



CHARACTERISTICS OF PLAYING PERFORMANCE AT THE MEN'S 18 EUROPEAN HANDBALL CHAMPIONSHIP

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Introduction

The ninth Men's 18 European Handball Championship (M18 ECh) was held from the 8th – 17th August 2008 in Brno, the Czech Republic. All the matches were played in the two halls of the sports complex in Vodová Street. Besides making the organisation easier, this enabled the participants of the championship to contact one another and watch the matches already starting with the preliminary rounds. The placement matches and finals took place in the main hall.

The EHF ensures, even during the course of individual championships, the collection and public presentation of quantitative playing performance indexes, which may be made use of, thanks to electronic media (see www.eurohandball.com), not only by the participants, but by other interested parties as well. After the end of the championship, these data are gradually complemented by qualitative analyses (Valdevit et al 2004, Visnapuu 2006, and Hianik 2007 etc.).

Therefore our aim is to concentrate on the qualitative characteristics of the playing performance at the 2008 M18 ECh and perhaps compare them with the results of the previous analyses. We chose the method of direct observation with record. We especially focused on the latter part of the championship, i.e. on placement matches, semi-finals and finals. We decided to do so namely because the mentioned matches could be watched directly by a number of observers, who could thus notice certain factors that are not, according to technical conditions, sufficiently transparent on the video recordings of the matches. The analysis of the findings gathered through observation was then carried out by means of expert evaluation.

Investigated group

From an initial 38 teams fighting for their chance to participate, only 16 teams took part in M18 ECh after having succeeded in the qualification. Two teams (BIH, FIN) got to M18 ECh for the first time in history, on the other hand the teams of DEN, HUN and RUS have participated in eight out of nine championships. The complete overview of the participation of individual countries is presented in table 1.



Table 1

	1992	1994	1997	1999	2001	2003	2004	2006	2008	Σ
AUT	x		x		x			x		4
BIH									x	1
BLR							x			1
BUL		x					x			2
CRO				x	x	x	x	x	x	6
CZE		x	x					x	x	4
DEN		x	x	x	x	x	x	x	x	8
ESP	x	x	x	x				x	x	6
EST			x				x	x		3
FIN									x	1
FRA				x	x	x	x	x	x	6
GER	x			x		x	x	x	x	6
GRE		x	x							2
HUN		x	x	x	x	x	x	x	x	8
ISL					x	x	x		x	4
ISR	x	x	x							3
LUX					x					1
MKD		x								1
NOR	x			x					x	3
POL				x				x		2
POR	x	x		x		x				4
ROU		x			x		x			3
RUS	x	x		x	x	x	x	x	x	8
SLO			x	x	x	x	x	x	x	7
SRB			x			x	x	x	x	5
SUI	x						x			2
SVK				x	x	x	x	x	x	6
SWE		x	x		x	x	x	x	x	7
TUR								x		1
UKR			x							1

It is worth mentioning that the DEN team got its seventh medal in total at this championship, never, however, becoming European champion. From the point of view of age distribution it is understandable that the largest age group consisted of players born in the year 1990, who made up three-quarters of the participants. The same rate was recorded at the previous M18 ECh (Visnapuu 2006).

The highest percentage of younger players (approx. 40%) were found in the official delegations of team CZE and team FRA, on the other hand there was not even a single younger player to be found in the delegations of team RUS and team SWE. The factors of body height and weight are a significant presupposition of playing performance. The average height of the 253 participants was 188.8 cm; the most numerous (31%) were the players with the body height of 185 – 190 cm. As regards average body height, it has changed only minimally during the three last M18 EChs (compare Valdevit et al 2004, Visnapuu 2006).

Just as in 2006, at the M18 ECh in 2008 only four (GER, SWE, ISL and NOR) out of the first eight ranking teams had the average body height higher than the total average. Eight players were taller than 200 cm, while 3 were under 175 cm in height. The average weight of all the participants was 84.1 kg, which is higher than at the previous M18 ECh. The above mentioned data are listed in tables 2, 3 and 4.



Table 2

Team	No. of players	Born 1990	Born 1991	Born 1992	No. of participating clubs	Highest participation
GER	16	12	4	0	10	4 Kronau Oestringen
DEN	16	11	5	0	12	3 FIF
SWE	16	16	0	0	11	3 Redberglids IK
ISL	16	15	1	0	7	4 FH, Haukar, Selfoss
CRO	16	12	4	0	9	6 Croatia Osiguranje
ESP	16	10	6	0	9	6 FC Barcelona
FRA	16	9	7	0	13	3 Bruges ES HB
NOR	14	11	3	0	10	3 Fyllingen Handball
SLO	16	12	4	0	8	5 Celje Pivovarna
SRB	16	11	4	1	10	4 Partizan Si
BIH	16	10	6	0	10	3 HC Zrinjski Mostar
HUN	16	14	2	0	7	5 Pler KC
CZE	15	8	6	1	7	7 HCB Karviná
RUS	16	16	0	0	8	5 Cheh. Medvedi
SVK	16	11	5	0	6	5 1. MHK Košice
FIN	16	11	3	2	6	5 BK-46
Σ	142	108	34	0		
%	100	75	24	1		

Table 3

Team	International Matches			
	Average	St. Dev.	Maximum	Minimum
GER	13,4	8,0	28	2
DEN	15,8	4,4	21	3
SWE	7,4	3,2	10	3
ISL	8,1	3,0	11	3
CRO	10,3	6,1	16	0
ESP	20,4	7,2	28	9
FRA	unlisted			
NOR	21,1	8,4	33	8
SLO	12,4	2,8	15	7
SRB	18,6	11,1	47	4
BIH	5,7	2,3	9	5
HUN	unlisted			
CZE	4,9	2,0	7	0
RUS	11,0	4,1	14	0
SVK	14,1	5,0	18	3
FIN	7,8	3,0	11	3
Average	12,6	5,3	x	x



Table 4

Team	Height					Weight							
	<185	185 - 190	191 - 195	196 - 200	> 201	Average	St. Dev.	Max.	Min.	Average	St. Dev.	Max.	Min.
GER	2	5	5	3	1	191,3	5,5	203	181	88,7	7,7	100	74
DEN	4	4	4	3	0	188,6	6,5	198	174	82,0	8,5	97	66
SWE	4	5	4	1	2	189,1	7,1	202	179	85,3	7,7	102	74
ISL	4	4	6	2	0	189,5	5,7	200	180	83,1	7,2	99	70
CRO	7	1	5	2	1	188,7	6,9	201	180	87,2	8,6	105	75
ESP	7	2	5	2	0	187,4	6,4	198	178	78,1	7,5	95	70
FRA	4	8	4	0	0	186,8	4,9	193	178	82,1	9,7	94	61
NOR	1	5	7	1	0	190,9	4,2	200	184	86,1	7,9	98	72
SLO	7	4	4	1	0	185,8	6,0	196	174	89,2	10,4	106	74
SRB	4	4	4	3	1	191,1	7,1	201	175	87,3	14,3	135	69
BIH	0	5	7	3	1	192,4	4,7	202	185	84,6	9,2	98	68
HUN	2	9	5	0	0	188,8	4,6	195	178	86,1	4,2	92	78
CZE	5	4	4	2	0	188,9	6,2	199	179	79,9	3,9	85	72
RUS	4	6	3	2	1	189,0	7,4	205	178	85,3	6,2	95	75
SVK	6	4	3	2	1	188,3	6,6	202	180	80,3	7,4	100	70
FIN	8	7	1	0	0	184,2	4,6	192	174	79,8	6,6	93	70
Σ	69	77	71	27	8	188,8	5,9	x	x	84,1	7,9	x	x
%	27	31	28	11	3								

Results

Competition Characteristics

The average result of a match (33.8:26.6) does not actually differ from the score 33.4:26.6 found at the previous M18 ECh (Visnapuu 2006). On the one hand this confirms the trend of a high number of goals scored during one match, on the other hand it is possible that a certain consolidation occurred there (at previous M18 EChs the number of scored goals tended to rise) owing to the fact that, similarly as in the adult categories, the realisation teams took greater pains to improve the defensive phases of the play.

