

THE CHARACTERISTIC OF HORSES USED IN HIPPOThERAPY IN SELECTED HORSE THERAPY CENTRES IN POLAND

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Abstract. The study aimed at characterisation of horses used in hippotherapy in five selected rehabilitation centres in Poland. All these centres operate under the patronage of the Polish Hippotherapeutic Association with activities conducted by qualified hippotherapy instructors. The analysis covered 34 horses in total. Sex, age, breed and basic zoometric measurements related data were collected. They were compared in tables and on diagrams, taking into account sex and breed group. It was found that only geldings and mares, respectively 71 and 29%, were used in hippotherapy in the analysed centres. The average herd age was 8.4 years, with a youngest horse of 4 years and an oldest one of 20 years. The height at the withers in these horses ranged 130 to 167 cm, while their circumference of chest 156–210 cm. No significant differences were found in the discussed parameters between gelding and mare groups, whereas numerous differences were observed between breed groups. The most numerous represented horses were the Wielkopolski one (25%) and the Hutsuls (21%); 15% of the herd constituted horses of unknown origin. The analysed horses represented the riding, general-utility and draught types. In all centres, the number of horses (minimum 3) and their diversity in respect of exterior allow for choosing a horse individually to patient's age and disease.

Key words: age, breed, hippotherapy, horses, rehabilitation, sex

INTRODUCTION

In recent years, more and more has been talked about hippotherapy in Poland and new centres, proposing in their offer therapeutic activities with the use of horses, have come into being in large numbers. According to the Polish Hippotherapeutic Association, the term hippotherapy is understood as therapeutic procedure at large, in which horses are used. In this meaning, hippotherapy comprises several spheres: equine movement therapy, equestrian rehabilitation (physiotherapy), horse assisted therapy (through contact with horses) and bareback riding and psycho-pedagogic horse riding. Equine movement therapy relies on passive submission to the motion of horse, with patient making no exercises at al.

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Equestrian rehabilitation combines the above sphere with therapeutic gymnastic exercises, with all exercises being individually well-matched to a individually by the therapist. Horse assisted therapy through contact with horses does not need to include horse riding and its most essential element is emotional contact of patient with horse. This therapy may include, among other, staying close to horses and observing them, caring and grooming assistance, and horse carriage riding. This is a desirable form of therapy for people with horse riding contradictions, for older people and for those with different types of emotional and psychical disturbances. Psycho-pedagogic horse riding and bareback riding are activities, the main objective of which is intellectual, cognitive, emotional and physical improvement, with activities taking place both on horse and by it. Sport horse riding and recreational horseback riding for disabled persons are not a part of hippotherapy, despite many therapeutic aspects, but are closely related to hippotherapy.

In hippotherapy conducted correctly a whole therapeutic team is involved, which consists, depending on disease and type of activities, of: hippotherapy and horse riding instructors, therapists and medical specialists, psychologists and pedagogues, and volunteers. However, the centre of this team consists always of a correctly trained horse, of accurately specified psychological predispositions, good health, and appropriate sex, breed and exterior.

The growing popularity of hippotherapy brings along a rise to request for horses suitable for that type of utility, which can be practically considered a separate riding utility, apart from recreational and sport ones. A question arises what horses are used with success for rehabilitation purposes in horse therapy centres that have been operating for several years, and thus having experience. There are not many communications concerning horses used in that direction, which can facilitate selection of appropriate horses for new or offer-extending horse riding and rehabilitation centres.

The present study aimed at examining a horse herd used in hippotherapy in selected horse therapy centres in Poland with respect to sex, age, breed and basic exterior parameters.

MATERIAL AND METHODS

Observations were carried out in five horse therapy centres operating in the Northern and Western Poland. All these centres have been in operation for several years and covered by the patronage of the Polish Hippotherapeutic Association, with activities conducted by qualified instructors specialised in hippotherapy in co-operation with medical specialists.

The analysis included 34 horses used for therapeutic activities. The number of horses in respective horse therapy centres was as follows:

- Centre 1 – 4 individuals,
- Centre 2 – 7 individuals,
- Centre 3 – 3 individuals,
- Centre 4 – 10 individuals,
- Centre 5 – 10 individuals.

