Introduction
The coach plays a crucial role in the process of acquisition of different skills by the tennis player. Tennis is mainly an individual sport. However, player and coach should create a team that has to work efficiently towards the achievement of the goals established. No matter the level of expertise of the player, the coach should be the first to provide assistance and help. In order to do this, the coach should use several tools that will facilitate this process.

The aim of this article is to present some research findings in two fundamental areas of the coach behavior: leadership and communication. It is hoped that the information included will assist in the understanding of the main roles and characteristics of tennis coaches.

Coach Leadership in Tennis.
Coach leadership is a psychosocial construct that is necessary for efficient tennis instruction. Although extensively studied in sport and in tennis, we are still far to understand all its implications for tennis coaches. Research has studied the different coach leadership styles (autocratic, democratic, laissez-faire) used according to different players characteristics and practice environments. In general, it has been found that coaches have been shown to behave more autocratically (directive-explicit-command) when coaching beginner players \(^1\) than when working with advanced or high performance players. On the other hand, players’ perceptions of the behaviors of their coaches have also been studied. It has been found \(^2,3\) that, as compared to older players, younger players have been shown as less demanding on their coaches. These results are consistent with other studies \(^4\) in which beginner players perceived their coaches more positively than the coaches themselves.

Other researchers \(^5\) have examined the variables that could predict coach/player compatibility by obtaining self-ratings of the quality of the interaction from both coach and player. Results showed that the discrepancy between the player’s preferences and perceptions on the autocratic dimension of the coach was the best predictor of coach-player compatibility.

Research has also shown that in times of internal or external stress (i.e. during tournaments or in emergency situations), coaches can benefit from increasing the task orientation (authoritarianism) of their behaviors (i.e. telling the players what to do). Devoid of this stress, player or relationship-oriented (democratic) behaviors by the coaches are most effective. \(^6\)

As found in previous studies, in subsequent research \(^7\)

Abstract
This article presents a review of the research conducted in some of the areas that define the process of skill acquisition in tennis. Special attention is given to aspects related to the coach role in this process such as leadership behaviors and communication strategies. Relationships between leadership styles, preferred and perceived leadership behaviors and their influence in player satisfaction and performance are discussed. Different types of communication strategies and their effectiveness in the game of tennis are presented.

Keywords: Skill, acquisition, coaching, leadership, communication.
The relationships between dimensions of coach social support and components of performance in tennis have also been explored. It has been concluded that effects of social support upon performance were only apparent when attention was focused on the components of performance. The results also have illustrated the importance of matching specific types of tennis-relevant social support with the needs of the players and those elicited by the stressors under consideration. The authors have suggested some applied implications such as the development of an understanding of the beneficial role social support from the coach has to play in protecting players from the impact of stressors upon performance.

Further research on leadership in tennis also has been found that a tennis player's level of ability did affect preferences for leadership behavior and that the gender of the player's coach had a significant effect on the player's preferences for social support behavior. Other study on leadership and player gender examined the impact that a coach's gender may have on leadership behavior indicators as reported by coaches and junior tennis players. It was found female tennis coaches reported significantly less autocratic behavior than their male counterparts. It was also found no significant differences in perceived leadership behavior based on the coach's sex. The author concluded that the results support the notion that perceived gender role orientations become linked to the social roles occupied rather than the coach's gender.

In a subsequent study that followed this path, it was found that the congruency of certain preferred and perceived leadership behavior of tennis coaches predicted several variables such as intrinsic motivation, tennis commitment and enjoyment, individual performance satisfaction, personal treatment satisfaction, team performance satisfaction, and training and instruction satisfaction. Results in this study revealed that players reported lower preferred levels of autocratic behavior than any other leadership behavior from their coaches. The author concluded that coaches should ensure that they are meeting their players' relatively low preferences for autocratic behavior if they wish to alter any of the aforementioned outcomes of autocratic behavior.

The relationships between perceived coach behavior and the emotional levels of intercollegiate tennis players have also been explored. The findings indicated a correlation between the leadership behavior of coaches as perceived by tennis players and some of the emotional dimensions measured as well as significant differences between the genders in the influence of the perceived leadership behavior of the coaches on the emotional state of the players. The correlation grew stronger for female players as the competition approached.

Coach leadership behavior and junior tennis player's satisfaction have been also studied in recent research. The main conclusions were that the use of transformational leadership behavior could increase players' satisfaction and improve their performances because these players expected and preferred coaches with these skills. This type of leadership occurs when the coach takes a visionary position and inspires players to follow by enhancing the motivation, morale and performance of the players. There was a strong connection between the level of the junior tennis players' satisfaction and team performance since junior tennis players who displayed higher levels of satisfaction corresponded to better win-loss records.

The same variables; tennis coach leadership behaviors and satisfaction of tennis players were studied with college level players. Results indicated significant relationships between perceived leader behavior and specific satisfaction with coach leadership.

