THE ROLE OF PARENT-INITIATED MOTIVATIONAL CLIMATE IN ATHLETES' ENGAGEMENT AND DISPOSITIONAL FLOW

İhsan Sarı[1] and İlgim Bizan[2]

[1]Sakarya University of Applied Science, Faculty of Sports Sciences, Sakarya, Turkey
[2]Nişantaşı University, Institute of Graduate Education, Istanbul, Turkey

Original scientific paper
DOI 10.26582/k.54.1.1

Abstract:

The aim of this study was to investigate the role of parent-initiated motivational climate in athletes' dispositional flow and sport engagement. For this purpose, a total of one hundred and eighty athletes (age, M=17.48, SD=3.39 years; sport experience, M=6.48, SD=3.75 years) voluntarily participated in this study. The participants were recruited voluntarily from team and individual sports. A personal information form, Parent-Initiated Motivational Climate Questionnaire-2, Athlete Engagement Questionnaire, and Short Dispositional Flow Scale 2 were used as the data collection tool. The data were analyzed by descriptive statistics, Pearson correlation analysis and stepwise multiple regression analysis. According to the Pearson correlation analysis, confidence, dedication, vigor, enthusiasm, global engagement, and dispositional flow were found to be positively and significantly correlated with parent-initiated task-involving climate. Parent-initiated ego-involving climate did not significantly correlate with any engagement or flow variables. According to the results of multiple regression analysis, parental task-involving climate significantly contributed to athletes' confidence, dedication, vigor, enthusiasm, global engagement, and dispositional flow. Overall, the results showed that parents' task-involving motivational climate contributed to athletes' engagement and dispositional flow. In line with these findings some suggestions for parents are proposed.

Key words: *motivational climate, parent, dispositional flow, engagement*

Introduction

Motivation is one of the most popular topics in sports psychology research (Roberts, Treasure, & Conroy, 2007). In recent investigations, besides the reasons of athletes to start and continue sport participation (Akyüz, M., Agar, Akyüz, & Doğru, 2016; Zeng, Meng, Sun, & Xie, 2019), factors related to drop out from sports were also investigated (Baron-Thiene & Alfermann, 2015; Silva Dias, et al., 2018). The primary aim of these studies was highlighting the importance of providing the valuable and beneficial sport experience to young athletes. When the theories developed on athletes' sport motivation are examined, it can be seen that, along with a number of theories, the Achievement Goal Theory (Ames, 1992; Nicholls, 1989) constitutes the very basis for many up-to-date studies (e.g. Lochbaum, Zanatta, & Kazak, 2020; Monteiro, et al., 2018; Ring & Kavussanu, 2018; Sarmento, Peralta, Harper, Vaz, & Marques, 2018).

The Achievement Goal Theory (AGT) posits that individuals are motivated to demonstrate their competence or achievement. AGT asserts the existence of two major goal states which influence how individuals construe their competence or define their subjective success in the achievement settings (Nicholls, 1989). These goal states are *task* (or *mastery*) *orientation* and *performance* (or *ego*) *orientation*. The two goal states represent different reasons for engaging in a specific behavior and use different standards for defining success. Having task goals reflects a desire to develop one's competence by improving or learning as much as one can. A person with task goals defines his/her success with either self-referential standards (i.e. learning new things or surpassing prior personal best performance) or task-based standards (e.g. answering 80% problems correctly). On the other hand, performance goals reflect a desire to demonstrate existing competence by outperforming others or obtaining success with less effort. People with performance goals define success with normative standards (i.e. ranking). Therefore, it is possible to say that task goals, but not performance goals, stimulate challenge seeking, raise effort, and facilitate learning and related outcomes which are more valuable (Senko, 2016). In addition to the two goal orientations, the concept of perceived motivational

climate is also one of the important tenets of AGT. Motivational climate refers to perceptions of situational cues and expectations of significant others that encourage the development of a particular achievement orientation and, at any time, induce a certain goal involvement state (Ames, 1992).

According to AGT (Ames, 1992; Nicholls, 1989), there are two types of motivational climate: task-involving or performance-involving climate. A task-involving motivational climate refers to the climate in which athletes perceive that effort, cooperation, learning and improvement are emphasized and appreciated by significant others (e.g. coaches, parents, teachers, etc.) (Newton, Duda, & Yin, 2000). Self-development, investing as much effort as possible and hard work are valued in task-involving climates, while in contrast, intra-team competition, social comparison and interpersonal evaluation are emphasized in a performance-involving climate (Newton, et al., 2000), in which individuals value normative success. Many studies in sport psychology literature address the concept of motivational climate according to who creates it. A closer examination of these studies reveals that coach-created (Appleton & Duda, 2016; Sarı & Derhayanoğlu, 2019;), parent-created (Kolayiş, Sarı, & Çelik, 2017; Wagnsson, Stenling, Gustafsson, & Augustsson, 2016) and peer-created (Hein & Jõesaar, 2015) motivational climates have mostly been studied in sport context. Studies reveal that task-involving motivational climates created by coaches, parents and peers are important for athletes to experience enjoyment, motivation, fun, intrinsic motivation, and flow (Atkins, Johnson, Force, & Petrie, 2015; Harwood, Keegan, Smith, & Raine, 2015; Vazou, Ntoumanis, & Duda, 2006). On the other hand, there is also evidence that ego-involving motivational climate increases athletes' exhaustion, sport devaluation (Russsel, 2021) and moral disengagement (Sarı & Deryahanoğlu, 2019), as well as it diminishes athletes' basic need satisfaction and well-being (Reinboth & Duda, 2006). Moreover, athletes in highly ego-involving climates can behave against sportsmanship (Boixados, Cruz, Torregrosa, & Valiente, 2004; Wagnsson, et al., 2016). To sum up, the relevant research showed that a task-involving climate as compared to an ego-involving climate can generally be more beneficial for athletes' optimal sport participation experiences and athletic outcomes.

Research on coach and peer motivational climates is more prevalent than the investigations that focus on the parent-created motivational climate. A systematic review reported that the number of studies about coach-created or peer-created motivational climates were higher than the number of studies about parent-created motivational climate (Harwood, et al., 2015). In their systematic review of studies on motivational climate (1990 – 2014), Harwood et al. (2015) identified only three studies on parent-created motivational climate that met their inclusion criteria. The three identified studies (Morris & Kavussanu, 2008; O'Rourke, Smith, Smoll, & Cumming, 2011; White, Kavussanu, & Guest, 1998) included in the review by Harwood et al. (2015) focused on the effect of parental motivational climate on athletes' goal orientation and anxiety. The focus on goal orientation and anxiety are quite different research areas as compared to the motivational variables examined in the present study. Considering the previous studies referred to above, the role of the parent-initiated motivational climate in athletes' motivational outcomes is not clear and there are quite few studies on this topic. Therefore, more research must be conducted on it. Therefore, examining the parent-initiated motivational climate appears to be an important topic.

