

Ger J Exerc Sport Res
<https://doi.org/10.1007/s12662-024-00952-8>
 Received: 21 May 2023
 Accepted: 25 February 2024

© The Author(s) 2024



Gunter Straub^{1,2} · Henning Plessner¹

¹ Institute of Sports and Sports Sciences, Heidelberg University, Heidelberg, Germany

² Speyer, Germany

Frequency and performance relevance of parent-coaches in competition-oriented sports

Introduction

The question of whether it is a good thing for children to be coached by their own parents is met with a divided opinion in the world of sport and among the general public. On the one hand, one finds examples in literature, film, and television in which a certain parent-coach-child-athlete relationship (Weiss & Fretwell, 2005)¹ appears in a positive light (e.g., Schneider, 2021). On the other hand, one comes across findings that suggest that this form of “atypical coach-athlete relationships” (Jowett, 2008, p. 22) or “‘familial’ coach-athlete relationship[s]” (Jowett, Timson-Katchis, & Adams, 2007, p. 61) has a particular potential for conflict (e.g., Schmid, Bernstein, Shannon, Rishell, & Griffith, 2015).

To date, the benefits and risks of the corresponding dual role constellation (parent/coach, child/athlete) have received little attention in the education and research landscape (Graham, Dixon, & Hazen-Swann, 2016). This may be due, in part, to the fact that the explanatory object of the parent-coach-child-athlete relationship fits within a relatively young field of research: The systematic study of coach-athlete interaction did not take off until the beginning of the third millennium (Poczwardowski, Barott, & Jowett, 2006; Wylleman, 2000).

Nonetheless, research on parent-coach-child-athlete relationships should be pursued as it can be considered as part of the effort to achieve optimal talent development and individual development of athletes from the perspective of sport practice (Federal Institute of Sport Science [Bundesinstitut für Sportwissenschaft], 2023). The need to advance the study of parent-coach-child-athlete relationships may also be fueled by the fact that an increasing level of parental involvement is emerging in the field of youth sport in the present (Eliasson, 2019; Qunito Romani, 2020). A changing understanding of gender and parenting roles is hypothesized to trigger this Zeitgeist phenomenon (Trussell & Shaw, 2012).

As part of their research, some authors have addressed the elementary descriptive question of the number of parent-coaches found in the sport landscape. To date, this question has preferably been answered from the perspective of the parents (e.g., Gould & Martens, 1979). In general, Eliasson (2019, p. 1007) points out “that the exact number of parent-coaches and child-athletes of coaches in many countries remains unknown.” Given this background, it is innovative to determine the frequency of parent-coaches from the perspective of children, and, in addition, to ask the question about the relevance of parent-coaches to athletic performance. The question of how important coaching-by-parents is for the success of athletes has also not yet been the subject of quantitative research. In the light of these two existing research gaps, two studies were conducted. In

contrast, the duration of such parent-coach-child-athlete collaborations has been measured on various occasions (McCann, 2005; Schmid et al., 2015; Weiss & Sisley, 1984). Furthermore, it was empirically found that in youth sports, it is primarily fathers who assume the coaching role for their children (Snyder & Purdy, 1982). It also became apparent that different types of parent-coaches can be identified (e.g., voluntary and full-time), although no one has yet taken a decidedly comparative look at the different forms. Thus, questions about the duration and ontogenetic localization of parent-coach-child-athlete collaborations, as well as about the gender distribution and different types of parent-coaches also became part of the research project.

Study 1

Study 1 was not only designed to answer the question of the frequency of occurrence; in parallel, two other parameters were at issue. The list of three research questions reads as follows:

- What proportion of athletes were coached by their own parents during childhood and/or adolescence?
- How long were child-athletes coached by their parents?
- At what age were child-athletes coached by their parents?

Procedure

Study 1 is based on two main surveys, which resulted in a cross-sport sub-study (“Cross substudy”) and a soccer-

¹ The “parent-coach phenomenon” (Weiss & Fretwell, 2005, p. 287) has been dubbed in somewhat greater detail by Jowett and colleagues as the “parent/coach-child/athlete relationship phenomenon” (Jowett et al., 2007, p. 60).

Table 1 Distribution of interviewed athletes according to their sport category and their role as a parent-coached or nonparent-coached child (Study 1)

Role	All individual sport and hand-oriented team sport athletes ^a		All soccer players		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Parent-coached child	24	18	52	33	76	26
Nonparent-coached child	111	82	104	67	215	74
Total	135	100	156	100	291	100

^aThe individual sport athletes came from boxing, equestrian, fencing, judo, rowing, shooting, swimming, tennis, weightlifting, and wrestling. The hand-oriented team sports athletes came from basketball, field hockey, and volleyball

specific substudy (“Soccer substudy”). In both cases, data collection was conducted in the second half of 2019. In the Rhineland–Palatinate city of Speyer, 151 performance-oriented athletes were surveyed across all sports. The male and female athletes came from 14 sports; in terms of performance level, the athletes were each active at least at the state association level. In addition, 140 male and female soccer players in “Verbandsliga” to “Regionalliga” divisions were interviewed in the region around the city of Speyer (“Vorderpfalz” and “Südpfalz”). The soccer players belonged to eleven different teams. All male and female athletes were asked to answer the question in writing whether they had ever been coached by their own parents. In case of a positive answer, they were to indicate whether they had been coached by their father, mother or both parents. They were also asked to indicate when and for how long the respective collaboration had taken place. Finally, respondents were asked to indicate their year of birth.