The strategies of the tennis coaches for influencing self-efficacy in their players have also been examined. Results have indicated that coaches used a variety of strategies designed to enhance self-efficacy to a moderate degree and found these techniques to be at least moderately effective. The most often used strategies to enhance self-efficacy in tennis and those found most effective included: encouraging positive self-talk, modeling confidence oneself, instruction-drilling, liberally rewarding statements, and verbal persuasion.

In a transcultural study that compared Australian and American tennis coaches, results indicated that few differences were found but that American coaches used more conditioning drills, modeling of other successful players, emphasis that feelings of anxiety are not fear but are a sign of readiness, and emphasis that failure results from lack of effort or experience and not from a lack of innate ability.

As can be concluded for the review, there is a considerable body of research in tennis leadership. However, more tennis-specific research is needed to
examine the role that coach leadership behavior plays regarding a number of potential physical, emotional and psychological outcomes. Future directions may include longitudinal studies in which the expertise of the player and the coach is considered as well as further cross-cultural studies that may help better understand the dynamics of the leadership process in tennis coaching.

**Coach communication in tennis.**
Communication and all associated, but not similar terms, such as interaction, empathy, feedback, verbal and non-verbal behaviors, etc., are at the forefront of quality tennis instruction and coaching. It is well known the principle: “A good tennis coach should be a good communicator” or “You are as good as your communication skills.” Research has studied the communication behavior of tennis coaches. Studies, for instance, have compared the communication styles of more and less successful tennis coaches. In two seminal studies (18,19), it was shown that more successful coaches use management (instructions) and silence (not speaking) behaviors more frequently (75% of the time), and ask significantly more questions of their players than less successful coaches. Research has also found that clearly communicating instructions, explanations, demonstrations, and feedback are important characteristics of effective coaching. (20) It has been suggested that coaches should also refrain from overloading their students with information when the players are learning new skills. It is concluded that if explanations and demonstrations are too complex, tennis players can become confused and encounter difficulty remembering the details. Based on these results it is stated that coaches must provide the right cue at the right time to create an attractive image and to direct the players' attention to key movements or concepts to be learned. The concept of intra-team communication in tennis has also been studied in order to observe differences between more effective and less effective tennis teams in collegiate doubles play by inspecting communication patterns and counting message exchanges. (21) The results indicated that better performing teams used certain patterns such as action statement more frequently. Besides, winning teams: showed more capacity for problem solving and coordination; were characterized by using more significant patterns; created a more homogeneous model of communication; made message exchange more predictable, and communicated twice as much than the losing teams. Finally, the overall results showed that most of the communication was comprised of emotional statements (i.e., more than a half) and action statements (i.e., more than a quarter).

Research has also tried to optimize the verbal behavior of wheelchair tennis coaches in training sessions. (22) In this study it was shown that a communication training program for the coach can improve the quality of the initial information that the coach provides before the player performs each skill as well as the feedback provided after the execution of the skill by the wheelchair tennis player. The combination of verbal communication in the form of verbal cues combined with the use of videotaped modeling has also been studied. (23) Results showed that using videotaped modeling with verbal cues leads to the participants reporting observing different concepts compared with the use of videotaped modeling without verbal cues. The study recommends that when tennis coaches use videotaped modeling as a teaching tool, they should give specific verbal cues to assist the players in what concepts to which they should attend, but that this might not lead to more of an improvement in confidence and performance.

The study of the effect of augmented verbal feedback after observing a learning model on the acquisition and retention of the tennis volley concluded that all players were significantly better than the control group on stroke movement pattern and ball outcome. (24) The feedback of high performance Spanish tennis coaches was also studied in terms of feedback application during training sessions according to the following variables (25): teaching resources applied for the correction of the execution, type of feedback used according to the coach intention, and teaching resources used to improve the behavior of the player. Results showed that high performance tennis coaches often use both prescriptive and explicative feedback when correcting tennis players. However, they do not seem effectively applying the adequate principles for its application. Research mentioned above clearly indicates that coach communication and feedback have also extensively studied in tennis. However, additional studies are needed to explain and better understand the role of verbal and non-verbal coach behavior as well as to determine the type of feedback more efficient according to both the characteristics of the players and the situation.

**Conclusions.**
While the amount and quality of research mentioned in this article confirms the relevance that coach leadership and communication studies have for tennis research, further attempts are needed to investigate the intricacies of these constructs for tennis coaches and tennis coaching. Additionally, future research should be geared towards a deeper understanding of the needs of both coaches and players in these areas in order to achieve the most effective relationships in training and competition.

**Competing interests:** none declared.
About the authors

Miguel Crespo (PhD) is the Development Research Officer of the International Tennis Federation. Miguel is a member of both the ITF’s Coaches and Sport Science and Medical Commission and is also associated to the Board of the STMS.

Address for correspondence:
Miguel Crespo, PhD. Avda. Tirso de Molina, 21, 21. 46015 Valencia. España. mcrespo@umh.es

References


11. Riemer HA, Toon K. Leadership and satisfaction in tennis:


