



SOCIAL SCIENCES

The teaching of offensive skills against different defensive scenarios in handball: analysis of coaches' perspectives in different categories

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Abstract: As it is observed that the selection of teaching approaches takes an important role in youth players' development, investigations regarding teaching handball at this age reveal a gap due to this theme. This study aimed to identify and analyze the coaches' preferred offensive skills through different defensive scenarios and how they are taught in youth handball teams. Twenty-two Brazilian coaches from teams U-12, U-14, U-16 and U-18 were interviewed (semi-structured interview). Data analysis was performed through the Collective Subject Discourse and presented according to the teams and defensive systems faced. The coaches' discourses showed an increasing expectation throughout the age groups, and the expectation the players can deal with different situations based on their analysis. In addition, it was also found that teaching approaches are based on a technocratic way with further attempts to transfer the learned skills to the game context for all age groups. Therefore, it is suggested that greater attention must be paid while choosing skills and teaching approaches at each stage of the sports training process, in a way to stimulate youth players to deal critically and autonomously with game situations.

Key words: Handball, offensive phase, teaching, youth players, game context.

INTRODUCTION

Teaching approaches with different characteristics are used throughout the coaching process in team sports and their selection is dependent on the coaching philosophy and the objectives of each coach, team and/or training session. Some approaches stimulate the learning of specific skills in exercises isolated from the interactions with opponents (traditional approaches), while others are based on the interactions provided in the game's context (called game-based approaches – GBA) (Kinnerk et al. 2018, Petiot et al. 2021).

Traditional approaches are based on direct instructions, aiming to stimulate skills efficiency and lead players to assimilate specific responses (Kinnerk et al. 2018, Petiot et al. 2021). Despite

the outcomes of these approaches, their use in larger proportions may restrict players' ability to solve the problems presented by the dynamic context of the game and can cause coaches' instructions dependency (Bunker & Thorpe 1986, Harvey et al. 2018). In this sense, while sports require players to critically analyze, adapt and make their decisions under the presented circumstances (Grêhaigne & Godbout 1995, Light 2013), game knowledge and decision-making may take an important role in the planning and execution of training sessions (Nelson et al. 2014).

Due to the lack of interactions from the traditional approaches and their consequences, GBA emerges as a way to offer an environment to practice players' autonomous decision-making

(Morales-Belando et al. 2018). GBA proposes to stimulate comprehension of the game and autonomous decision-making, by providing learner-centred participation in games and their modifications, based on the game principles and questions presented by the coaches (Holt et al. 2002, Light 2004).

As youth teams' coaches' preferences disagree with the literature advice for the coaching process (Harvey & Jarrett 2014), it demonstrates that their opinions according to these themes must be investigated, specifically in the Brazilian context (Musa & Menezes 2021), to properly suggest and adapt the interventions to youth handball players. Although interest in analyzing coaches' preferences for young handball players has been noted in Brazil, there is a lack of studies about the teaching of offensive-specific skills.

A recent study explored coaches' perspectives for teaching defensive skills to youth teams (Musa & Menezes 2022) and identified a disparity between expected skills and used teaching approaches, in addition to revealing an overload of content in the youth teams (U-12 and U-14). Furthermore, Brazilian handball has specificities about the different requirements related to the defensive systems permissions in youth tournament regulations (Leonardo & Scaglia 2018). While it directly impacts attackers' behaviour and actions, those specific regulations can interfere with coaches' expectations about offensive skills to be taught and how they teach them. As the attack stands as an important moment in handball matches (Paula et al. 2020, Saavedra et al. 2018), this scenario reveals an important gap to investigate coaches' perspectives about the offensive content to be taught in different categories.

Due to this scenario, it is possible to point out questions about the process of teaching-learning in handball, such as: "What are the

preferred offensive skills taught in Brazilian youth handball?" and "How are the offensive skills being taught in Brazilian youth handball?". To answer those questions this study investigates the speeches of Brazilian handball coaches about the teaching of offensive content in youth teams. More specifically, it analyzed what are: a) the preferences of youth teams' coaches about the offensive skills through different defensive systems, and b) the youth teams coaches' preferred teaching approaches.

MATERIALS AND METHODS

In this study, the qualitative method was used, which offers a better comprehension of processes, relationships, and social constructions (Flick 2018, Thomas et al. 2015), such as sports interactions (Thomas et al. 2015). This includes the identification of the skills taught by the coaches in different stages of training youth players. So, as this research is based on human opinions and experiences, this method stands as the best possibility.

Semi-structured interviews enable researchers to explore a particular context given the reality of the interviewees, whose diversity of opinions enriches the analyses and leads to an understanding of experiences and perspectives for the addressed topics (Silverman 2016). In this sense, semi-structured interviews were conducted in a way to expand the possibilities of the answer, obtaining consistent data according to the objectives of the study.

This study followed the recommendations of the Helsinki Declaration and after approval by the institutional Research Ethics Committee (report #4.081.641), the participants were recruited intentionally. Coaches from teams which participated in the two main handball leagues of the State of São Paulo in 2018 were selected. The leagues are competitions

unaffiliated with the Brazilian Handball Confederation and the State of São Paulo Handball Federation, having greater territorial coverage, lower costs of participation fees, and team displacements to play games (due to the proximity among cities), which enable a large number of teams to participate.

The league selection was made due to the proximity between the university and the cities where the teams are located. It reduced research costs and facilitated access to the coaches for the interviews. In these leagues, there is majority participation of teams linked to municipal governments, and in the year of this research, there was no participation of teams from clubs. The State of São Paulo was also chosen for this research because of its hegemony in the Brazilian handball context, with its teams having gained expressive results in the last 10 editions of Male (10-time champion, 10-time runner-up) and Female National League (6-time champion, 6-time runner-up), as well as facilitating the researcher's access to conduct the interviews. Additionally, although the Brazilian teams are not among the main teams in the world (except for the women's National Squad that won the 2013 World Champions), many of the players who play in them are contracted by European teams, and examples of this can be seen in the calls of the 2021 Men's Pre-Olympic Tournament (18 out of 20 players play in Europe) and the 2021 Women's World Championship (15 out of 16 players are in Europe).

We invited all coaches of teams that have competed in one of the handball leagues of the State of São Paulo to participate in this research ($n=68$). Twenty-two coaches (15 men and 7 women, denominated C1 to C22) of 32 male teams (U-12=7; U-14=7; U-16=10; U-18=8) and 28 female teams (U-12=5; U-14=8; U-16=8; U-18=7) agreed to participate in the interview and answered all the questions of the research instrument. Some

coaches coach two or more teams, both with the male and the female sex, which is an important characteristic of handball teams in Brazil. The mean age of the coaches and the mean time spent as a handball coach were, respectively, $40.7 (\pm 8.8)$ and $15.0 (\pm 7.3)$ years. All the coaches graduated in Physical Education, and 17 have concluded post-graduate courses in different areas of knowledge.

The interviews were previously scheduled with the coaches and took from 90 to 120 minutes. One of the authors (with experience as a handball athlete, coach, and researcher) conducted the interviews personally or through a communication app (due to the long distances for some coaches, divergences in available periods, and to clarify doubts in data analysis). The interviews took place during the team's regular season, and the time dedicated by the coaches enabled an in-depth understanding of the offensive skills (through varied defensive contexts) taught in different categories.

The interview instrument was elaborated in two main sections: 1) questions of a personal nature and about academic education to characterize the participants, and 2) questions focused on the offensive technical-tactical content through different defensive systems and how the skills are taught. The interview instrument was tested to adapt the questions, trying to ensure better comprehension and collecting more information. During the tests, it was identified the need to address specific questions to different defensive systems, due to their particular characteristics, which can generate different and specific interactions between players as they try to reach their objectives.

Although the pre-established questions were in the script, the coaches had the freedom to express their opinions about the topic of study (Thomas et al. 2015). After the adaptations,

the interview instrument was stipulated with questions such as (1) "What are the individual and collective guidelines when facing the closed defensive system in each category?", (2) "What are the individual and collective guidelines when facing opened defensive systems in each category?", and (3) "How do you teach those skills? Could you exemplify some exercises/games?" constituted the section relating to the skill and teaching of handball. These initial questions enabled the identification of the main skills emphasized by the coaches and the teaching approaches in each category. The coaches' discourses were recorded/analyzed individually and the transcription began on the same day (Oliver et al. 2005).

This study followed the suggested stages to guarantee trustworthiness, transparency and rigour (Richards & Hemphill 2017). All the processes involving the interviews were made by the first author (transcription, organization, codification, and analysis), and for the analysis, it was used the collective subject discourse method (CSD) (Lefèvre & Lefèvre 2012, Musa & Menezes 2022).

CSD is a single discourse based on the thoughts and conceptions described by the interviewees, which helps in the organization of the ideas presented by them (Lefèvre & Lefèvre 2012). So, in this study, the coach's answers were grouped into subtopics according to the teams that they work with (U-12, U-14, U-16, and U-18). In this method, the description and analysis of the studied phenomenon range were made from specific to general aspects, by identifying core ideas that summarize the answers of each interviewee (Lefèvre & Lefèvre 2012).

The two researchers involved in this work analyzed the elaborated CSD, for possible consensual adaptations in the final version (Sparkes & Smith 2009). The final CSD were also presented to a group of researchers from

the area to debate the findings and organize the discussion process and topics. After the elaboration and adaptation, the CSD were presented on three different topics according to the coaches' expectations in each category. The topics were divided into expected skills to face the defensive scenarios (opened and closed systems) and the preferred teaching approaches by them to teach those skills. The CSD with the main individual and collective skills were identified, organized, and presented in the form of an illustration for a better representation of the results.

It is important to highlight that coaches involved in this study may have coached different teams simultaneously (such as U-12 and U-14, or U-16 and U-18, for example), so the answers were unique and may not have any differentiation in their contents. These facts can be attributed due to the structural limitations of several teams, which must have training sessions between different genders and/or ages of players occurring simultaneously.

RESULTS

The analyzes revealed the individual and collective skills emphasized by the coaches through different defensive systems, as well as the teaching approaches used in different stages of training in youth teams. The coaches' discourses showed their expected skills to face defensive systems in each category, presenting differences and similarities inherent to each context (open and closed defensive systems). It was observed that for the younger teams (U-12 and U-14) more different skills are expected to face each defensive system, while for the older teams (U-16 and U-18) the discourses showed more similarities between the confrontation of opened and closed systems.

Some CSD excerpts are presented below as examples for attack against closed systems (from CSD-A to CSD-C), and opened systems (from CSD-D to CSD-F):

CSD-A, U-12 (closed systems): Against closed systems, I recommend that they try to see the pivot^{C11}, or work with two pivots, mainly using blockings^{C12}. I also use infiltrations^{C13} because in this category, regardless of the characteristics of each player, they want to infiltrate^{C11}, but normally I ask the taller ones to throw from long distance, and for the faster ones to feint^{C19}.

CSD-B, U-16 (closed systems): I always ask them to work on width and depth^{C13} with quick passes^{C3,C10}, displacement, decision making^{C10}, circulation^{C3}, successive penetrations^{C3,C5,C13,C16}, continuity^{C1} to create areas with numerical superiority, unfolding to receive these balls from the back players^{C3}, simple cross^{C5,C9}, double cross^{C5}, second pivot^{C5,C20}, pivot blocking^{C20}, false cross, attack outside the guard^{C5}, create diagonals with the center and prepare actions where the wing and the back players can throw^{C9} or so that you have long shots^{C1,C14,C16}.

CSD-C, U-18 (closed systems): If they can't infiltrate^{C6}, I ask them to play with continuity^{C1,C6,C9,C12,C14} for wings^{C6,C9,C14}, pivot^{C6,C9} or back player^{C9}, without throw from long distance^{C1,C6}. I ask that all this be done with quick passes, displacements, decision making^{C10}, crosses^{C21}, and play with two pivots^{C12,C14,C21}, mainly using their blocking^{C12}. Another way you can work is the ball inversions from one wing to the other or from the opposite back player to wing^{C21}.

CSD-D, U-12 (opened systems): To overcome this type of defense players needs mobility, intelligence^{C9}, create passing angles^{C12} in shorter/smaller spaces^{C9} and empty spaces^{C1,C4,C10,C22}, give and go^{C9}, attack in empty space^{C12,C13,C16}, respond to the teammate's actions^{C10,C11,C21} to have continuity^{C16}, and play with the pivot blocking^{C4,C10,C11}. What can help in this case is the use of offensive system changes with circulation^{C4}, crosses from back players to central^{C1} and to wings^{C4}, diagonal attack^{C1,C4,C9,C12}, and positions exchanges^{C4,C10,C22}.

CSD-E, U-14 (opened systems): The attackers must have mobility^{C9,C10} to create passing angles^{C9,C12}, attack the empty space^{C1,C10,C11,C12,C22}, give and go^{C9,C19}, respond to teammate^{C10,C11} and continuity^{C16} in successive penetrations^{C5}, play with pivot^{C9,C1,C18}, blocking^{C10} and position exchange^{C10,C22} with crosses^{C1,C5} and second pivot takedown^{C1,C5,C18}. All this being done with depth^{C10} and width^{C12}.

CSD-F, U-16 (opened systems): The attack against this defense must work without the ball^{C14,C15,C16}, with depth^{C9,C12} and width^{C12} and thus be able to throw from long distance^{C2} or 6-m^{C3}, give and go^{C5,C15}, play with the pivot^{C3,C5,C14} and attack diagonally^{C1,C12}, catching the ball in motion^{C15} and giving an answer^{C10,C11} to enter the empty space^{C12,C15}. Attackers can change their positions^{C10} with crosses^{C1,C3,C5}, system change^{C5,C11,C15,C20} with circulation^{C15}, successive penetrations^{C5}, blocking^{C10,C15}, and play with the seventh player^{C15}.

These appointments demonstrate that coaches teach specific ways to deal with the different defensive scenarios in the earlier

stages of the players' development. In contrast, the discourses also demonstrate more flexibility for players to deal with defensive contexts. It could also be noted that for younger teams (U-12 and U-14) fewer skills are expected than for the older teams (U-16 and U-18). Figure 1 illustrates the expected skills by the coaches through the categories, as well as for the defensive systems.

The speeches referring to U-12 and U-14 teams showed specific elements to face each defensive system. Faced with the closed defensive system, the coaches highlighted the importance of technical skills (long-distance throws, fast passes, feints and dribbles). Against opened defensive systems, coaches mentioned elements related to analysis and comprehension of the game (defence context analysis, perception and intelligence), and tactical skills (play without the ball, respond to partner attack, successive penetrations and position exchange).

For the U-16 and U-18 teams, it was highlighted once again the importance of the dribble and the passes to face the closed systems. To face the open systems, the discourses pointed to tactical elements (give and go, use of additional court player and system changes) to face open systems. It can be observed that coaches expect less specific skills for the older teams to face the defensive systems when compared with the younger teams, but analyzing the common skills, it can be noted an increase in the expected skills over the age groups.

The analysis of the coaches' discourses according to teaching approaches revealed the intention to use the same approaches in all age groups, but with differences between closed and open systems. Faced with closed defensive systems, the choice of approaches was based on stimulating the learning of skills without a real opposition (traditional approaches), followed by the attempt to contextualize with the game

(using some GBA principles), as presented by the excerpts below:

CSD1, U-12: [...] We practice statically; after we work in a movement without the ball and then in movement with the ball increasing the speed^{C10}. After that we practice attack against defence a lot with numerical superiority or even equality^{C1,C12} to stimulate continuity and throws^{C1}, as on the other side of the court the wingers are practising specific throws^{C12}. I divide my work by sectors too and then I regroup^{C13}.

CSD2, U-14: Collectively, I work from the simple to the complex. First by sectors and then regrouping until forming the complete defence^{C13}. We use the static defenders for the attackers entering the spaces between them^{C10}. Afterwards, we work in a movement without the ball and then in movement with the ball, increasing the speed and with different numerical relationships^{C1,C12,C18} or even numerical equality^{C1}. I also do individual drills with jumps, support and techniques to make them able to throw from mid and long ranges^{C19}.

CSD3, U-18: We practice everything statically, after in movement without the ball and then in movement with the ball increasing the speed^{C10} and attacking offense^{C1}. After that, I work with game situations with different numerical relationships^{C1,C6,C12} or even in numerical equality and different court positions^{C6,C12}.

The preference for teaching skills isolated from the game context followed by an attempt to transfer it to game situations with the opposition is evidenced in the speeches referring to all age groups. Coaches mention the use of approaches

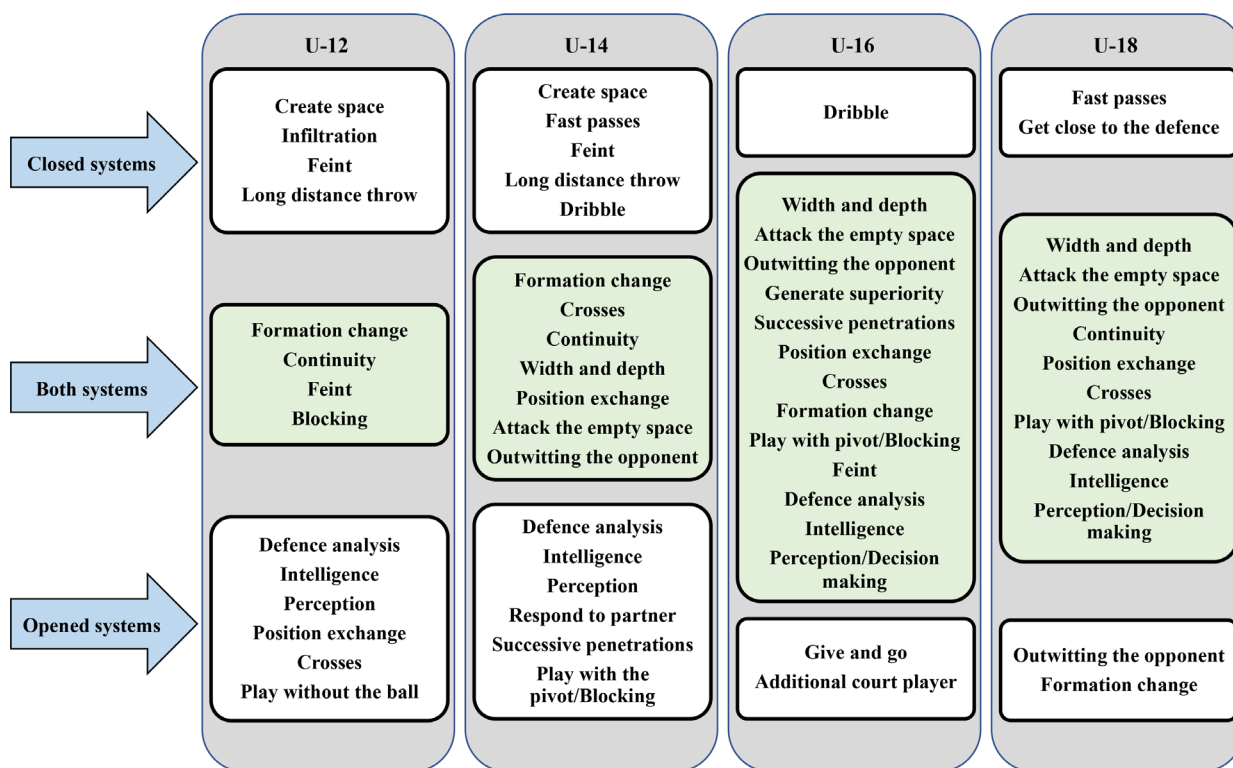


Figure 1. Emphasized skills facing opened systems, closed systems, and common to both systems.

that limit interactions between players, to learn how to play before playing in these situations.

When mentioning the teaching approaches' preferences to face open defensive systems, coaches revealed a preference for GBA principles, justified by the need for teaching to be guided by the experience of different game situations:

CSD4, U-12: I teach everything through game situations 4vs.4, 3vs.3, 2vs.1^{C4,C10}, playing from the middle until the side court using both sides of the court. If they start to go away from the defender's limited space, we use the same obstacles to contain it^{C4}.