As part of the various rounds of surveys, which usually took place at the beginning of a training session at the sports facility, the responses of male and female coaches were also recorded. The coaches were asked to answer the questions already mentioned both in terms of their own careers as active athletes (“Have you ever been coached by your own parents?”) and from a parent’s perspective (“Have you ever coached your own children?”). The data were collected and analyzed anonymously. For reasons of comprehensiveness, the results from the perspective of the athletes (“athletes’

survey”) will be cited decisively in this article.

Participants

A total of 291 athletes and 46 coaches were officially surveyed as part of the cross-sport and soccer-specific data collection efforts. However, only 330 people were involved, as seven respondents were both athletes and coaches (“playing coach”, “playing captain”). The seven “playing-coaches” were included in the respective data analysis regarding the “athletes’ survey” as well as the “coaches’ survey”. The analysis of the cross-sport survey officially included the responses of 109 male and 42 female athletes—the analysis of the soccer-specific survey included the responses of 87 male and 53 female players. The average age of athletes who participated in the cross-sport and soccer-specific surveys, respectively, was nearly 24 years on the cutoff date of December 31, 2019 ($M = 23.844$ years, $SD = 6.808$, $N = 286$). The average age of the coaches who participated in the two main surveys—plus one youth soccer coach who had been surveyed on an accompanying basis (“U17 Bundesliga”)—was just under 46 years on the same date ($M = 45.638$ years, $SD = 10.741$, $N = 47$; 42 men, 5 women).

Results

Frequency of the parent-coach–child-athlete alliances²

In the cross-sport survey, 29 of the 151 male and female athletes, or 19%, indicated that they had ever been coached by their own parents. In the soccer-specific survey, 47 of the 140 male or female players, or 34%, indicated that they had been coached by their own parents at some point. This difference is statistically significant ($\chi^2 [1, N = 291] = 7.770$, $p = 0.005$, $V = 0.163$). This significance is also present when the 16 soccer players interviewed in Speyer (“Cross substudy”) are added to the sample drawn at the regional level (“Soccer substudy”) ($\chi^2 [1, N = 291] = 9.075$, $p = 0.003$, $V = 0.177$). The descriptive characteristics of this comparison of all soccer players and those athletes playing an individual sport or a hand-oriented team sport can be found in [Table 1](#).

Duration of parent-coach–child-athlete alliances

The duration of the alliance was practically always quantified by the interviewees in years and without monthly data. The measurement of the alliance duration within the framework of the data analysis was based in principle on the year-to-year overarching division of sports competitions into seasons. This means, for example, that the specification “2000 to 2005” was not calculated as six (calendar) years from a numerical point of view, but as five seasons.

First, we checked whether, from the athletes’ point of view, the duration of the parent-coach–child-athlete alliances differed between the genders (19 women, 56 men). Purely descrip-

² The term “alliance” is used in reference to Alfred Richartz, who is a sports scientist as well as a child and adolescent psychotherapist. With regard to partners whose cooperation is based on common objectives, mutual recognition, and mutual expectations and obligations, Richartz (2000, pp. 187–190) introduced the term “working alliance” (“Arbeitsbündnis”) into sports science. “The concept of the working alliance originates from psychoanalysis (Körner, 1993), but has also found its way into pedagogy (Meyer, 2004) in recent years.” (Richartz, Hoffmann, & Sallen, 2009, p. 288, translated by the authors).

G. Straub · H. Plessner

Frequency and performance relevance of parent-coaches in competition-oriented sports

Abstract

The occurrence of children being coached by their parents in the world of sport is a well-known phenomenon, but one that remains insufficiently researched. It is rather unclear how common this is and there are very different assessments of whether it is more of an advantage or a disadvantage to be trained by one's own parents. In the first study, we assess the frequency of occurrence of parent-coaches as well as the duration of these collaborations and their developmental location in the lives of the offspring. Results from a cross-sport survey and a soccer-specific survey indicate that a notable proportion of performance-oriented male and female senior athletes (19 and 34%, respectively) have been coached by their own parents at some point ($\chi^2 [1, N = 291] = 7.770, p = 0.005, V = 0.163$). In the second study, we address the question of the relevance of parent-coaches to athletic achievement. In this regard, the hypothesis that the proportion of male soccer players who were coached by their parents is larger in higher-ranking amateur leagues (38%) than in lower-ranking leagues (28 and 14%) was empirically confirmed ($\chi^2 [2, N = 331] = 11.950, p = 0.003, V = 0.190$). Thus, it can be assumed that about one fifth of all performance-oriented senior athletes had been coached by their own parents for some time. Moreover, the fact of having been trained by one's own parents can in principle be regarded as a conducive condition for the athletic development of adolescents.