Basing on breeding records, information on horse sex, age and breed was collected. Using a zoometric measuring stick and tape, three basic zoometric measurements were taken, as well as step length measurement. On the grounds of these measurements, boniness index and chest circumference index were calculated according to the following formulas:

Boniness index = (circumference of the front cannon / withers height) x 100%;

Chest circumference index = (circumference of chest / withers height) x 100%.

The obtained results were compared in tables and on diagram, after calculating mean values and standard deviations and determining significance of differences between the means. Breed groups numbering 2 individuals (Fjord horses and others) were ignored in statistical calculations, for which Statistica® 6.0 software package was used.

RESULTS

Table 1 presents distribution of sex among the horses used in hippotherapy in the analysed horse therapy centres. As it is seen in table, geldings were mostly used for therapeutic activities (24 horses – 71%), while mares were not so numerous (10 individuals – 29%). No stallions were used for therapeutic activities in horse therapy centres under observations.

Table 1 also presents the average age, values of basic zoometric measurements and constitution indices for geldings and mares separately and for total horses. No significant differences were found between geldings and mares in respect of parameters presented in the table, even though a big difference was observed between minimum and maximum values. As results from the table, age mean value for the horses used in hippotherapy in horse therapy centres under discussion was 8.4 years, with a youngest horse being 4 years old and an oldest one of 20 years. The horses averaged 143.8 cm in height at the withers, with this height ranging in them 130 to 167 cm. The average circumference of chest in the discussed horse group was 175.9 cm and the average circumference of cannon was 19.9 cm. The length of step ranged 120 to 163 cm. A significant correlation was found between the withers height and the step length in these horses. As it is commonly known, constitution indices illustrate better the harmony of body constitution than absolute dimensions, in particular when the discussed horses represent different utility types and breeds. The value of boniness index in the examined horse group ranged 12 to 18.2%, with a mean value of 13.9%. The average chest circumference index was 122.4%, ranging 108.5 to 139.4%.

Table 2 presents the breed structure of “therapeutic” horses. In the horse herd under discussion, 7 breed groups were isolated. As it results from the table, the Wielkopolski horses (9 individuals) and the Hutsul ones (7 horses) were represented most numerous (25 and 21%, respectively). The Polish Koniks, numbering 6 individuals, constituted 18% of the examined horse group; also horses of unknown origin (UO) were used in the horse therapy centres under discussion, which made up 15% of the examined group. The Haflinger horses (3 individuals) constituted 9% of the herd, while the Fjord horses and other ones, with 1 New Forest pony and 1 horse after the Wielkopolski stallion and the New Forest mare, were least numerous. These groups represented 6% of the examined herd each.

Table 1. Mean age and values of basic measurements, step length and constitution indices for horses used in hippotherapy in the selected Polish horse therapy centres according to sex
 Tabela 1. Średni wiek i wartości podstawowych wymiarów, długości kroku oraz indeksów budowy koni użytkowanych w hipoterapii w wybranych ośrodkach terapeutycznych

Sex Płeć	Statistical measure- ments Miara statystyczna	Age, years Wiek, lata	Height at withers, cm Wysokość w kłębie, cm	Chest circumference, cm Obwód klatki piersiowej, cm	Cannon circumfe- rence, cm Obwód nadpęcia, cm	Step length, cm Długość kroku, cm	Boniness index, % Indeks kościwości, %	Chest circumference index, % Indeks obwodu klatki piersiowej, %
Geldings Watachy n = 24	\bar{X}	8.4	144.8	176.3	20.3	136.9	14.0	121.8
	S	4.78	10.52	12.71	2.03	9.55	1.46	7.76
Mares Klaczki n = 10	\bar{X}	8.3	141.6	175.0	19.2	131.7	13.5	123.8
	S	3.53	11.19	12.20	2.26	13.39	0.92	7.07
Total Ogółem n = 34	\bar{X}	8.4	143.8	175.9	19.9	135.4	13.9	122.4
	S	4.4	10.65	12.93	2.13	10.88	1.33	7.52
	Min	4	130	156	16	120	12.0	108.5
	Max	20	167	210	26	163	18.2	139.4

\bar{x} – mean – średnia, S – standard deviation – odchylenie standardowe, Min – minimum – minimum,
 Max – maximum – maksimum.