Gardner, Magee, and Vella (2016) examined the relationship between parental support and athletes' motivational outcomes. Parental support includes parents' behaviors such as tangible support (e.g. covering financial and transport costs), socio-emotional support (e.g. encouragement and aiding understanding), informational support (e.g. explaining the rules), and companionship (e.g. watching sports events) (Cote, 1999; Cote & Hay, 2002). The construct, parental support, refers to athletes' perception of parental supportive behaviors and it is very different from parental task-involving and ego-involving motivational climates addressed in the present study. Similarly, Gomes, Gonçalves, Dias, and Morais (2019) investigated whether the young athletes' motivation is related to the behavior of their parents. However, they only measured task and ego goal orientations as the motivational outcomes. Motivation is a diverse construct encompassing far more than ego and task goal orientations. Different motivational outcomes need to be examined in relation with the parent-initiated motivational climate. Therefore, there is a need for more research on the relationship between athletes' motivation and parent-initiated motivational climate from different perspectives.

The parent-initiated motivational climate is important for athletes' autonomous motivation (Kolayiş, et al., 2017), their basic psychological needs satisfaction (Sarı, Köleli, & Güvendi, 2019), and for young athletes' moral decision making (Altıntaş, Sarı, & Karaç, 2018). Kolayiş et al. (2017) suggested that athletes' autonomous motivation might be enhanced as a result of parental behavior that fostered the task-involving motivational climate, provided athletes with learning and entertainment opportunities and emphasized young athletes' effort investment (Kolayiş, et al., 2017).

To summarize, it could be stated in general that the parental motivational climate is important for athletes' motivational components.

Athletes' engagement was the first motivational variable examined within the scope of this research. In recent decades, psychologists have argued strongly for a more positive focus within psychological studies (e.g. Diener, 2003; Seligman & Csikszentmihalyi, 2014). Therefore, the term 'engagement', which is opposite to 'burnout', was conceptualized (Schaufeli, Bakker, & Salanova, 2006). Athlete engagement is defined "as an enduring, relatively stable sport experience, which refers to generalized positive affect and cognitions about one's sport as a whole" (Lonsdale, Hodge, & Jackson, 2007b; Lonsdale, Hodge, & Raedeke, 2007a). Engagement is "persistent, positive, cognitive-affective experience in sport that is characterized by four components: confidence, dedication, enthusiasm, and vigor" (Lonsdale, et al., 2007a). Confidence, as the first component of engagement, represents "a belief in one's ability to attain a high level of performance and achieve desired goals". The second component of engagement is dedication and it represents "a desire to invest effort and time towards achieving goals one views as important". The third component is vigor defined as "a sense of physical and mental liveliness". Lastly, enthusiasm refers to "feelings of excitement and high levels of enjoyment" (Lonsdale, et al., 2007a). Studies have showed that athletes' engagement is linked to the coaches' task-involving climate (Curran, Hill, Hall, & Jowett, 2015) and athletes' perfectionistic strivings and need satisfaction (De Francisco, Arce, Sanchez-Romero, & del Pilar Vilchez, 2018; Jowett, Hill, Hall, & Curran, 2016; Martínez-Alvarado, Guillén García, & Feltz, 2016). To the authors' knowledge, however, no research has been conducted on the relationship between the parent-initiated motivational climate and athletes' engagement.

Flow is the second variable examined in relation with the parent-initiated motivational climate in the scope of this research. Athletes' experience of flow has been the subject of interest for researchers in recent years (e.g. Jackman, Swann, & Crust, 2016; Stavrou, Psychountaki, Georgiadis, Karteroliotis, & Zervas, 2015). Namely, providing optimal experiences to athletes can help them to train with pleasure as well as to maximize their sporting performance. In this context, the concept known as "flow" was developed. Flow was initially conceptualized by Csikszentmihalyi in 1975 in his book entitled "Beyond Boredom and Anxiety." While in flow, individuals experience strong task engagement and become completely immersed in an activity which is perceived as rewarding by itself (Csikszentmihalyi, 1975). Flow generally occurs when individuals' skill level matches the situational challenge where the skill level and challenges are both in balance (Csikszentmihalyi, 2008). The term 'flow' was defined as "the person's deep sense of task and cognitive competence, integration with the activity, and the inner pleasure felt in the activity involved" (Moneta, 2004). According to another research (Swann, Keegan, Piggott, & Crust, 2012) flow refers to the autotelic experience, endless source of energy, wonderful feeling of the body, not feeling pain and feeling strong.

In recent years, the importance of determining how individuals feel during their experiences and which emotions occur during their activities have been understood and thus many psychology studies have focused on the topic of flow experience (Cheron, 2016; Csikszentmihalyi, 2013; Ilies, et al., 2017; Nakamura & Csikszentmihalyi, 2014;). However, general psychology is not the exclusive field in which this intriguing topic is popular; scientists from different disciplines such as education (Hsieh, Lin, & Hou, 2016), business administration (Maqbool, Cerne, & Bortoluzzi, 2019), health (Yoshida, et al., 2018), and physical activity (Carter, River, & Sachs, 2013) are also focused on flow. In recent years, the concept of flow has been researched in various samples such as collegiate swimmers (Karageorghis, et al., 2013), elite youth swimmers (Briegel-Jones, Knowles, Eubank, Giannoulatos, & Elliot, 2013), participants in computer game activities (Harmat, et al., 2015), university students who performed dart activity (Zhang, Duan, Lyu, Keatley, & Chan, 2016), elite and sub-elite athletes from team and individual sports (Thienot, 2013), and students of collegiate music programs (Miksza & Tan, 2015).