Keywords

Youth sport · Parental involvement · Child-athlete · Talent development · Family support

tively, it was found that when comparing female and male respondents, the medians of the two groups differed only slightly ($MD_{\text{women}} = 3$ seasons, $MD_{\text{men}} = 4$ seasons). The same is true with respect to the comparison of the means ($M_{\text{women}} = 4.474$ seasons, $M_{\text{men}} = 4.661$ seasons). A Mann–Whitney U test for large samples (Bös, Hänsel, & Schott, 2000) revealed that the distributions of the two gender groups did not differ significantly with respect to the duration of their collaboration with a father-coach or mother-coach ($U = 477.5, n_1 = 19, n_2 = 56, z = 0.661, p = 0.509$, two-sided, $d = 0.153$).³

Next, we tested whether the duration of the parent-coach–child-athlete alliances differed between the sport categories (individual sports, hand-oriented team sports, soccer) from the perspective of the sport participants. A Kruskal–Wallis test showed that the assumption of no difference between the three groups must be rejected ($H = 9.446, df = 2, p = 0.009, d = 0.679$).⁴ Dunn's (1964) test was used for post hoc comparisons between the three groups. According to the results, the difference between the individual sport athletes ($MD = 6$ seasons) and the soccer players ($MD = 2.5$ seasons) can be considered statistically significant ($z = 2.882, n_1 = 11, n_2 = 51, p = 0.004$, two-sided, $d = 0.787$). This provided inferential statistical support for the assumption that alliances between parent-coaches and child-athletes last longer on average in the world of individual sports than in the world of soccer.

Ontogenetic localization of the parent-coach–child-athlete alliances

Using the written information about an athlete's year of birth and when a parent-coach–child-athlete alliance began, it was possible to locate these special coach-athlete relationships in terms of life history or calendar ($N = 75$).

■ **Figure 1** provides an overview of the temporal location of the parent-coach–child-athlete alliances within the life histories of the athletes. The phases of the collaboration are shown aggregated with the help of the educational stages that a person passes through during life. With this in mind, the majority of the identified parent-coach–child-athlete collaborations occurred during a time when the athletes were attending secondary school. Only 20% of the parent-coach–child-athlete alliances took place exclusively in a phase of life in which the children were still attending preschool or elementary school.⁵

Gender of parent-coaches and child-athletes

At the level of all athletes interviewed, test statistics show a tendency to support the assumption that boys would be coached more often by their parents than girls ($\chi^2 [1, N = 291] = 2.735, p = 0.098, V = 0.097$). In all, there were 57 men and 19 women in the present study who had been coached by their parents at some point (■ **Table 2**). The group of parent-coaches concerned in the athletes' survey ($N = 76$) comprises 67 fathers (88%) and 9 mothers.⁶

Study 2

Study 2 was designed to focus on answering the question of the relevance of parent-coaches to athletic performance. It took place in the field of men's soccer.

⁵ Please note that in Germany the elementary, or primary, school includes grade 1 to 4.

⁶ Two of the 76 parent-coached children surveyed stated that they had been coached by both parents (one case each in individual sports and soccer). Two other parent-coached children did not make any statement about the gender of their parent-coaches (both cases in the area of soccer).

³ Due to the absence of a normal distribution (right skewness), nonparametric procedures were used for inferential statistical testing of differences between groups. Due to further distributional peculiarities (strong case number difference and high number of rank ties), adjustments were made in the calculation of the U-value of the standard normal distribution ("z-value"), both in the numerator and in the denominator (Bortz & Lienert, 1998, pp. 126–142).

⁴ Due to the large number of connected ranks, the calculated test variable H was subjected to a correction (Bortz & Lienert, 1998, p. 145).

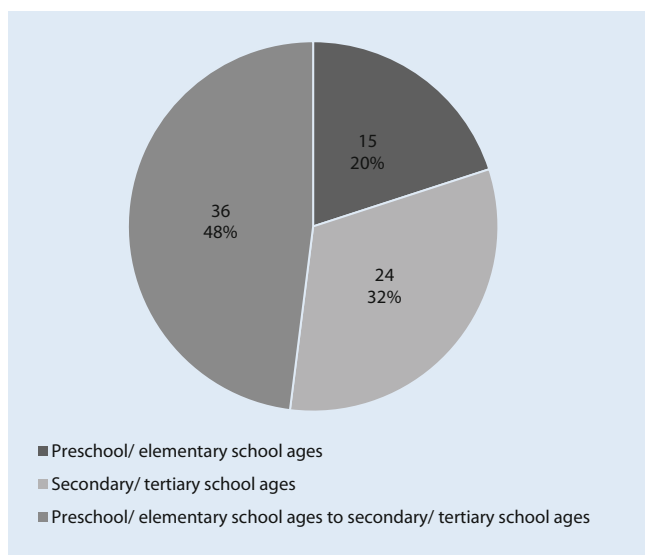


Fig. 1 ◀ Ontogenetic location of the parent-coach-child-athlete alliances on the basis of the educational levels involved (athletes' survey; $N = 75$)

The proportion of soccer players who have been coached by their parents turns out to be larger in higher-ranked leagues than in lower-ranked leagues.

Procedure

Study 2 was accompanied by another wave of surveys, in which lower-ranked players were visited in addition to soccer players in the “Oberliga” and “Verbandsliga”. The second wave of surveys was conducted in the second half of 2020. On the sidelines of training sessions, athletes were asked to answer in writing the question of whether they had ever been coached by their own parents. In case of a positive answer, they were to indicate whether they had been trained by their father, mother or both parents. In addition, the active players were asked in which calendar year or age they had joined a soccer club. The players' year of birth was also recorded, as well as calendar information regarding the beginning and end of the parent-coach-child-athlete collaboration.

