n = 535 (among whom 397 football dropouts)	1	1	1	0	1	1	1	1	7	Most important reasons for withdrawal: having other things to do, decline in excitement. Teammates and friends rated important in the decision to withdraw; family rated less important; teachers exert no influence.
27. Skard and Vaglum (1989)	Norway; quantitative; male football players; age: 13–16; n = 307 (among whom 66 dropouts); 2 measured time points	1	0	1	0	1	1	1	1	6	Dropouts show higher levels of acting out, fear of failure and sport competition anxiety, lower levels of football self-confidence, football priority, football satisfaction, poor relationship with the coach.
28. Theis (2009)	Germany; qualitative; male dropouts; age: 8–12; n = 42 (+ 5 coaches; + 11 parents)	1	1	1	0	1	0	1	0	5	Extracted categories for dropout by content analysis: content of practise, coach behaviour and mobbing by team mates.
29. Ullrich-French and Smith (2009)	USA; quantitative; follow-up design; active male and female football players and dropouts; age: 10–14; n = 148 (among whom 33 dropouts)	1	1	1	1	1	1	1	1	8	Those who persevere show higher levels of friendship quality, perceived competence, combination of maternal support and peer group relationships. No significant influence of enjoyment, intrinsic motivation or stress.
30. van Yperen (1997)	Holland; quantitative; longitudinal design; active male football players; mean age = 16.6; n = 65	1	0	1	0	1	1	1	1	6	Players with higher levels of perceived inequity scored higher on energy depletion and intention to dropout.

Table 2: Descriptive overview of selected studies related to dropout

	Numer of studies (%)
<i>Year of publiation</i>	
< 1980	0
1981-2000	10 (33.3%)
2000-2010	9 (30.0%)
≥ 2010	11 (36.7%)
<i>Region</i>	
Germany	6 (20.0%)
other European countries	18 (60.0%)
North America	6 (20.0%)
<i>Design of the study</i>	
quantitative	27 (91.0%)
qualitative	2 (6.0%)
qualitative & quantitative	1 (3.0%)
<i>Number ouf participants</i>	
≤ 200	10 (33.3%)
201-500	13 (43.3%)
> 500	3 (10.0%)
> 1.000	4 (13.4%)
<i>Participants*</i>	
Child (≤ 13 years)	2 (6.6%)
Adolescent	10 (33.3%)
Child & adolescent	18 (56.7%)
(and/or) parents /coaches	5 (16.7%)
<i>Sex of child/adolescent participants</i>	
male	15 (50.0%)
female	4 (13.3%)
male and female	11 (36.7%)

* > 100%, because in some studies both athletes and parents/coaches are requested

Table 3: Summary and content analysis of influencing factors in the context of dropout behaviour in football

Influencing factors	Assigned studies (numbers of the study from Table 1)	Summary
Intrapersonal conditions		
General → <i>Change of interests/preferences</i> (sports and non-sports related, decreasing priority in football)	14(+), 22(+), 26(+), 27(+)	Change in interest promote dropout, n=4
Football related → <i>Low perception of football-related competence</i> (Subjective perceived by athletes)	4(0), 8(0/-), 17(0/-), 18(0/-), 19(0/-), 20(-), 22(-), 23(-), 24(0/-), 26(0), 27(-), 29(-)	Competencies without significant effects on dropout, n=2; low perceived competences promote dropout partially, n=5; low perceived competences promote dropout significantly, n=5)
→ <i>Performance and activity related motivation</i> - Low incentive (motivational) structure of football - Goal intention and divergence	4(-), 21(-), 22(-), 23(-) 4(+), 8(0), 26(+) 9(-), 17(-)	Dropout shows lower motivational values n=4 Low incentive structure of football promotes dropout, n=2 Lower evaluation of sporting success by dropouts, n=2
→ <i>Pressure (intrinsic/extrinsic)</i>	23(+), (28), 29(0), 30(+)	Perceived pressure favours dropout, n=2
→ <i>Growth/maturity</i>	5(-), 6(-), 8(-), 12(-)	Higher relative age reduces dropout, n=4
Interpersonal/social conditions		
Club external → <i>Lack of support of significant others</i>	11(-), 18(0), 23(-), 24(0/-), 25(-), 26(0), (28), 29(0/-)	Lack of support of others without significant effects on dropout n=2; partially, n=2; significantly, n=3
Club internal → <i>Relationship with the coach</i>	(13), 14(-), 19(0), 22(-), 24(0/-), 25(-), 27(-), (28)	Negative evaluation of coach relation increases dropout significantly, n=4; partially, n=1; without significant effects, n=1
→ <i>Teammate relations, team atmosphere/cohesion</i>	14(-), 17(-), 19(-), 22(-), 23(-), 25(-), 26(0/-), (28), 29(-)	Negative evaluation of teammate relation and team cohesion increase dropout significantly, n=7; partially, n=1
→ <i>Common interest, solidarity and club identification</i>	16(+), 17(+)	Higher identification and perceived solidarity within the club reduce probability of dropout significantly, n=2

Structural conditions		
Club external		
→ <i>Time (for other activities, school, friends, etc.)</i>	7(0/+), 14(+), 26(+)	Time constraints for other activities promote dropout behaviour significantly n=2, partially, n=1 Significant relation between parental perception of costs and intention to dropout, n=1
→ <i>Money/costs</i>	7(+)	
Club internal		
→ <i>Time</i>	7(0), 14(0/+)	Partially influence of increasing time invested in football and intention to dropout, n=1 Services deficits increase (intention) to dropout, n=2; partially n=1
→ <i>Structural features and service conditions</i>	7(0/-), 16(-), 17(-)	

Note: (+/-) significant related to dropout behaviour; (0) no significant related to dropout behaviour; studies in bold: qualitative studies