The average number of goals scored in one match grew from the basic and semi-final groups to placement matches (57.9; 59.7; 61.7). In regards to goal difference, naturally, it was at its highest (7.3) in the basic groups, where the teams with greater differences in their performance encountered each other. Unlike the previous M18 ECh, the mean difference increased in the placement matches (including semi-final matches). We can merely speculate whether this was caused by a loss of motivation or by a lower physical preparedness of the losing teams.

Technical and Tactical Characteristics

Defence

The basic feature was a high level of individual ability to effectively solve the 1:1 situation. This might have been the reason why a number of teams used the substitution of 1-2 defence specialists. This tactical move was recorded in 10 out of 16 participating teams! In the remaining teams it was used only in connection with momentary changes in the line-up or the playing system. Once again we can merely speculate whether it was caused by the effort to achieve a maximally effective defence phase or it was rather the consequence of the M18 ECh programme, so demanding on condition.



Defence Against Fast Break

The changing of defence–attack brought certain complications, namely when defending against a fast break (FB) of the opponent, especially in the case when the substituting player went into a defence position on the far side away from the bench. Most teams tried to go about the substitution of the players based on the situation (according to the development of the opponent's fast break). The teams of RUS and SRB chose a different concept, where the substituting players did not get involved in the defence against FB, trying to get to the bench as fast as possible. On the other hand the teams of FRA and SWE, as a matter of principle, substituted only after stopping the opponent's FB (or after going on to a gradual attack). The HUN team made use of an interesting variation – in case they did not manage to substitute in time, they adopted the defence system 4:2, in which the two substituting players had the function of extended defenders.

The common feature of defending against FB of the opponent was, in all the teams, the effort to return to the vicinity of their own goal area and - only there - to stop the opponent or make him go on to a gradual attack. Only in the SVK team did we repeatedly record the variation when the player involved in the break (in the role of pivot) stayed after the loss of the ball in the offensive half, being active in defence among the offense players going on to FB. The FRA team presented an interesting tactical feature. If they were signalled a warning about a passive play by the referees, two of the players stopped engaging in the combination, taking a defensive position on their own half to defend against the probable FB of the opponent.

Defence Against Gradual Attack

As for the concept, there has been no change since the previous M18 ECh, as the preferred defence systems (DS) were 6:0 and 5:1 once again and the variations in which these DS were presented by the individual teams were very close to those we observe in the adult national teams (NT) of the individual countries. It was noticeable, namely in the Scandinavian teams (SWE, DEN), and in the GER and FRA teams. We consider this fact as proof of a long-term conceptual work with NT in the mentioned countries. In the final phase of M18 ECh, we made an attempt at a certain quantification of the application of individual DS. We took into consideration only the part of playing time when both teams played with full number of players. The results are presented in the following survey:

Defence System	Rate (%)	Time (min)
6:0	35.84	688
5:1	51.56	990
3:2:1	10.94	210
4:2	0.57	11
5+1	0.99	19
3+3	0.1	2
Total	100.0	1920

Looking at the concept of individual DS, we found many systems interesting such as the 5:1 DS with an extended player against the right back (FRA against ISL, SRB against SLO), and the 0:6:0 variations, which were applied by the team of FRA when defending in the situation of being outnumbered. Special attention should be paid to the DS 3:2:1 variation, in which the centre back defender marks the pivot behind him. The method was used by team GER and its successful performance proves the highly advanced tactical skills of the whole team. In our opinion it was just the excellent defence play in combination with the high success rate of the goalkeepers (44 %!) that was one of the crucial factors ensuring first place of the team.

The use of man-on-man defence systems was recorded only in the final stages of the matches, when the losing teams (ISL, ESP) were trying to turn the score. Combined DS



(5+1, 4+2) were applied by the teams based on the situation, namely during the defence when outnumbered. The NOR team also used the variation 4:1+1 in this situation.