The relevant literature in sport psychology showed that athletes' flow experience was linked to various factors such as coach and peer motivational climates (Çağlar, Aşçı, & Uygurtaş, 2017), internal factors such as motivation and arousal (Swann, et al., 2012), and skill level (Koehn & Morris, 2014). However, according to Çağlar et al, (2017), the parent-initiated motivational climate did not have any effect on team-sport athletes' flow experience. Therefore, it also appears important to examine the effect of the parent-initiated motivational climate on athletes' flow. In line with those explanations above, the aim of this study was to investigate the role of the parent-initiated motivational climate on athletes' flow experience and sport engagement. It was hypothesized that the task-involving motivational climate would have a positive effect on athletes' engagement and flow. Also, it was hypothesized that the parent-initiated ego-involving climate would have a negative effect on athletes' engagement and flow.

Method

Participants

Initially, a total of 190 athletes filled out the questionnaires. Ten participants' data were removed due to improper answers or missing values. A total of 180 athletes took part in this study (age, M=17.48, SD=3.39 years; experience, M=6.48, SD=3.75 years; the number of training sessions per week, M=3.78, SD=1.51 times). The sample was comprised of 82 males and 98 females. They were chosen from a variety of team and individual sports in Sakarya, which is a city in northwestern Turkey. These sports were: athletics (5.56%), basketball (5.56%), cycling (5.56%), football (40%) team handball (12.78%), karate (6.67%), taekwondo (10.56%), and volleyball (13.33%). The athletes were chosen by a convenience sampling method.

Data collection tools

Personal information form. This section of the data collection tool included some questions aimed to determine athletes' characteristics such as age, gender, sport branch, sport experience and the number of training sessions per week.

Parent-Initiated Motivational Climate Questionnaire-2. This scale was developed by White, Duda and Hart (1992) to determine how athletes perceived motivational climates created by their parents. Later, the scale was revised and an 18-item form was developed (White & Duda, 1993). Language adaptation of this scale into Turkish was made by Altıntaş, Aşçı, and Çağlar (2016). The scale has a father's motivational climate and a mother's motivational climate version, each comprised of 18 items. However, a mean score from the father's and mother's motivational climate can be used to determine parental climate as a single score (Kolayiş, et al., 2017; O'Rourke, Smith, Smoll, & Cumming, 2014). Answers to items ranged from a score of 1 (strongly disagree) to 5 (strongly agree) on a Likert-type scale. The sub-dimensions are: learning and enjoyment climate (nine items; an example item: *My mother/father is satisfied when I learn something new*), worry-conducive climate (five items; an example item: *My mother/father feels badly when I can't do as well as others*), and success-without-effort climate (four items; an example item: *My mother/father is satisfied when I win without effort*). Relevant literature showed that the learning and enjoyment climate referred to the task-involving climate, whereas the worry-conducive climate and success-without-effort climate can be an indicator of the performance-involving climate (O'Rourke, et al., 2014; Kolayiş, et al., 2017).

Short (9-item) Dispositional Flow Scale-2 (SDFS-2; Jackson, Martin, & Eklund, 2008). This scale contains nine items comprised of one item from each dimension of the Dispositional Flow Scale-2 (DFS-2), (e.g. *I have a strong sense of what I want to do* from *clear goals* dimension). SDFS-2 is a 5-point Likert scale. The answer for the items ranges from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicate a higher feeling of dispositional flow. The validation of the Turkish long form of this scale was made by Aşçı, Çağlar, Eklund, Altıntaş, and Jackson (2007) and the language adaptation of the Short (9-item) Dispositional Flow Scale-2 was performed by Çağlar, Sarı, Aşçı, Eklund, and Jackson (2020).

Athlete Engagement Questionnaire (AEQ). Athlete engagement was measured by the Athlete Engagement Questionnaire (Lonsdale, et al., 2007b). This scale is comprised of four subscales: confidence, dedication, enthusiasm, and vigor. Participants responded to all the AEQ items using 5-point Likert scales (1=almost never, 2=rarely, 3=sometimes, 4=frequently, 5=almost always) to indicate "How often you felt this way in the past three months". Sample items included: (a) confidence: *I believe I am capable of accomplishing my goals in sport*; (b) dedication: *I am determined to achieve my goals in sport*; (c) enthusiasm: *I feel excited about my sport*; and (d) vigor: *I feel really alive when I participate in my sport*. The language adaptation of this scale into Turkish was performed by Kelecek, Kara, and Aşçı (2018). The scale has 16 items, four for each dimension. In line with the approach taken by the previous studies (Hodge, Lonsdale, & Jackson, 2009; Podlog, et al., 2015), we calculated a global engagement score. For this purpose, subscale scores were averaged across the four subscales and the global engagement score was formed.

Data collection

Coaches were informed about the aims of the research and their permission was obtained. Voluntary sports clubs were then visited during their training sessions. The aims of the research were explained to all athletes and the questionnaires were administered only to volunteers. The athletes were informed that the obtained data would be kept confidential and used exclusively for research purposes. All the necessary actions were taken to protect participants' anonymity and facilitate their honest responses.

Data analysis

Data were analyzed by the SPSS 17.0 software. A frequency analysis was performed to check for incorrect data entries and for a normal range between data points. If missing values in a dataset are below the rate of 5%, any procedure to handling missing values can be used (Tabachnick & Fidell, 2007). After checking for missing values, only three observations were detected with a few

missing values, which was less than 5%. Therefore, the missing values were replaced by the mean score. It was also checked whether the number of participants was adequate and the findings were provided in Results. *Z* scores were computed to check for outliers in the data and no data outliers were detected. The assumption of normality was examined to see if the residuals were normally distributed. Also, multicollinearity was examined by the Pearson correlation analysis. The data were analyzed by descriptive statistics, the Pearson correlation analysis, and the stepwise multiple regression analysis. The level of significance was determined to be .05.

Results

The suitability of the data for further analysis was checked. Residuals were analyzed for normal distribution. Skewness and kurtosis values of the residuals were between -2 and +2, which indicated normal distribution (George & Mallery, 2016). Also, the adequacy of sample size is an important issue in regression analysis (Hair, Anderson, Tatham, & Black, 1995). The adequacy of sample size was tested using the formula N>50+8m, which was proposed by Pallant (2007). In this formula, the variable m expresses the number of independent variables. Two independent variables were used in the regression analysis in this study. So, the formula used was: N>50+8*2. In other words, there must be more than 66 participants to test the hypotheses in this study by a regression analysis. Therefore, it can be concluded that the number of participants was adequate. The outliers in the data were checked by the standard z-values. This value is expected to be between -3.3 and +3.3 (Pallant, 2007). In the analysis, it was determined that three observations were out of the range, therefore they were deleted. The number of participants (N=180), indicated in Methods, represents the total number of data analyzed after deleting the outliers. A high level of significant relationships between the independent variables refers to multicollinearity or to a situation where a variable in a multiple regression model can be accurately predicted from other variables. Pallant (2007) stated that a relationship between the independent variables higher than .90 was an indicator of multicollinearity problem. The Pearson correlation coefficient between the two independent variables was calculated as -.034 in this research. A negative correlation of -.034 between the independent variables rules out a multicollinearity effect.