Participants

For the data analysis, data from a total of 331 male soccer players were finally available from both survey waves. At the time of the data collection, the athletes played for teams in the highest amateur leagues in states of Baden-Württemberg and Rhineland-Palatinate/

Saarland (“Oberliga”), in high amateur leagues (“Verbandsliga”) in North Baden, as well as in the southwest region of Germany, and in lower divisions. The spectrum of lower-class leagues covered various regional divisions of the County League (“Bezirksliga”) as well as of the District League (“Kreisliga”) which is located below the County League and includes various playing levels (A, B, C and D). The lower-class teams belonged to the Westphalia Football and Athletics Association (“Fußball- und Leichtathletik-Verband Westfalen”) and the Southwest German Football Association (“Südwestdeutscher Fußballverband”).

Results

As part of the data analysis, a compressed cross tabulation was created (Table 3). A chi-square (χ^2) test was then performed. Defining three categories in terms of playing strength, the test statistically calculated a relationship that was significant at the 1% level ($\chi^2 [2, n = 331] = 11.950, p = 0.003, V = 0.190$). This is a small effect size in the sense of Cohen (1988, as cited in Ellis, 2010, p. 41).

Discussion

The first study on the frequency of parent-coaches in sports reveals four main ideas in quantitative terms. First, the study suggests that a noteworthy number of

male and female athletes who pursue their sport in a performance-oriented manner are coached by their own parents for a shorter or longer period of time. Across a variety of sports, the percentage—even in the case of changing perspectives—is consistently in the double digits. In the cross-sport survey in the city of Speyer, the percentage of parent-coached children was 19%. This percentage is only slightly reduced if the soccer players are left out of this sample; the percentage is then still 18% (Table 1). Even among the coaches interviewed (“coaches' survey”), 5 out of 47 cases (11%) showed that the person in question had once been coached by a parent.⁷

In addition, there are various sport-specific differences with regard to the frequency of parent-coaches. The proportion of parent-coaches was significantly higher in the group of soccer players (33%) than in individual sports and hand-oriented team sports (Table 1). Kemming (2008) and Reinders (2013) also point out in the context of their empirical studies that the parent-coach phenomenon can be observed especially in kids' and youth soccer.

Wylleman and De Knop (1998) already observed that parents often start coaching their children after the kids have finished elementary school. The two authors found in the field of athletics and swimming that 20% of parent-coaches did not become coaches of their own children until the kids were in their teens and adolescents, respectively (cited in Wylleman & Lavalée, 2004, p. 514). In our study 1, we detected that 32% of the child-athletes had been coached by their parents starting when they were of secondary school age (Fig. 1). In addition, Wylleman and De Knop (1998) also seem to have encountered parent-coach-child-athlete alliances that did not begin until the transition from junior to senior age category or even later (13%) (cited in Wylleman, De Knop, Verdet, &

⁷ However, two of the coaches interviewed were “playing coaches”, i.e., persons who were numerically also included in the sample of athletes.

Table 2 Distribution of the interviewed athletes according to their gender and their status as a parent-coached or nonparent-coached child (Study 1)

Status	Men		Women		Total	
	n	%	n	%	n	%
Parent-coached child	57	29	19	20	76	26
Nonparent-coached child	139	71	76	80	215	74
Total	196	100	95	100	291	100

Table 3 Distribution of the interviewed male soccer players according to different levels of play and their status as a parent-coached or nonparent-coached child (Study 2)

Status	Verbandsliga and Oberliga		Bezirksliga		Kreisliga A–D		Total	
	n	%	n	%	n	%	n	%
Parent-coached child	59	38	31	28	9	14	99	30
Nonparent-coached child	98	62	80	72	54	86	232	70
Total number	157	100	111	100	63	100	331	100

Cecič-Erpič, 2007, p. 244; Wylleman & Lavallee, 2004, p. 514).⁸

A fourth result which stands out is the statistically significant finding that alliances between parent-coaches and child-athletes—measured in seasons as previously described—are of longer duration in individual sports (MD = 6 seasons, $M = 7.682$, $SD = 4.787$) than among soccer players (MD = 2.5 seasons, $M = 3.824$, $SD = 3.292$). The duration of parent-coach–child-athlete alliances collected in study 1 is slightly lower than average values obtained in previous research (McCann, 2005; Weiss & Sisley, 1984). When all collaborations between parents and their own children in study 1 are considered (athletes' survey and coaches' survey), the mean alliance duration is 5.055 seasons ($SD = 4.219$, $N = 95$). If only the already completed parent-coach–child-athlete alliances are taken into account, then the average duration is 4.604 seasons ($SD = 3.918$, $n = 84$). In comparison, the average value in terms of alliance length in the retrospective study by McCann (2005)—following our calculation method—was 4.818 seasons ($SD = 3.281$, $N = 11$). The former

⁸ Nevertheless, the results of Wylleman and De Knop (1998) showed that the majority of parent-coaches (67%) began coaching their child in the early stages of his or her athletic career ("initiation stage") (cited in Wylleman & Lavallee, 2004, p. 514).

parent-coaches ("dropout coaches") in the study by Weiss and Sisley (1984, p. 336) had coached their own children for an average of 5.2 years ($n = 97$).⁹

The evaluation of the developmental location of parent-coach–child-athlete alliances fully paves the way for a discussion. From the perspective of the athletes interviewed, a high number of collaborations were found to have begun after the child had completed—or with the completion of—elementary school (Fig. 1). Interestingly, among the alliances that had been formed at a later stage, there were often links that lasted only a short time: For 13 of the 24 identified child-athletes who had not been coached by their parents until secondary or tertiary school, the sporting alliance in question spanned a period of 2 seasons or less.