Attack

In this phase we noticed in a number of teams (DEN, SWE, ESP etc.) a pronounced similarity with the concepts of their NT's in higher categories. It noticeably manifested more in gradual attacks, namely in the situations when the opponent had enough time to form the defence.

Fast break

It was repeatedly a very successful feature, as it was the basis of 20% of all the goals scored at M18 ECh. The character of FB was influenced by two factors. Firstly it was the above mentioned substituting of defence specialists, which in a way limited the application of all tactical possibilities. Besides the exceptions caused by the development of the match, we could notice the effort in all the teams to first realise FB and only then to substitution. But in many cases the substituted players went to the bench immediately after the opponent managed to get back to his own goal area, so in this way the teams kept losing the chance to make use of aimed prolonged FB.

Another factor naturally consisted in the defence systems that the individual teams applied. In all the teams it was apparent that there was a selected player charged with starting FB. In most of the cases these were the players who later on, in gradual attacks, played the position of the centre back (only FRA and DEN made use of the player in the position of right back). If the mentioned players defended in the position of extended defenders (BIH, SVK), after the gain of the ball they stayed in the vicinity of their own goal area and the first wave of the fast break was then usually performed by outside defenders or (which was a more usual variation) also other players defending inside the defensive formation took part in it.

However, a more frequent move was the one in which the mentioned player defended in the position of the left outside defender (RUS, HUN, SLO, CRO). After the gain of the ball the player disengaged himself to pass in the direction of his own goal area, and then organised a FB.

All the teams coped with FB in two waves. In the first we noticed a marked preference of leading the break on the left side in the team of SRB; on the other hand it was on the right side in the CZE team (also thanks to this fact the player Linhart became the most successful shooter of M18 ECh). More noticeable differences could be perceived in the way of leading the second wave of fast break. Some teams (FIN, RUS, HUN, FRA, ISL, and DEN) preferred finishing in the area of the wing or the pivot, or else near the line of the goal area, to create and solve the 1:1 situation. FRA tried to systematically prepare such a finish by means of the players from the first wave running from the wing area into the area of the second pivot. The remaining teams attempted to create the shooting position for the finish from the area of the backs. The players in the second wave then moved to the break half directly along the shortest path, but in case of GER, ISL and CZE, we noticed an intentional change of positions (crossing) between the backs. In SVK and CZE teams we saw the finish of the second wave FB only sporadically.

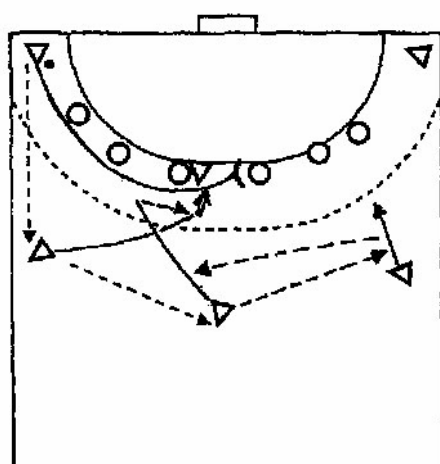
In the specific situations, all the participants (with the exception of SVK) made use of FB after a fast passing of the throw off. So we may claim that this element became, on the level of national teams in the male junior categories a current tactical means. Most teams applied the same concept as in a usual FB.

Gradual Attack

There was again a characteristic high rate of individual solutions for the playing situations. All the observed teams had at their disposal players with an excellent level of individual playing skills supported by a high level of their fitness abilities, namely that of dynamic strength. An important factor for the success rate of gradual attacks was also keeping the pace and a high engagement during the whole match. In this respect the engagement of all the players from the bench was important, being decisive namely in final stages of the match. Some teams (FIN, BIH, CZE, and SVK) did not appear to be able to engage all the players from the bench evenly, either because of their injuries or simply because of lesser playing skills of the players on the bench.

The basis of the attack concept of the majority of the participating teams was one pivot system. Within the range of this system there was often applied, to exert stronger pressure on the inner defenders, the run of the back (FRA, CRO, RUS, SLO, SRB, BIH) or the wing (SWE) into the area of the second pivot. An example of such a combination played by the team SWE is drawn in Diag. 1.