Regarding engagement scores, it can be seen in Table 1 that the highest score belongs to enthusiasm, whereas the lowest score belongs to confidence. The scores for motivational climate showed that the parent task-involving climate score was higher than the ego-involving climate score (Table 1).

According to the Pearson correlation analysis, confidence (r=.37), dedication (r=.34), vigor (r=.36), enthusiasm (r=.42), global engagement (r=.42), and flow (r=.44) were found to be positively and significantly correlated with the parent task-involving climate. The parent ego-involving climate did not significantly correlate with athletes' engagement or flow (Table 2).

Table 1. Descriptive statistics for engagement, flow, and motivational climate

Variables	Min	Max	M	SD	Cronbach alpha
Confidence	1.00	5.00	4.01	0.95	0.94
Dedication	1.00	5.00	4.03	0.95	0.93
Vigor	1.00	5.00	4.12	0.96	0.97
Enthusiasm	1.25	5.00	4.21	0.91	0.95
Global engagement	1.63	5.00	4.13	0.77	0.97
Flow	1.00	5.00	3.88	0.97	0.94
Parent task-involving climate	1.00	4.00	2.30	0.70	0.97
Parent ego-involving climate	1.00	5.00	3.79	1.06	0.92

Table 2. Pearson correlation among engagement, flow, and motivational climate

	1	2	3	4	5	6	7	8
1) Confidence	—							
2) Dedication	.72*	—						
3) Vigor	.74*	.76*	—					
4) Enthusiasm	.78*	.77*	.90*	—				
5) Global engagement	.85*	.85*	.89*	.91*	—			
6) Flow	.52*	.50*	.56*	.52*	.57*	—		
7) Parent task-involving climate	-0.12	-0.12	-0.07	-0.1	-0.09	-0.04	—	
8) Parent ego-involving climate	.37*	.34*	.36*	.42*	.42*	.44*	-0.03	—

Note. *p<.01

According to the results of regression analysis, the parental task-involving climate significantly contributed to confidence $F(1,178)=28.362$, $p<.05$). Adjusted R^2 value indicated that 13% of variance in confidence was explained by the parent task-involving climate (Table 3).

The results show that the parental task-involving climate significantly contributed to dedication $F(1,178)=23.903$, $p<.05$). Adjusted R^2 value indicated that 11% of variance in dedication was explained by the parent task-involving climate (Table 4).

The findings in Table 5 show that the parental task-involving climate significantly contributed to vigor $F(1,178)=26.867$, $p<.05$). Adjusted R^2 value indicated that 13% of variance in vigor was explained by the parent task-involving climate (Table 5).

The results of regression analysis in Table 6 indicate that the parental task-involving climate significantly contributed to enthusiasm $F(1,178)=38.183$, $p<.05$). Adjusted R^2 value indicated that 17% of variance in enthusiasm was explained by the task-involving climate (Table 6).

According to the findings in Table 7, the parental task-involving climate significantly contributed to global engagement $F(1,178)=37.652$, $p<.05$). Adjusted R^2 value indicated that 17% of variance in global engagement was explained by the task-involving climate (Table 7).

The results in Table 8 reveal that the parental task-involving climate significantly contributed to flow $F(1,178)=42.228$, $p<.05$). Adjusted R^2 value indicated that 19% of variance in flow was explained by the task-involving climate (Table 8).

Table 3. Regression analysis regarding contribution of parent motivational climate to confidence

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
8) Parent task-involving climate	.331	.062	.371	28.362	5.326	.000	.13

Note. Dependent variable=confidence.

Table 4. Regression analysis regarding contribution of parent motivational climate to dedication

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
Parent task-involving climate	.307	.063	.344	23.903	4.889	.000	.11

Note. Dependent variable=dedication.

Table 5. Regression analysis regarding contribution of parent motivational climate to vigor

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
Parent task-involving climate	.326	.063	.362	26.867	5.183	.000	.13

Note. Dependent variable=vigor.

Table 6. Regression analysis regarding contribution of parent motivational climate to enthusiasm

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
Parent task-involving climate	.361	.058	.420	38.183	6.179	.000	.17

Note. Dependent variable=enthusiasm.

Table 7. Regression analysis regarding contribution of parent motivational climate to global engagement

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
Parent task-involving climate	.301	.049	.418	37.652	6.136	.000	.17

Note. Dependent variable=global engagement.

Table 8. Regression analysis regarding contribution of parent motivational climate to flow

Independent variable	B	SH	Beta	F	t	p	Adjusted R^2
Parent task-involving climate	.400	.062	.438	42.228	6.498	.000	.19

Note. Dependent variable=flow.

Discussion and conclusion

Descriptive statistics showed that the athletes perceived the parent-initiated task-involving climate to be higher than the ego-involving climate, which was in line with the findings in relevant literature (O'Rourke, Smith, Smoll, & Cumming, 2013; Schwebel, Smith, & Smoll, 2016).

The main aim of this study was to investigate the role of the parent-initiated motivational climate in explaining athletes' flow experience and sports engagement. Our first and second hypotheses regarding the positive contribution of the parent-initiated task-involving motivational climate to athletes' flow and engagement were supported by the data. Considering these results, it could be stated that it is important for parents to provide the task-involving motivational climate in order to maintain their children's high levels of engagement and flow. This study's findings are in line with a small number of other similar studies. For example, a recent study investigating the roles of coach, peer and parent motivational climate on boys' intention to continue sports revealed that the task-involving climate can enhance young athletes' sports intentions (Atkins, et al., 2015). Furthermore, Kolayiş et al. (2017) concluded that the parent-initiated task-involving climate could contribute to athletes' self-determined motivation, whereas characteristics of the ego-involving climate could diminish it. Athletes' self-determined motivation is an important variable for athletic outcomes (Amorose, Anderson-Butcher, Newman, Fraina & Iachini, 2016; Sarı, 2019), therefore the parent-initiated motivational climate, as either enriching or diminishing factor for athletes' self-determined motivation, appears to be an important environmental agent for athletes. In another parent-athlete relationship research, Gardner et al. (2016) conducted a latent profile analysis regarding motivational climate and identified four distinct social climate profiles of young athletes. Gardner et al. (2016) further reported that individuals characterized by a positive social climate profile reported the greatest enjoyment and intention to continue, whereas individuals characterized by a diminished social climate profile reported relatively less enjoyment and intention to continue. O'Rourke et al. (2014) reported that the parent-initiated motivational climate was a significant predictor of athletes' autonomous regulation. The authors (O'Rourke, et al., 2014) concluded that parents interact with their children individually at home and are engaged in multiple aspects of their children' sport experience such as travel, financial support, and emotional support. Parents operate not only within a sport context but also within a larger framework that significantly shapes their child's physical and psychological development. Therefore, the parent-initiated motivational climate may have a strong influence on the children (O'Rourke, et al., 2014).