This could indicate a type of coach who is willing and able to accompany his or her son or daughter in a flexible manner. Ideally, this is not a parent who wants to make it easier or possible for the child and its peers to get started in a sport by taking on a coaching role (on

⁹ Coaches who were still active ("current coaches") had coached their own children for an average of 5.3 years ($n = 159$). Weiss and Sisley (1984) did not provide standard deviations in regard to alliance duration.

a voluntary basis).¹⁰ And it is probably just as little about a pronounced connoisseur who wants to accompany his offspring from childhood and over a long period in a sport.¹¹ It is possible that a type of father-coach or mother-coach has been identified in this way whose coaching career is to be considered independent of the athletic career of their own child. Both careers—that of the athlete and that of the coach—take their own direction over long stretches and overlap only at times (in "bridging situations").¹²

Finally, the finding that boys are more often coached by their parents than girls is quite inspiring, even if it only tends to be inferentially significant. This result can be made plausible by referring to the existence of gender role stereotypes. Eccles, Jacobs, and Harold (1990) as well as Würth and Saborowski (1999) have already shown in their respective studies that parents ascribe significantly more natural talent or more often an aptitude for competitive sports to their sons than to their daughters. The dominance of male respondents, both among coaches and athletes, can be attributed not only to the fact that sport is a male domain (e.g., Willms, 2009), but also to the fact that only 3 of the 14 sports surveyed can be named a "girls' sport" (equestrian, swimming, volleyball). Since most of the coaches are male, the finding that boys are more often coached by their parents than girls, can also be seen as a variant of the leisure phenomenon that fathers spend more time with sons than with daughters in play, companionship, and gender-stereotypical activities (e.g., Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). The observation that 88% of all parent-coaches were fathers can be understood as a form of "fathering through sport" (Kay, 2007, 2009) and as an expression of a new form of masculinity ("in-

¹⁰ Following the concept of "retroactive socialization" (Klewes, 1983), such parents could be called "activated parent-coaches". In English usage, however, the terms "reverse socialization" and "reciprocal socialization" are more likely to be employed (e.g., Snyder & Purdy, 1982).

¹¹ These parents could perhaps be referred to by the term "designated parent-coaches."

¹² Parents like these could be dubbed "disposable parent-coaches."

clusive masculinity”; Anderson, 2009). With the help of children’s and youth sports, fathers become more involved in the family environment in a different way than is traditionally the case (Coakley, 2006; Graham & Dixon, 2014; Graham et al., 2016).

The second study on the performance relevance of parent-coaches in sports was based on a central assumption. The main hypothesis, which states that the proportion of male soccer players who have been trained by their parents is greater in higher-ranking leagues than in lower-ranking leagues, was confirmed empirically. This suggests that having been coached by one’s own parents has a direct or indirect beneficial influence on the development of the playing performance of young people.

The formulation just chosen regarding the ways in which the existence of a parent-coach figure influences the athletic development of youngsters alludes to the recognition that there is widespread unclarity about the subtleties of providing family support (Rees, Hardy, Güllich, Abernethy, Côté, Woodmann, Montgomery, Laing, & Warr, 2016). On average, child-athletes in soccer are coached by their father (the “normal case”¹³) for 4–5 seasons.¹⁴ This period, for which an individualized and intensive sporting cooperation between a parent and the child may be assumed, can in many cases have a beneficial effect on performance. This mechanism can be characterized with the title “coached-by-parents as a catalyst”. The interpretation approach “coached-by-parents as a catalyst” is based on the assumption that it is primarily or solely the father (or mother) in the function as a coach who has a certain *added value*. Perhaps the unique selling point of a father-trainer

is to enable the son or daughter to train as individually as possible, so that, for example, unofficial training in their free time can serve as an optimal feeder for the official club training. In terms of training practice, this also means that initiatives in coach education are to be welcomed, particularly those aimed at qualifying moms and dads in the field of youth sports (Bavarian Football Association [Bayerischer Fußball-Verband & BFV], 2021).

Alternatively, or complementary, the function of a parent-coach can also be seen as a kind of mosaic stone of family assistance—as one mosaic stone among several. The willingness to take on a coaching position within one’s own son’s or daughter’s team can thus be interpreted as a signal that is, in principle, good. This signal might indicate that a player receives intensive support in many ways, not only in the public or organized sphere, but also at home. On the one hand, this sheds light on a coaching parent who is willing and able to take an in-depth look at the child’s sport. This means that a father’s voluntary involvement in an organized training of a certain soccer club may often be limited to just a few years, but the father’s expertise will be available to his son or daughter for long stretches of their childhood and youth. This can take the form of conversations around the kitchen table as well as one-on-one “extra shifts” on the soccer field, in the front yard, or in the park.¹⁵ On the other hand, this brings the noncoaching parent and siblings into focus. Mothers, as well as brothers and sisters, also play a role in supporting a child-athlete in the private sphere (Blazo & Smith, 2018; Chafetz & Kotarba, 1999; Thompsons, 1999). Thus, the finding that players in higher leagues were more often coached by their own fathers than this was the case in lower divisions can also be understood as an indicator of qualitatively higher support for the player by the entire parental home. The mechanism referred to here

can be described as “coached-by-parents as an indicator”.¹⁶

However, both interpretations should be used with caution. On the one hand, the effect size of the relationship between the status of the child-athlete (as a parent-coached child or nonparent-coached child) and the level of performance achieved is small. On the other hand, the characteristic “parent-coached” is a category that indicates a social function and role but does not say anything about the concrete form of the associated leadership or educational behavior.