Diag. 1

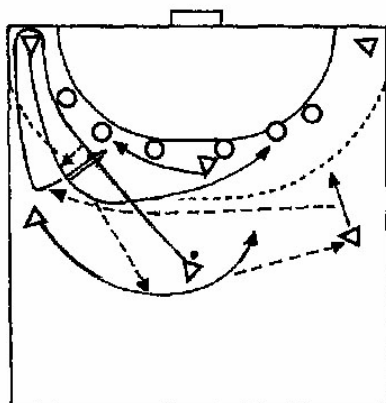


SWE

1

Another much-used combination (DEN, ISL, NOR, SVK) was the change of positions between the back and the wing and the ensuing variable activity of all the three backs – for an example see Diag. 2

Diag. 2

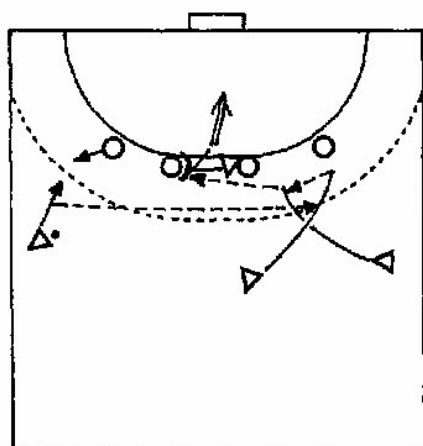


DEN

2

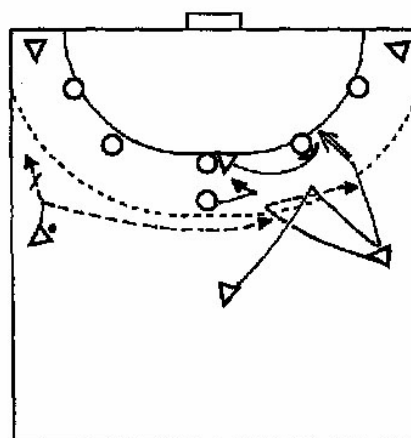
The change of places between the backs as a preparatory combination for an alternative finish (shooting x breaking free of the pivot) was in general a very frequent tactical phenomenon. The examples are shown in Diag. 3, 4, 5 and 6.

Diag. 3, 4, 5, 6



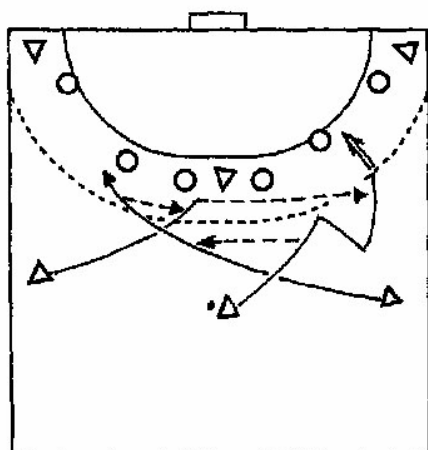
ESP

3



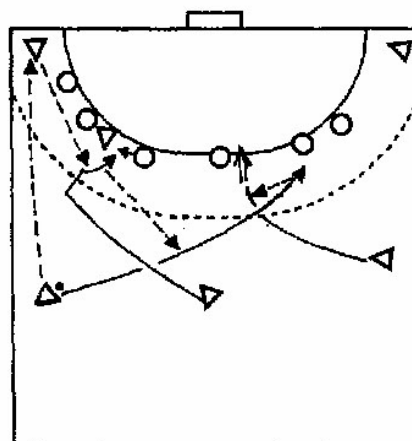
SWE

4



NOR

5

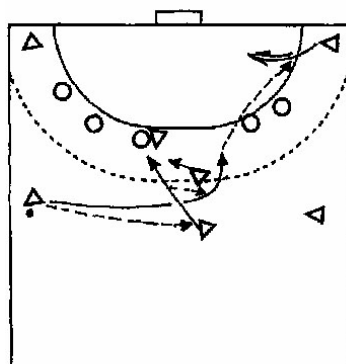


GER

6

The high level of individual playing skills of a number of players is also testified by the application of a long pass to the opposite wing across the goal area after the change of positions between the backs. An example played by DEN is shown in Diag. 7.

Diag. 7

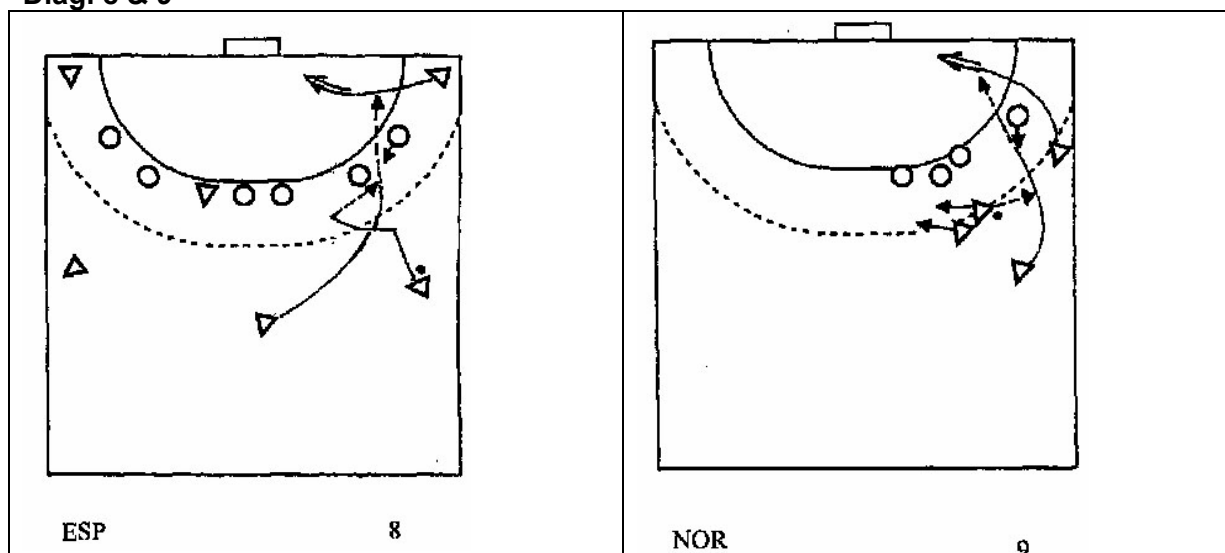


DEN

7

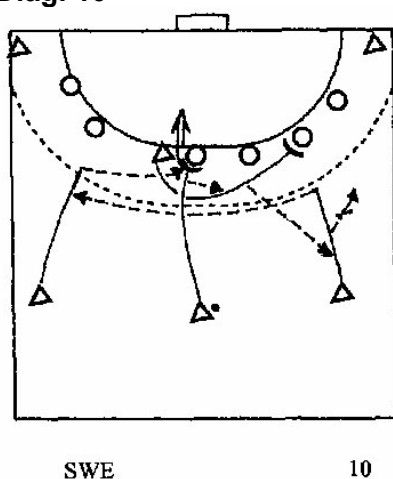
With view to the above mentioned level of the players' skills we were also able to see the use of play over the goal area ("in the air"), both as a part of a combination (Diag. 8) and in the free throw execution (Diag. 9).

Diag. 8 & 9



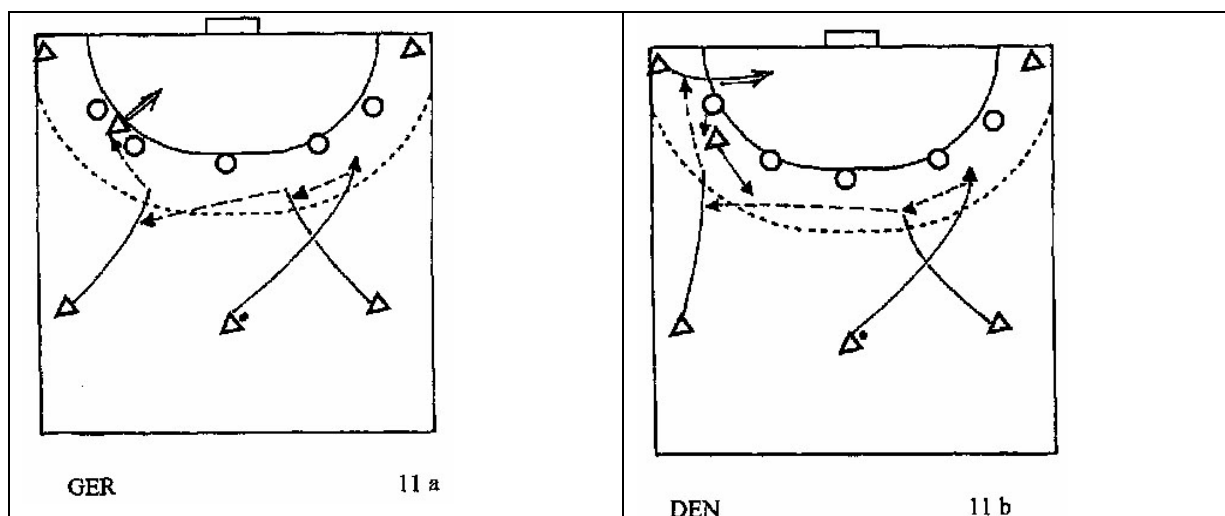
We also often witnessed the engagement of a pivot in preparatory combinations, most of all in cases when the pivot moved in this way from the middle of the goal area to one side, preparing thus a situation suitable for the run of a back into the area of the pivot on the other side – see Diag. 10

Diag. 10



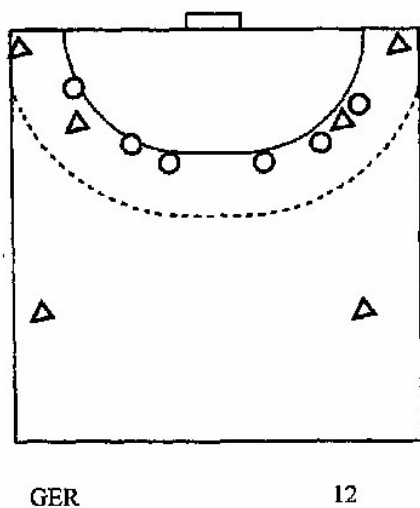
The affectivity of the position of the pivot outside the centre of the goal area was repeatedly shown by both the best teams (GER, DEN) against an opponent that was in a numerical inferiority. In power play the pivots took up a position between the first and the second side defender on one side (Diag. 11 a, b). In this actual case then the centre and right back due to their cooperation outnumbered the opponent on the left side, and the situation could be variably made use of by the remaining attackers – examples see Diag. 11a, 11b.

Diag. 11a, 11b



The GER team applied an attack system with two pivots even in some phases of the play when neither of the teams outnumbered the other. Even in this case both the pivots took up a "wide" position (Diag. 12), thus forcing the inner defenders to cooperate in a relatively large area. The situation could be made use of by the individually excellently prepared connections (S. Fäth was declared the Most Valuable Player of M18 ECh).

Diag. 12



When playing numerical inferiority in attacks, most teams played, as in the two previous championships (Visnapuu 2006, Valdevit et al 2004) without a pivot, trying to make use of the individual assets of the best individuals. However, the DEN and SWE teams applied, as a variation when outnumbered, the play without the right wing. This was probably caused by the fact that in both cases the cooperation of their pivot and backs was among the most effective means of attack and the mentioned teams did not want to give them up even when being numerical outnumbered.



Characteristics of the Best Teams

Germany

The winner of the championship gave the impression of the best prepared team as for condition (namely strength). The fact manifested itself namely in defence phase. Although the team chose a DS relatively demanding on condition (3:2:1), even before the end of the tournament there was no noticeable decline in strength. Moreover it was a very balanced group of players (A. Becker was declared the best defender of M18 ECh), so during the championship the load could be distributed much more evenly than it was the case with some other teams. As has already been mentioned, the hard and compact defence is connected with the excellent performances of the balanced pair of goalkeepers. It is definitely no coincidence that they ended up in the first two places when looking at the rate of success (45 and 43 %). Even in this case we can state an equal distribution of the load. The high quality of the play is also confirmed by a markedly higher number of ball gains (160 compared to about 130 of the other teams in the top half of the table) recorded by means of quantitative analysis.

The break phase was characterised by the high level of playing discipline. The players moreover have a high degree of individual skills. Thanks to this, the attack play of the GER team was effective specifically in the elements dominating in modern handball – the solution of 1:1 situation and in simple combinations of rather small groups of players (2, 3). The dominant feature consisted explicitly in the play of the backs, who achieved the success rate 48% in the tournament. We were somewhat surprised by the fact that the markedly higher number of ball gains was not manifested in the number of FB, which in the case of GER reached 67. The number is comparable with the other medal teams (65, 67).

Denmark

As usual the team consisted of technically excellently prepared players. Outwardly it showed (including the realisation team) considerable solidarity and was an example of “team spirit“. Together with a high involvement of all the players it helped the team to cope with the decisive phases of the matches.

In the defensive phases, the team was sufficiently aggressive, which to a certain extent eliminated a kind of height handicap (the body height average of the team is under the average of M18 ECh, being the lowest out of the teams placed 1 - 4). The attack play was varied, with major emphasis on the cooperation of backs with the pivot (Beck-Hansen was declared the best pivot of M18 ECh). That is why the statistical survey shows that Denmark differs from all the other finalists with the highest number of shots from the 6m area and a lower number from the area of backs (9m). There are perhaps some reserves in the success rate from 6m area (57 %). The tactical scope of the team is also proved by the fact that out of all the finalists it had the most evenly distributed shots from individual areas in gradual attacks.

Sweden

From a certain point of view SWE might be called the team with the toughest luck at the 2008 M18 ECh. The team ranked third, while getting, as the only team at the tournament, at least one point in the match with the winner of the championship and losing just one match during the whole tournament (semi-finals with DEN). The team's playing performance was moreover influenced by injuries of key players in the second half of the championship.

From the point of view of preconditions it was a very well balanced team with suitable somatotypes of all the players on all positions. The playing concept was based on thorough defence with an excellent transition to FB. The fact can be documented also by means of the highest affectivity of FB (82 %) out of all the finalists. In gradual attacks, the effective SWE play made a simple impression thanks to the excellent backs. As for the cooperation



elements, we recorded a frequent application of the run of one wing into the area of the second pivot.

Iceland

Like SWE, it was a team with very good somatic, tactical and technical presuppositions. Moreover, one of the most distinctive personalities of M18 ECh – A. Palmarrsson, who was declared the best centre back of the tournament, was a team player. The concept of the play in defence was, also with respect to the somatic presuppositions, based on DS 6:0 and only in case the team wanted to turn the development of the match, another system was used (5:1). Perhaps that is why ISL had a lower number of ball gains and therefore also fewer FB than other finalists.

In gradual attacks we recorded the preference of the cooperation of the back (namely centre back) – pivot, in some cases also rather risky kinds of passes. This may explain the higher number of ball losses compared to the other finalists. A certain decrease of playing performance in the final phase of the tournament might have been, in our opinion, caused by insufficient fitness preparation.

Conclusions

On the basis of the above mentioned facts, the following general conclusions can be stated:

1. The similarity of the playing concept of youth teams with the concept of national teams of men or juniors may be considered a permanent tendency. We hold it to be proof of a long term cooperation of the national federations.
2. The level of individual playing skills keeps growing all the time. The best teams likewise have a balanced group of players at their disposal, so owing to regular substituting they are able to keep a high playing pace during the course of all the matches.
3. As for cooperation, there is a prevalence of smaller groups of players (2, 3), with the quality of their performance growing.
4. Most of the teams have managed to make use of the fast performance of the throw off and this element became part of the currently applied tactical means.
5. There is a growing rate of forward and combined defence systems used by individual teams.
6. We considered the high occurrence of specialist substitution as a negative tendency.

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