Our findings regarding the positive contribution of the parent-initiated task-involving motivational climate to athletes' flow and engagement suggested that parents' task-involving motivational climate might contribute to their children's belief in their own abilities, desire to invest effort, feeling excited, getting enjoyment from the activity, and becoming physically and mentally lively. The findings also suggest that parental behaviors can also facilitate a deep sense of task and cognitive competence, integration with the activity, and deriving inner pleasure out of their sportive experiences.

The third and fourth hypotheses regarding a negative contribution of the parent-initiated ego-involving motivational climate to athletes' flow and engagement were not supported. These results were not in line with some of the similar studies. For instance, there is evidence that the parent-initiated ego-involving motivational climate was negatively associated with athletes' autonomous motivation (O'Rourke, Smith, Smoll, & Cumming, 2012; O'Rourke, et al., 2014). It was also suggested that the parent-initiated ego-involving climate might be related to athletes' burnout (Gustafsson, Hill, Stenling, & Wagnsson, 2016). However, there is also a recent study indicating that parent-initiated motivational climates (both the task- and ego-involving) were not a significant predictor of athletes' flow experience (Çağlar, et al., 2017). It appears that while the parent-initiated task-involving motivational climate fostered athletes' flow and engagement, the parent-initiated ego-involving motivational climates did not diminish these two outcomes.

Results showed that the athletes' perception of the parent-initiated task-involving motivational climate contributed to their flow experience and engagement. Considering the findings obtained in this study, it can be concluded that it is important for parents to provide a task-involving climate to their children to enhance their flow experience and engagement. It can be suggested for athletes' parents that they should evaluate their children by taking into consideration the children's own performances. Also, children are better off not to be compared with their peers and it should be emphasized by young athletes' parents that the athletes should focus on their own performance and trainings and that they should constantly develop their sport skills. Moreover, it is important, as a characteristic of the task-involving motivational climate, that making efforts and hard work should be underlined by athletes' parents. In addition, it should be stated to young athletes by their parents that trying to achieve one's best is important and that it is normal to make mistakes as long as the child is trying to correct them. Also, young athletes should not feel

threatened or pressured due to making mistakes or performing poorly. All these behaviors are the characteristics of the parent-initiated task-involving motivational climate, which should be taken into consideration by parents in their communication with their children.

Limitation and future directions

There are also some limitations of this research. Firstly, a cross-sectional design was adopted in this study, therefore longitudinal and experimental designs can be used to offer conclusions regarding the causal effect of the parent-initiated motivational climate on athletes' motivational outcomes. Secondly, this research was limited to flow and engagement as the motivational factors. Therefore, future research might include alternative variables such as commitment and psychological needs satisfaction. Thirdly, the participants in the present study were Turkish athletes. Therefore, future research can include a multinational sample and examine possible cultural differences. Future research can also focus on designing some intervention programs for young athletes' parents regarding the essential aspects of motivational climates in which parents can get more experienced about providing adaptive parental behaviors to their children.

References

Akyüz, M., Agar, M., Akyüz, Ö., & Doğru, Y. (2016). Motivational factors affecting athletes in selecting the sport branches of athletics, ski and tennis. *Journal of Education and Training Studies*,*4*(12), 160-165.

Altıntaş, A., Aşçı, F.H., & Çağlar, E. D. (2016). Reliability and validity study of the Turkish version of Parent-Initiated Motivational Climate Questionnaire-2. *Spormetre Journal Physical Education and Sport Sciences*, *14*(2), 163-174. https://doi.org/10.1501/Sporm_0000000293

Altıntaş, A., Sarı, I., & Karaç, Y. (2018). Determinants of moral decision-making attitudes of young athletes: Parents, coaches and peers. In *IV. International Congress of Exercise and Sport Psychology* (pp. 42). 13-15 Nisan, İstanbul, Turkey.

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261-271. https://doi.org/10.1037/0022-0663.84.3.261

Amorose, A.J., Anderson-Butcher, D., Newman, T.J., Fraina, M., & Iachini, A. (2016). High school athletes' self-determined motivation: The independent and interactive effects of coach, father, and mother autonomy support. *Psychology of Sport and Exercise*, *26*, 1-8. https://doi.org/10.1016/j.psychsport.2016.05.005

Appleton, P.R., & Duda, J.L. (2016). Examining the interactive effects of coach-created empowering and disempowering climate dimensions on athletes' health and functioning. *Psychology of Sport and Exercise, 26*, 61-70. https://psycnet.apa.org/doi/10.1016/j.psychsport.2016.06.007

Aşçı, F.H., Çağlar, E., Eklund, R.C., Altıntaş, A., & Jackson, S. (2007). The adaptation study of Dispositional Flow Scale–2 and Flow State Scale–2. *Hacettepe Journal of Sports Sciences, 18*(4), 182-196.