However, based on the present empirical results, the presence of a parent-coach figure in the biography of a soccer player can—as a rule—be considered as a performance-enhancing framework condition. Overall, the confirmation of our hypothesis joins many findings according to which the support that a young athlete receives from his or her family has a positive effect on the performance development (see most recently Coutinho, Mesquita, & Fonseca, 2018).

Limitations

Regarding the research methodology used in the present studies, some critical questions can be formulated, for instance on the veridicality of the memory performances as well as on the precision of the operationalizations. At many interview sites, the impression was that a large proportion—if not the majority—of interviewees first had to recapitulate autobiographical contexts in order to then be able to name the relevant years. The observation that a recollec-

¹³ In study 1, 49 male coaches and 2 female coaches were on record after completion of the athletes’ survey in soccer (twice no indication, once indication “father and mother”).

¹⁴ Parent-coached children who played soccer reported an average alliance duration of 3.824 seasons in study 1 ($SD = 3.292$, $N = 51$). For parent-coaches in soccer interviewed in study 1 (coaches’ survey), an average value of 4.975 seasons ($SD = 3.952$, $N = 10$) could be calculated regarding alliance length.

¹⁵ Of course, this is quite possible even if a child is officially trained by their own father in the club.

¹⁶ The fact that the duration of parent-coach-child-athlete alliances in organized form does not differ between soccer players of different performance categories can be considered as a numerical hint for the interpretation approach “coached-by-parents as an indicator”. With regard to the present study, a subsequent calculation of the difference between the alliance length of soccer players competing at a higher level ($MD = 2.75$ seasons, $M = 3.966$, $SD = 3.281$) and soccer players competing at an intermediate or lower level ($MD = 3.5$ seasons, $M = 4.176$, $SD = 3.321$) did not yield a statistically significant result ($U = 948.5$, $n_1 = 58$, $n_2 = 34$, $z = 0.301$, $p = 0.763$, two-sided, $d = 0.063$).

tion cannot be retrieved episodically and therefore must first be generated (cf. Norman & Bobrow, 1979; Conway & Pleydell-Pearce, 2000) is also well known in sports science (e.g., Bette, Schimank, Wahlig, & Weber, 2002, p. 203). In fact, this should increase the likelihood of recall bias. In addition, detailed time measurements would also be desirable, for example based on monthly data. In general, however, the question arises to what extent participants in a survey framed by a fleeting encounter can still produce better recall performances.

Conclusion

Based on two studies on the frequency and performance relevance of parent-coaches in sports, two things can be stated: As a rough rule of thumb, it can be assumed that about one fifth of all performance-oriented senior athletes had been coached by their own parents for a shorter or longer period of time. Furthermore, according to an initial empirical examination, the fact of having been coached by one's own parents can in principle be regarded as a conducive condition for the athletic development of adolescents. However, the presence of a parent-coach figure in an athlete's biography is not *per se* a guarantee of tailored training and success in competition.

Corresponding address

Gunter Straub

67346 Speyer, Germany
gunter.straub@issw.uni-heidelberg.de

Funding. Open Access funding enabled and organized by Projekt DEAL.

Declarations

Conflict of interest. G. Straub and H. Plessner declare that they have no competing interests.

All procedures performed in studies involving human participants or on human tissue were in accordance with the ethical standards of the institutional and/or national research committee and with the 1975 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study. There are no ethical concerns about the admissibility of the research project.

Open Access. This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Anderson, E. (2009). *Inclusive masculinity: the changing nature of masculinities*. London: Routledge.
- Bavarian Football Association [Bayerischer Fußball-Verband/ BFV] (2021). BFV-Schulung "Kindertrainer" [BFV training course "children's coaches"]. <https://www.bfv.de/bildung-und-foerderung/ausbildung-und-schulungen/vereinsmitarbeiter/kinder-trainer>. Accessed 26 July 2022.
- Bette, K.-H., Schimank, U., Wahlig, D., & Weber, U. (2002). *Biographische Dynamiken im Leistungssport: Möglichkeiten der Dopingprävention im Jugendalter [Biographical dynamics in elite sports: ways to prevent doping during adolescence]*. Strauß.
- Blazo, J. A., & Smith, A. L. (2018). A systematic review of siblings and physical activity experiences. *International Review of Sport and Exercise Psychology*, 11(1), 122–159. <https://doi.org/10.1080/1750984X.2016.1229355>.
- Bortz, J., & Lienert, G. A. (1998). *Kurzgefa[ss]te Statistik für die klinische Forschung: Ein praktischer Leitfaden für die Analyse kleiner Stichproben [Statistics for clinical research: A short practical guideline for the analysis of small samples]*. Springer.
- Bös, K., Hänsel, F., & Schott, N. (2000). *<Empirische Untersuchungen in der Sportwissenschaft: Planung – Auswertung – Statistik [Empirical studies in sports science: Planning – evaluation – statistics]*. Czwalina.
- Chafetz, J. S., & Kotarba, J. A. (1999). Little League mothers and the reproduction of gender. In J. Coakley & P. Donnelly (Eds.), *Inside sports* (pp. 46–54). Routledge. <https://doi.org/10.4324/9780203980705>.
- Coakley, J. (2006). The good father: Parental expectations and youth sports. *Leisure Studies*, 25(2), 153–163. <https://doi.org/10.1080/02614360500467735>.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edn.). Lawrence Erlbaum. <https://doi.org/10.4324/9780203771587>.
- Conway, M. A., & Pleydell-Pearce, C. W. (2000). The construction of autobiographical memories in the self-memory system. *Psychological Review*, 107(2), 261–288. <https://doi.org/10.1037/0033-295X.107.2.261>.
- Coutinho, P., Mesquita, I., & Fonseca, A. M. (2018). Influência parental na participação desportiva do atleta: uma revisão sistemática da literatura [parental influences in athlete sport participation: a systematic review of literature. *Revista de Psicologia del Deporte*, 27(2), 47–58.
- Dunn, O. J. (1964). Multiple comparisons using rank sums. *Technometrics*, 6(3), 241–252. <https://doi.org/10.1080/00401706.1964.10490181>.
- Eccles, J. S., Jacobs, J. E., & Harold, R. D. (1990). Gender role stereotypes, expectancy effects, and parents' socialization of gender differences. *Journal of Social Issues*, 46(2), 183–201. <https://doi.org/10.1111/j.1540-4560.1990.tb01929.x>.
- Eliasson, I. (2019). Child-rearing in public spaces: the challenging dual-role relationships of parent-coaches and child-athletes of coaches in Swedish team sports. *Sport, Education and Society*, 24(9), 1006–1018. <https://doi.org/10.1080/13573322.2018.1528219>.
- Ellis, P. D. (2010). *The essential guide to effect sizes: statistical power, meta-analysis, and the interpretation of research results*. Cambridge University Press.
- Federal Institute of Sport Science [Bundesinstitut für Sportwissenschaft] (2023). Aktuelle Handlungsfelder der Forschungsförderung [Current fields of action in research funding]. https://www.bisp.de/DE/Forschungsschwerpunkte/forschungsschwerpunkte_node.html. Accessed 12 Apr 2023.
- Gould, D., & Martens, R. (1979). Attitudes of volunteer coaches toward significant youth sport issues. *Research Quarterly for Exercise and Sport*, 50(3), 369–380. <https://doi.org/10.1080/00345377.1979.10615623>.
- Graham, J. A., & Dixon, M. A. (2014). Coaching fathers in conflict: a review of the tensions surrounding the work-family interface. *Journal of Sport Management*, 28(4), 447–456. <https://doi.org/10.1123/jsm.2013-0241>.
- Graham, J. A., Dixon, M. A., & Hazen-Swann, N. (2016). Coaching dads: understanding managerial implications of fathering through sport. *Journal of Sport Management*, 30(1), 40–51. <https://doi.org/10.1123/jsm.2014-0223>.
- Jowett, S. (2008). Outgrowing the familial coach-athlete relationship. *International Journal of Sport Psychology*, 39(1), 20–40.
- Jowett, S., Timson-Katchis, M., & Adams, R. (2007). Too close for comfort? Dependence in the dual role parent/coach-child/athlete relationship. *International Journal of Coaching Science*, 1(1), 59–78.
- Kay, T. (2007). Fathering through sport. *World Leisure Journal*, 49(2), 69–82. <https://doi.org/10.1080/04419057.2007.9674487>.
- Kay, T. (Ed.). (2009). *Fathering through sport and leisure*. Routledge. <https://doi.org/10.4324/9780203890707>.
- Kemming, J. (2008). *Kinderfußball – Anspruch und Wirklichkeit: Eine Fragebogenstudie [Children's soccer – aspirations and reality: A questionnaire study]*. Cologne: German Sport University. Unpublished diploma thesis.
- Klewes, J. (1983). *Retroaktive Sozialisation: Einflüsse Jugendlicher auf ihre Eltern [Retroactive socialization: Influences of adolescents on their parents]*. Beltz.
- Körner, J. (1993). Psychoanalytisches Arbeitsbündnis [Psychoanalytic working alliance]. In W. Mertens (Ed.), *Schlüsselbegriffe der Psychoanalyse [Key concepts in psychoanalysis]* (pp. 309–314). Verlag Internationale Psychoanalyse.
- McCann, P. S. (2005). Parent-coach and child-athlete retrospective perceptions of the dual role in youth sport. Unpublished dissertation, Michigan State University, East Lansing, MI. <https://d.lib.msu.edu/etd/33664?q=mccann>. Accessed 5 Apr 2023. <https://doi.org/10.25335/M5CJ87W6G>.