CSD5, U-14: The practice occurs through game situations^{C1,C12} in half-court with obstacles limitation^{C1}. I work a bit of game predetermined plays^{C18} with everyone

practising all the positions, 1vs.1 game and pass and rush^{C19}.

CSD6, U-16: I teach everything through game situations^{C1,C2,C20} with the positioned defence first and then with the defence acting^{C16}. If the players escape the limited spaces we use obstacles but we usually let them use a lot of space to have quality in the passes^{C1}. Above this, pass games, games to fight for space occupation and the ball are also very interesting^{C15}.

The excerpts related to teaching the attack against open systems presented elements from game situations and interactions (between teammates and opponents) for all categories. It reveals an emphasis on GBA principles, with greater interaction and participation in specific game situations, in other words, learning by playing.

DISCUSSION

This study aimed to analyze the offensive skills and teaching approaches prioritized by coaches in U-12, U-14, U-16 and U-18 teams, through different defensive systems. The results revealed coaches' preferred offensive skills to face defensive systems over time, and the analysis of the coaches' speeches revealed an increasing expectation throughout the age groups since players consolidate the skills learned in previous categories. As youth players experience handball situations, their comprehension of the game improves, and the complexity of the interactions increases (Musa & Menezes 2022). So, the player's development requires them to learn new skills over time, and make coaches' expectations rise gradually.

Although the progression in the expectation of new skills is connected to the players' development, coaches' speeches showed that taught skills may be associated with a general offensive context and with the characteristics of each defensive system. When facing closed defensive systems, coaches highlighted the technical skills (e.g. dribble, fast passes, feints and long-distance throws) as a prerequisite to play, reinforcing a 'learn-to-play' overview. In closed systems, the defenders are positioned closer to each other and generally occupy regions near the goal area. This organization intends to generate more difficulty in offensive infiltrations and short-distance throws, which demands attackers a great execution of technical skills to overcome the defence (Seco 2005).

On the other hand, against open defensive systems coaches of U-12 and U-14 teams expect attackers to analyze the defenders' behaviour, adjust their positioning to occupy empty spaces and generate advantages through actions of those without the ball possession. In addition, for the U-16 and U-18 teams, it was observed that

coaches expect players to learn tactical skills, which are related to the behaviour pointed out in younger teams.

The opened defensive systems are characterized by defenders positioned at different distances to their own goal, which intend to keep the attackers far from the goal area and hinder their actions with or without the ball possession. Opened systems are often deeper than closed systems, which fends off the attackers to the goal, increases the proximity between opponents, decreases time and space for attackers' decision-making, and offers spaces between the defensive lines (Seco 2005). So, the coaches may expect those skills due to the defender's pressure and to the offered spaces in this defensive system, which requires from the attackers a context analysis and, posteriorly, collective actions.

More specifically, the results revealed common skills through all categories when facing both defensive systems, which takes place in the development of general skills related to handball. These general skills are related to occupation and position in the court (width and depth, system change and position exchange), and tactical skills (play with the pivot/offensive blocking, system change, attack the empty spaces and continuity). There were also differences between expected skills to face both defensive systems since in U-12 teams it was mentioned the importance of the feint to outwit the opposition and the addition of elements related to the analysis and comprehension of the game (defence analysis, perception and intelligence) for the older teams (U-16 and U-18).

In the game context the interactions between the attackers should try to produce advantages over the defenders through aspects already mentioned by the coaches (such as playing in depth and width, generating numerical superiority, and changing the offensive system).

For this, different group tactical elements can be chained by the attackers, such as crossings, position exchanging, successive penetrations and blockings, whose main characteristics include, in general, the attempt to produce better conditions for the shot and/or to approach the opponent's goal and/or hinder the defenders' actions. Although several of these tactical elements have been mentioned since the U-12 teams, their teaching depends on players' understanding of trajectories, space occupation and ball circulation, concepts that are not always consolidated in this category, even more so considering two defensive perspectives (opened and closed).

The analysis of the contents addressed by coaches in the teaching-learning process of the defensive aspects of handball in different categories revealed a large volume of skills required in the U-12 teams (Musa & Menezes 2022), in view of two specific game scenarios. Our study identified an increasing number of skills common to both scenarios (facing closed and open defensive systems) up to U-16 teams, but with decreasing demands on the number of skills to face open or closed defenses over time. These results suggest the development of more specialized skills in the U-12 and U-14 teams, while their incorporation by the players would allow the common use of both systems in the U-16 and U-18 teams. Paradoxically, it is in the older categories that more specialized behavior is required to fulfill aspects inherent to the logic of the adult game (Musa et al. 2022), when training can already occur jointly from the U-18 team to the adult in the analyzed context.

Such expectations reinforce that skills must be taught so that players can understand and deal with different game situations, use spaces properly, offering options to their partners, as the players with the ball are required to make the best possible decisions (Gréhaigine &

Godbout 1995, Morales-Belando et al. 2018, Seco 2005). In this sense, some studies have shown the importance of teaching through games and situations that involve complexity for decision-making in handball in different contexts (Dorak et al. 2018, Menezes 2021, Mazzardo et al. 2022).

In the coaches' discourses, it could be noted that offensive skills are taught in a way that players must deal with different game situations through their analyzes, decisions and adaptations since the earlier stages, but with more freedom for older players. These observations agree with those addressing the defensive skills, which pointed to a tendency for teaching more pre-stipulated decision-making to younger players and more freedom to the older players (Bento et al. 2021, Musa & Menezes 2022). As players tend to learn and develop according to the way they are initially stimulated (Feu Molina 2006), the coaches' expectations for offensive skills do not follow a logic within the formation process, the same as defensive skills.

Although, the heterogeneous context of coaches' expectations related to handball skills reveals a concern about how they are taught. Regarding teaching approaches through the different defensive contexts, coaches' discourses revealed GBA principles for all contexts but also pointed out evidence of traditional approaches for teaching how to play against closed defensive systems in all categories.

Some required skills to face the closed defensive system (such as fast passes, long distance throw, and dribble) were associated with technical skills, which may lead them to choose a traditional approach and, although its relationship with the game situation in which it is used is obvious (interdependence between technique and tactics), it is often taught without the constraints offered by the game. The choice of this approach recommends the learning of movements considered 'ideal' based on direct

instruction, followed by the attempt to transfer them to the game context (Dorak et al. 2018). The idea of 'learn-to-play' consider the technical aspects as the main way to develop the abilities required in the matches, but the exclusive usage of this approach can lead to the development of conditioned and stereotyped actions, restricting players' capacity to adapt movements to their needs, preferences and the game context (Bunker & Thorpe 1986, Kinnerk et al. 2018, Light & Harvey 2017).

The use of a greater proportion of traditional approaches in U-12 and U-14 teams (initial stages) may reproduce the context of high performance and restrict their possibilities of learning (Holt et al. 2002, Petiot et al. 2021), which can also overvalue the adults' sports at the expense of the teaching-learning process. In this sense, youth players are expected to evaluate and correspond accordingly to the game's situations, greater emphasis should be placed on approaches that offer a proper development of decision-making and knowledge about the game, such as GBA (Arias-Estero et al. 2020, Light & Harvey 2017, Miller et al. 2016, Morales-Belando et al. 2018). The teaching of group tactical elements (such as crossings, position exchanging and blocking) requires their interrelationship with the positions and actions of the defenders, and the traditional approach deprives players of the contextualized decision that is influenced by space-time pressure.

In this study, it was also possible to note the relationship of some highlighted skills with GBA principles. The analysis of the discourses related to opened defensive systems (CSD4 to CSD6) revealed aspects such as analyzing the opponent and responding intelligently to the game situations and producing advantages through actions without ball possession. These skills are linked by the coaches to GBA principles, as it aims to promote reflection, and the capacity

to deal with and adapt critically players' actions to the game situations according to their preferences (Harvey & Jarrett 2014, Kinnerk et al. 2018, Light 2004). The central issue involves learning through the game (play-to-learn) and its modifications, which privilege interactions between players and those with the proposed rules.

Research addressing the GBA revealed the improvements in decision-making and tactical awareness of players (Arias-Estero et al. 2020, Miller et al. 2016, Morales-Belando et al. 2018), physical performance (Thomas et al. 2013), technical development (Pizarro et al. 2017), psychological and social aspects, such as autonomy, competence and enjoyment (Gil-Arias et al. 2017, Morales-Belando et al. 2018). These benefits encourage the more frequent use of these approaches, especially in the initial stages of the teaching-learning process (Light & Harvey 2017), which can be permanently emphasized in the long-term training of handball players.

Therefore, despite the usage of traditional approaches to emphasize the offensive technical skills, GBA principles also have premises related to technical learning through modifications and adaptations in the rules of the games with complexities appropriation to the players' characteristics (Breed & Spittle 2020, Holt et al. 2002). So, it is suggested that especially for the initial stages GBA must be used in greater proportion, especially based on players' interactions and in the requirements for decision making (Petiot et al. 2021).

On the other hand, one of the reasons coaches prefers the traditional approaches is given their difficulties in planning, developing and adapting activities to a 'new way' (GBA) (García-López et al. 2019). In Brazilian handball, the experienced coaches' preferences were investigated for U-12, U-14, U-16 and U-18 teams. It was observed some GBA principles in coaches'

discourses, but traditional approaches are still the preference for youth teams' practice (Menezes et al. 2018, 2015). The use of GBA principles occurs mainly after the emphasis on technique through the traditional approach and reinforces the need to understand GBA in its essence and complexity, which is still a challenge in this research area and in Brazilian handball training.

Finally, the comparison of the findings of this study with other studies revealed the discrepancy between the variety of offensive and defensive skills across the categories, as well as the differences between the teaching approaches to develop the skills of each phase of the game. The findings suggest that coaches know a greater number of offensive possibilities and elements (such as individual and group tactical elements) than defensive ones (Musa & Menezes 2022), which reveals possibilities for future training actions for coaches. In this sense, it is important to highlight those dichotomous relationships are established between attackers and defenders throughout the game and, although they have opposing goals, these players participate in the same activities, and it does not seem reasonable to select different teaching approaches for the same moment of training.

After an extensive analysis of the results of this study and the literature consulted, a gap was identified regarding a curricular proposal for the teaching of handball that presents guidelines to coaches. This curriculum should consider the minimum content to be taught in each category, a progression of offensive and defensive systems of play, and the principles of the teaching approach to be used.

CONCLUSION

This study aimed to analyze which are the most important offensive skills for Brazilian handball youth teams' coaches and how it is taught through the ages (U-12 to U-18). It was revealed that coaches expect youth players to analyze and adapt their actions according to the game situations, with some specific skills when facing each defensive scenario. The analysis of how coaches teach the expected skills revealed an appropriation of the traditional approaches principles, with further usage of GBA as a way to transfer the emphasized skills to game context.

In this sense, it can be concluded that youth players in the initial stages (U-12 and U-14) must have more freedom to adapt their behaviour according to game situations, as the game in the next stages (U-16 and U-18) will require them to these skills. It is also suggested that youth players must experience the different situations of handball, especially in activities which provide them with the opportunity to deal critically with the demands of the game environment and stimulate their knowledge about the game (Light 2004).

This study discussed the teaching of offensive skills in handball youth teams and expands the discussion on a gap reported in other studies (Musa & Menezes 2021, Prieto et al. 2015), contributing to the decision making of youth teams' coaches while planning and executing their training sessions. Due to the analysis of coaches' opinions, this study did not reflect the full context of youth Brazilian handball teams training. Although the focus of this work has been on the contents addressed by the coaches and not on their temporal distribution (which we understand to present a fruitful perspective for future research projects), one of the limitations refers to the absence of descriptive information about the

training sessions, which could help in a possible analysis of the discourses. So, further studies can be proposed to address other contexts (other countries or sports) and the analysis of the training sessions as a means of comparing coaches' speeches with professional practice.

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Both authors conducted all stages of the research project: literature review, data collection, analysis of coaches' speeches, discussion, and conclusion.