Atkins, M.R., Johnson, D.M., Force, E.C., & Petrie, T.A. (2015). Peers, parents, and coaches, oh my! The relation of the motivational climate to boys' intention to continue in sport. *Psychology of Sport and Exercise, 16*, 170-180. https://psycnet.apa.org/doi/10.1016/j.psychsport.2014.10.008

Baron-Thiene, A., & Alfermann, D. (2015). Personal characteristics as predictors for dual career dropout versus continuation–A prospective study of adolescent athletes from German elite sport schools. *Psychology of Sport and Exercise*, *21*, 42-49. https://psycnet.apa.org/doi/10.1016/j.psychsport.2015.04.006

Boixados, M., Cruz, J., Torregrosa, M., & Valiente, L. (2004). Relationships among motivational climate, satisfaction, perceived ability, and fair play attitudes in young soccer players. *Journal of Applied Sport Psychology, 16*(4), 301-317. https://psycnet.apa.org/doi/10.1080/10413200490517977

Briegel-Jones, R.M., Knowles, Z., Eubank, M.R., Giannoulatos, K., & Elliot, D. (2013). A preliminary investigation into the effect of yoga practice on mindfulness and flow in elite youth swimmers. *Sport Psychologist*, *27*(4), 349-359. https://doi.org/10.1123/tsp.27.4.349

Çağlar, E., Aşçi, F.H., & Uygurtaş, M. (2017). Roles of perceived motivational climates created by coach, peer, and parent on dispositional flow in young athletes. *Perceptual and Motor Skills*, *124*(2), 462-476. https://doi.org/10.1177%2F0031512516689404

Çağlar, E., Sarı, İ., Aşçı, F.H., Eklund, R.C., & Jackson, S.A. (2020). Short versions of Turkish flow scales: Reliability and validity study. *Studia Psychologica*, *62*(3), 179-197. https://psycnet.apa.org/doi/10.31577/sp.2020.03.799

Carter, L., River, B., & Sachs, M.L. (2013). Flow in sport, exercise, and performance: A review with implications for future research. *Journal of Multidisciplinary Research, 5*(3), 17-31.

Cheron, G. (2016). How to measure the psychological "flow"? A neuroscience perspective. *Frontiers in Psychology*, *7*, 1823. https://doi.org/10.3389/fpsyg.2016.01823

Côté, J. (1999). The influence of the family in the development of talent in sport. *The Sport Psychologist*, *13*(4), 395-417. https://doi.org/10.1123/tsp.13.4.395

Côté, J., & Hay, J. (2002). Family influences on youth sport performance and participation. In J.M. Silva & D. Stevens (Eds.), *Psychological foundations of sport* (pp. 503-519). Boston, MA: Allyn & Bacon

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety. The experience of play in work and games.* San Francisco: Jossey-Bass.

Csikszentmihalyi, M. (2008). *Flow: The psychology of optimal experience*. New York, NY: Harper Perennial Modern Classics.

Csikszentmihalyi, M. (2013). *Flow: The psychology of happiness*. Random House.

Curran, T., Hill, A.P., Hall, H.K., & Jowett, G.E. (2015). Relationships between the coach-created motivational climate and athlete engagement in youth sport. *Journal of Sport and Exercise Psychology, 37*(2), 193-198. https://doi.org/10.1123/jsep.2014-0203

De Francisco, C., Arce, C., Sanchez-Romero, E.I., & del Pilar Vilchez, M. (2018). The mediating role of sport self-motivation between basic psychological needs satisfaction and athlete engagement. *Psicothema*, *30*(4), 421-426. https://doi.org/10.7334/psicothema2018.117

Diener, E. (2003). What is positive about positive psychology: The curmudgeon and Pollyanna. *Psychological Inquiry*, *14*(2), 115-120.

Gardner, L.A., Magee, C.A., & Vella, S.A. (2016). Social climate profiles in adolescent sports: Associations with enjoyment and intention to continue. *Journal of Adolescence*, *52*, 112-123. https://doi.org/10.1016/j.adolescence.2016.08.003

George, D., & Mallery, P. (2016). *IBM SPSS statistics 23 step by step: A simple guide and reference* (13th ed.). New York: Routledge.

Gomes, A.R., Gonçalves, A.M., Dias, O., & Morais, C. (2019). Parental behavior, cognitive appraisal, and motivation in young athletes. *Research Quarterly for Exercise and Sport*, *90*(1), 80-94. https://doi.org/10.1080/02701367.2018.1563278

Gustafsson, H., Hill, A.P., Stenling, A., & Wagnsson, S. (2016). Profiles of perfectionism, parental climate, and burnout among competitive junior athletes. *Scandinavian Journal of Medicine and Science in Sports*, *26*(10), 1256-1264. https://doi.org/10.1111/sms.12553

Hair, J., Anderson, R., Tatham, R., & Black, W. (1995). *Multivariate data analysis* (4th ed.). Upper Saddle River, NJ: Prentice Hall.

Harmat, L., de Manzano, Ö., Theorell, T., Högman, L., Fischer, H., & Ullén, F. (2015). Physiological correlates of the flow experience during computer game playing. *International Journal of Psychophysiology*, *97*(1), 1-7. https://doi.org/10.1016/j.ijpsycho.2015.05.001

Harwood, C.G., Keegan, R.J., Smith, J.M., & Raine, A.S. (2015). A systematic review of the intrapersonal correlates of motivational climate perceptions in sport and physical activity. *Psychology of Sport and Exercise*, *18*, 9-25. https://doi.org/10.1016/j.psychsport.2014.11.005

Hein, V., & Jõesaar, H. (2015). How perceived autonomy support from adults and peer motivational climate are related with self-determined motivation among young athletes. *International Journal of Sport and Exercise Psychology*, *13*(3), 193-204. https://doi.org/10.1080/1612197X.2014.947304

Hodge, K., Lonsdale, C., & Jackson, S. (2009). Athlete engagement in elite sport: An exploratory investigation of antecedents and consequences. *The Sport Psychologist*, *23*(2), 186-202. https://doi.org/10.1123/tsp.23.2.186

Hsieh, Y.H., Lin, Y.C., & Hou, H.T. (2016). Exploring the role of flow experience, learning performance and potential behavior clusters in elementary students' game-based learning. *Interactive Learning Environments*, *24*(1), 178-193. https://doi.org/10.1080/10494820.2013.834827

Ilies, R., Wagner, D., Wilson, K., Ceja, L., Johnson, M., DeRue, S., & Ilgen, D. (2017). Flow at work and basic psychological needs: Effects on well-being. *Applied Psychology*, *66*(1), 3-24. https://psycnet.apa.org/doi/10.1111/apps.12075

Jackman, P.C., Swann, C., & Crust, L. (2016). Exploring athletes' perceptions of the relationship between mental toughness and dispositional flow in sport. *Psychology of Sport and Exercise*, *27*, 56-65. https://doi.org/10.1016/j.psychsport.2016.07.007

Jackson, S.A., Martin, A.J., & Eklund, R.C. (2008). Long and short measures of flow: The construct validity of the FSS-2, DFS-2, and new brief counterparts. *Journal of Sport and Exercise Psychology*, *30*(5), 561-587. https://doi.org/10.1123/jsep.30.5.561