- Meyer, H. (2004). *Was ist guter Unterricht? [What is good teaching?]*. Cornelsen Scriptor. <https://doi.org/10.1024/1861-6186/a000170>.
- Norman, D. A., & Bobrow, D. G. (1979). Descriptions: an intermediate stage in memory retrieval. *Cognitive Psychology*, 11(1), 107–123. [https://doi.org/10.1016/0010-0285\(79\)90006-9](https://doi.org/10.1016/0010-0285(79)90006-9).
- Poczwardowski, A., Barott, J. E., & Jowett, S. (2006). Diversifying approaches to research on athlete-coach relationships. *Psychology of Sport and Exercise*, 7(2), 125–142. <https://doi.org/10.1016/j.psychsport.2005.08.002>.
- Prewitt-White, T. R., Fisher, L. A., Odenheimer, E. F., & Buchanan, R. R. (2016). “He just wanted everything to be perfect, me to be perfect”: U.S. NCAA Division I daughter-athletes’ experiences of the father-daughter relationship. *Sport, Exercise, and Performance Psychology*, 5(2), 144–160. <https://doi.org/10.1037/spy0000061>.
- Qunito Romani, A. (2020). Parental behaviour and children’s sports participation: evidence from a Danish longitudinal school study. *Sport, Education and Society*, 25(3), 332–347. <https://doi.org/10.1080/13573322.2019.1577235>.
- Rees, T., Hardy, L., Güllich, A., Abernethy, B., Côté, J., Woodman, T., Montgomery, H., Laing, S., & Warr, C. (2016). The great British medalists project: a review of current knowledge on the development of the world’s best sporting talent. *Sports Medicine*, 46(8), 1041–1058. <https://doi.org/10.1007/s40279-016-0476-2>.
- Reinders, H. (2013). Der bayerische Jugendfußball zwischen Leistung und sozialer Teilhabe: Ergebnisse der BFV-Studie 2013 [Bavarian youth soccer between performance and social participation: Results of the BFV study 2013]. University of Würzburg Library. https://opus.bibliothek.uni-wuerzburg.de/opus4-wuerzburg/frontdoor/deliver/index/docId/6739/file/Schriftenreihe_Empirische_Bildungsforschung_Band27.pdf. Accessed 23 July 2022.
- Richartz, A. (2000). *Lebenswege von Leistungssportlern: Anforderungen und Bewältigungsprozesse der Adoleszenz – eine qualitative Längsschnittstudie [Life paths of competitive athletes: Demands and coping processes of adolescence – a qualitative longitudinal study]*. Meyer & Meyer.
- Richartz, A., Hoffmann, K., & Sallen, J. (2009). *Kinder im Leistungssport: Chronische Belastungen und protektive Ressourcen [Children in competitive sports: Chronic stress and protective resources]*. Hofmann.
- Schmid, O. N., Bernstein, M., Shannon, V. R., Rishell, C., & Griffith, C. (2015). “It’s not just your dad, it’s not just your coach...” The dual-relationship in female tennis players. *The Sport Psychologist*, 29(3), 224–236. <https://doi.org/10.1123/tsp.2014-0049>.
- Schneider, J. (2021). Zverev peilt Grand-Slam-Sieg in Australien an [Zverev aims for Grand Slam victory in Australia] [Video excerpt from “Das aktuelle Sportstudio” from 18.12.2021]. <https://www.zdf.de/nachrichten/sport/tennis-zverev-sportstudio-100.html> (Created 19.12.). Accessed 21 July 2022.
- Snyder, E. E., & Purdy, D. A. (1982). Socialization into sport: parent and child reverse and reciprocal effects. *Research Quarterly for Exercise and Sport*, 53(3), 263–266. <https://doi.org/10.1080/02701367.1982.10609352>.
- Thompsons, S. M. (1999). *Mother’s taxi: sports and women’s labor*. State University of New York Press.
- Trussell, D. E., & Shaw, S. M. (2012). Organized youth sport and parenting in public and private spaces. *Leisure Sciences*, 34(5), 377–394. <https://doi.org/10.1080/01490400.2012.714699>.
- Weiss, M. R., & Fretwell, S. D. (2005). The parent-coach/child-athlete relationship in youth sport: cordial, contentious, or conundrum? *Research Quarterly for Exercise and Sport*, 76(3), 286–305. <https://doi.org/10.5641/027013605X13080719840753>.
- Weiss, M. R., & Sisley, B. L. (1984). Where have all the coaches gone? *Sociology of Sport Journal*, 1(4), 332–347. <https://doi.org/10.1123/ssj.1.4.332>.
- Willms, N. (2009). Fathers and daughters: negotiating gendered relationships in sport. In T. Kay (Ed.), *Fathering through sport and leisure* (pp. 124–144). Routledge.
- Würth, S., & Saborowski, C. (1999). Mädchen und Jungen in der sportlichen Entwicklung – welche Rolle spielen die Eltern? [Girls and boys in athletic development – what role do parents play?]. *Trainerakademie Köln aktuell*, 3(11–12), 29–30.
- Wylleman, P. (2000). Interpersonal relationships in sport: uncharted territory in sport psychology research. *International Journal of Sport Psychology*, 31(4), 555–572.
- Wylleman, P., & De Knop, P. (1998). *Athletes’ interpersonal perceptions of the “parent-coach” in competitive youth sport*. Paper presented at the 28th Congress of the International Association of Applied Psychology, San Francisco.
- Wylleman, P., & Lavallee, D. (2004). A developmental perspective on transitions faced by athletes. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: a life-time perspective* (pp. 503–524). Fitness Information Technology.
- Wylleman, P., De Knop, P., Verdet, M.-C., & Ceci- Erpič, S. (2007). Parenting and career transitions of elite athletes. In S. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 233–247). Human Kinetics. <https://doi.org/10.5040/9781492595878>.
- Yeung, W. J., Sandberg, J. F., Davis-Kean, P. E., & Hofferth, S. L. (2001). Children’s time with fathers in intact families. *Journal of Marriage and Family*, 63(1), 136–154.

Publisher’s Note. Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.