Jowett, G.E., Hill, A.P., Hall, H.K., & Curran, T. (2016). Perfectionism, burnout and engagement in youth sport: The mediating role of basic psychological needs. *Psychology of Sport and Exercise*, *24*, 18-26. https://doi.org/10.1016/j.psychsport.2016.01.001

Karageorghis, C.I., Hutchinson, J.C., Jones, L., Farmer, H.L., Ayhan, M.S., Wilson, R.C., ..., & Bailey, S.G. (2013). Psychological, psychophysical, and ergogenic effects of music in swimming. *Psychology of Sport and Exercise*, *14*(4), 560-568. https://psycnet.apa.org/doi/10.1016/j.psychsport.2013.01.009

Kelecek, S., Kara, F.M., & Aşçı, F.H. (2018). Reliability and validity of Athlete Engagement Questionnaire. *Spormetre Journal of Physical Education and Sport Sciences*, *16*(3), 39-47. https://doi.org/DOI:10.1501/Sporm_0000000374

Koehn, S., & Morris, T. (2014). The effect of performance context and skill level on the frequency of flow experiences. *European Journal of Sport Science*, *14*(1), 478-486. https://doi.org/10.1080/17461391.2012.718364

Kolayiş, H., Sarı, I., & Çelik, N. (2017). Parent-initiated motivational climate and self-determined motivation in youth sport: How should parents behave to keep their child in sport? *Kinesiology*, *49*(2), 217-224.

Lochbaum, M., Zanatta, T., & Kazak, Z. (2020). The 2× 2 achievement goals in sport and physical activity contexts: A meta-analytic test of context, gender, culture, and socioeconomic status differences and analysis of motivations, regulations, affect, effort, and physical activity correlates. *European Journal of Investigation in Health, Psychology and Education*, *10*(1), 173-205. https://doi.org/10.3390/ejihpe10010015

Lonsdale, C., Hodge, K., & Jackson, S.A. (2007b). Athlete engagement: II. Developmental and initial validation of the Athlete Engagement Questionnaire. *International Journal of Sport Psychology*, *38*, 471-492.

Lonsdale, C., Hodge, K., & Raedeke, T.D. (2007a). Athlete engagement: I. A qualitative investigation of relevance and dimensions. *International Journal of Sport Psychology*, *38*(4), 451-470.

Maqbool, S., Cerne, M., & Bortoluzzi, G. (2019). Micro-foundations of innovation: Employee silence, perceived time pressure, flow and innovative work behaviour. *European Journal of Innovation Management*, *22*(1), 125-145. https://doi.org/10.1108/EJIM-01-2018-0013

Martínez-Alvarado, J.R., Guillén García, F., & Feltz, D. (2016). Athletes' motivational needs regarding burnout and engagement. *Revista de Psicologia del Deporte*, *25*(1), 65-71.

Miksza, P., & Tan, L. (2015). Predicting collegiate wind players' practice efficiency, flow, and self-efficacy for self-regulation: An exploratory study of relationships between teachers' instruction and students' practicing. *Journal of Research in Music Education*, *63*(2), 162-179. https://doi.org/10.1177%2F0022429415583474

Moneta, G.B. (2004). The flow experience across cultures. *Journal of Happiness Studies*, *5*(2), 115-121. https://psycnet.apa.org/doi/10.1023/B:JOHS.0000035913.65762.b5

Monteiro, D., Borrego, C.C., Silva, C., Moutão, J., Marinho, D.A., & Cid, L. (2018). Motivational climate sport youth scale: Measurement invariance across gender and five different sports. *Journal of Human Kinetics*, *61*, 249-261. https://doi.org/10.1515/hukin-2017-0124

Morris, R.L., & Kavussanu, M. (2008). Antecedents of approach-avoidance goals in sport. *Journal of Sports Sciences*, *26*, 465-476. https://doi.org/10.1080/02640410701579388

Nakamura, J., & Csikszentmihalyi, M. (2014). The concept of flow. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology* (pp. 239-263). Springer, Dordrecht. http://dx.doi.org/10.1007/978-94-017-9088-8_16.

Newton, M., Duda, J.L., & Yin, Z. (2000). Examination of the psychometric properties of the Perceived Motivational Climate in Sport Questionnaire-2 in a sample of female athletes. *Journal of Sports Sciences*, *18*(4), 275-290. https://doi.org/10.1080/026404100365018

Nicholls, J.G. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.

O'Rourke, D.J., Smith, R.E., Smoll, F.L., & Cumming, S.P. (2011). Trait anxiety in young athletes as a function of parental pressure and motivational climate: Is parental pressure always harmful? *Journal of Applied Sport Psychology*, *23*(4), 398-412. https://psycnet.apa.org/doi/10.1080/10413200.2011.552089

O'Rourke, D.J., Smith, R.E., Smoll, F.L., & Cumming, S.P. (2013). Parent-initiated motivational climate and young athletes' intrinsic-extrinsic motivation: Cross-sectional and longitudinal relations. *Journal of Child and Adolescent Behavior*, *1*(2), 109. http://dx.doi.org/10.4172/jcalb.1000109

O'Rourke, D.J., Smith, R.E., Smoll, F.L., & Cumming, S.P. (2014). Relations of parent and coach-initiated motivational climates to young athletes' self-esteem, performance anxiety, and autonomous motivation: Who is more influential? *Journal of Applied Sport Psychology, 26*(4), 395-408. https://doi.org/10.1080/10413200.2014.907838

O'Rourke, D.J., Smith, R.E., Smoll, F.L., & Cumming, S.P. (2012). Parent-initiated motivational climate, self-esteem, and autonomous motivation in young athletes: Testing propositions from achievement goal and self-determination theories. *Child Development Research*, Article ID 393914. https://doi.org/10.1155/2012/393914

Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS version 15* (3rd ed.). Maidenhead: Open University Press.

Podlog, L., Gustafsson, H., Skoog, T., Gao, Z., Westin, M., Werner, S., & Alricsson, M. (2015). Need satisfaction, motivation, and engagement among high-performance youth athletes: A multiple mediation analysis. *International Journal of Sport and Exercise Psychology*, *13*(4), 415-433. https://psycnet.apa.org/doi/10.1080/1612197X.2014.999346

Reinboth, M., & Duda, J.L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise, 7*(3), 269-286. https://doi.org/10.1016/j.psychsport.2005.06.002

Ring, C., & Kavussanu, M. (2018). The impact of achievement goals on cheating in sport. *Psychology of Sport and Exercise*, *35*, 98-103. https://doi.org/10.1016/j.psychsport.2017.11.016

Roberts, G.C., Treasure, D., & Conroy, D.E. (2007). Understanding the dynamics of motivation in sport and physical activity: An achievement goal interpretation. In G. Tenenbaum & R.C. Eklund (Eds.), *Handbook of sport and exercise psychology* (3rd ed.; pp. 3-30). New York, NY: Wiley.

Russell, W. (2021). An examination of sport motivation, motivational climate, and athlete burnout within the developmental model of sport participation. *Journal of Amateur Sport*, *7*(1), 1-14. https://doi.org/10.17161/jas.v7i1.14558

Sarı, I. (2019). The relationship between perceived autonomy support from the coach and athletes' autonomous motivation: A meta-analytic research. *Spormetre Journal of Physical Education and Sport Sciences*, *17*(2), 110-125. https://doi.org/10.33689/spormetre.455760

Sarı, I., & Derhayanoğlu, G. (2019). The relationship of athletes' moral disengagement to perceived motivational climate and valued goals. *Spormetre Journal of Physical Education and Sport Sciences*, *17*(4), 91-104. https://doi.org/10.33689/spormetre.536451

Sarı, I., Köleli, Y., & Güvendi, B. (2019, November). Parent initiated motivational climates as a motivational factor in athletes and meditating role of the basic psychological needs. Paper presented at the 17th International Sport Sciences Congress, 13-16 November, Antalya, Turkey.

Sarmento, H., Peralta, M., Harper, L., Vaz, V., & Marques, A. (2018). Achievement goals and self-determination in adult football players–A cluster analysis. *Kinesiology, 50*(1), 43-51.

Schaufeli, W.B., Bakker, A.B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*(4), 701-716. https://doi.org/10.1177%2F0013164405282471

Schwebel, F.J., Smith, R.E., & Smoll, F.L. (2016). Measurement of perceived parental success standards in sport and relations with athletes' self-esteem, performance anxiety, and achievement goal orientation: Comparing parental and coach influences. *Child Development Research*, Article ID 7056075. https://doi.org/10.1155/2016/7056075

Seligman, M.E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology* (pp. 279-298). Springer, Dordrecht. https://doi.org/10.1007/978-94-017-9088-8_18

Senko, C. (2016). Achievement goal theory: A story of early promises, eventual discords, and future possibilities. In K. Wentzel & D. Miele (Eds.), *Handbook of motivation at school* (2nd ed.; pp. 75-95). New York, NY: Taylor & Francis.

Silva Dias, T., Novotná, K., Oliveira, H.Z., Azevedo, C., Corte-Real, N., Slepička, P., & Fonseca, A.M. (2018). Why talented athletes drop out from sport? The Portuguese and Czech case. *Education + Training*, *60*(5), 473-489. https://doi.org/10.1108/ET-12-2017-0207

Stavrou, N.A., Psychountaki, M., Georgiadis, E., Karteroliotis, K., & Zervas, Y. (2015). Flow theory–goal orientation theory: Positive experience is related to athlete's goal orientation. *Frontiers in Psychology*, *6*, 1499. https://doi.org/10.3389/fpsyg.2015.01499

Swann, C., Keegan, R.J., Piggott, D., & Crust, L. (2012). A systematic review of the experience, occurrence, and controllability of flow states in elite sport. *Psychology of Sport and Exercise, 13*(6), 807-819. https://doi.org/10.1016/j.psychsport.2012.05.006

Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.

Thienot, E. (2013). *Mindfulness in elite athletes: Conceptualisation, measurements, and application*. (Unpublished doctoral dissertation, The University of Western Australia).

Vazou, S., Ntoumanis, N., & Duda, J.L. (2006). Predicting young athletes' motivational indices as a function of their perceptions of the coach- and peer-created climate. *Psychology of Sport and Exercise*, *7*(2), 215-233. https://psycnet.apa.org/doi/10.1016/j.psychsport.2005.08.007

Wagnsson, S., Stenling, A., Gustafsson, H., & Augustsson, C. (2016). Swedish youth football players' attitudes towards moral decision in sport as predicted by the parent-initiated motivational climate. *Psychology of Sport and Exercise*, *25*, 110-114. https://doi.org/10.1016/j.psychsport.2016.05.003

White S.A., & Duda J.L. (1993). The relationship between goal orientation and parent initiated motivational climate among children learning a physical skill. Paper presented at the 8th world meeting for the International Society for Sport Psychology, Lisbon, Portugal.

White, S.A., Duda, J.L., & Hart, S. (1992). An exploratory examination of the parent-initiated motivational climate questionnaire. *Perceptual and Motor Skills*, *75*(3), 875-880. https://doi.org/10.2466%2Fpms.1992.75.3.875

White, S.A., Kavussanu, M., & Guest, S.M. (1998). Goal orientations and perceptions of the motivational climate created by significant others. *European Journal of Physical Education*, *3*(2), 212-228. https://doi.org/10.1080/1740898980030209

Yoshida, K., Ogawa, K., Mototani, T., Inagaki, Y., Sawamura, D., Ikoma, K., & Sakai, S. (2018). Flow experience enhances the effectiveness of attentional training: A pilot randomized controlled trial of patients with attention deficits after traumatic brain injury. *NeuroRehabilitation*, *43*(2), 183-193. https://psycnet.apa.org/doi/10.3233/NRE-172396

Zeng, Z., Meng, W.Y., Sun, P., & Xie, L.S. (2019). An exploratory study of youth soccer players' participation motivation and health-related behaviors. *The Physical Educator*, *76*(2), 329-356. https://doi.org/10.18666/TPE-2019-V76-I2-8499

Zhang, C.Q., Si, G., Duan, Y., Lyu, Y., Keatley, D.A., & Chan, D.K. (2016). The effects of mindfulness training on beginners' skill acquisition in dart throwing: A randomized controlled trial. *Psychology of Sport and Exercise*, *22*, 279-285. https://doi.org/10.1016/j.psychsport.2015.09.005

Submitted: February 17, 2020
Accepted: February 29, 2022
Published Online First: March 18, 2022

Correspondence to:
İhsan Sarı, Ph.D.
Sakarya University of Applied Sciences,
Faculty of Sports Sciences
Serdivan/Sakarya, Turkey
Phone: 90 264 616 03 21
E-mail: sariihsan@yahoo.com

Acknowledgments

This research was presented at the 17th International Sports Science Congress Antalya, Turkey (13-16 November 2019).