Table 2. Mean age and values of basic measurements, step length and constitution indices for horses used in hippotherapy in the selected Polish horse therapy centres according to breed

Tabela 2. Średni wiek i wartości podstawowych pomiarów, długości kroku i indeksów budowy koni użytkowanych w hipoterapii w wybranych ośrodkach, w zależności od rasy

Breed Rasa	Statistical measure- ments Miarą statystyczna	Age, years Wiek, lata	Height at withers, cm Wysokość w kłębie, cm	Chest circumference, cm Obwód klatki piersiowej, cm	Cannon circumfe- rence, cm Obwód nadpęcia, cm	Step length, cm Długość kroku, cm	Boniness index, % Indeks kościwości, %	Chest circumference index, % Indeks obwodu klatki piersiowej, %
Polish Konik Konik Polski n = 6	\bar{X}	6.3	136.8 a,b	165.7 a,b	19.0 a,b	136.3 a,b	13.9 a	121.04
	S	2.25	3.19	7.92	1.41	9.85	0.98	4.09
Wielkopolski Wielkopolska n = 9	\bar{X}	9.7	159.3 a,c,d,e	185.9 a,c	20.6 a,c	147.0 a,c,d,e	12.9 a,b,c	116.7 a,b
	S	4.69	5.22	11.15	1.04	7.40	0.64	5.48
Haflinger Haflinger n = 3	\bar{X}	5.3	143.0 c,b,f	174.3	21.3 b,d	131.0 c	14.9 b,d	121.8
	S	1.53	1.73	14.98	0.58	12.17	0.22	9.01
Hutsul Huculskie n = 7	\bar{X}	7.4	133.9 d,f,g	167.1 c,d	17.9 c,d,e	125.9 b,d	13.3 d,e	124.9 a
	S	3.15	2.91	9.49	1.07	5.34	0.66	8.08
UO NN n = 5	\bar{X}	11.0	142.4 e,g	178.2 b,d	22.0 e	130.2 e	15.4 c,e	125.3 b
	S	6.63	5.94	4.32	3.24	9.88	1.97	5.40
Fjord* Fiordingi* n = 2	\bar{X}	8.0	139.5	178.0	20.8	134.0	14.8	127.4
	S	5.66	4.95	18.38	3.18	8.49	1.75	8.66
Other* Inne* n = 2	\bar{X}	10.0	139.0	186.5	19.0	134.5	13.7	134.2
	S	7.07	1.41	4.95	1.41	0.71	1.16	2.20

\bar{X} – mean – średnia, S – standard deviation – odchylenie standardowe; a, b, ... – within the particular columns the means marked with the same letter differ significantly at $p \leq 0.05$ – średnie w kolumnach oznaczone tymi samymi literami różnią się istotnie przy $p \leq 0.05$; * – groups not included in statistical calculations due to small number of animals – grupy nie uwzględnione w obliczeniach statystycznych ze względu na małą liczebność; UO/NN – horses of unknown origin – konie o nieznanym pochodzeniu.

Table 2 also presents the average age and the values of zoometric measurements and basic body constitution indices for the horses used in hippotherapy according to their breed. Despite notable age diversity, no significant differences were found between mean values for respective breed groups. The average height at the withers for the Wielkopolski horses was 159.3 cm, thus they were significantly higher from the horses of other breeds. The Hutsul horses were the shortest at the withers, with a mean value of 133.9 cm. The Wielkopolski horses were characterised by significantly higher average circumference of chest (185.9 cm) when compared to Polish Koniks and Hutsuls. The smallest average circumference of chest was a characteristic of Polish Koniks (165.7 cm), while the largest average circumference of cannon was found in the horses of unknown origin (UO). This value amounted to 22 cm and was significantly higher from the mean value stated for the Hutsul horses (17.9 cm). Furthermore, the Hutsul horses were characterised by the average circumference of cannon that was significantly lower from that for the Wielkopolski and Haflinger horses. Like in case of the withers height, the Wielkopolski horses surpassed significantly other breed groups in respect of the average length of step (147 cm). The shortest average length of step was found in the group of Hutsul horses. The smallest average boniness index and chest circumference index were found in the Wielkopolski horses (12.9% and 116.7%, respectively), whereas the largest boniness index, significantly higher from the value determined for the Wielkopolski and Hutsul horses, was a characteristic of the UO horses (15.4%). From among all horses included in the statistical analysis, this group of horses was also characterised by the largest average chest circumference index (125.3%). On the other hand, the smallest mean value of chest circumference index was found in the Wielkopolski horses (116.7%).

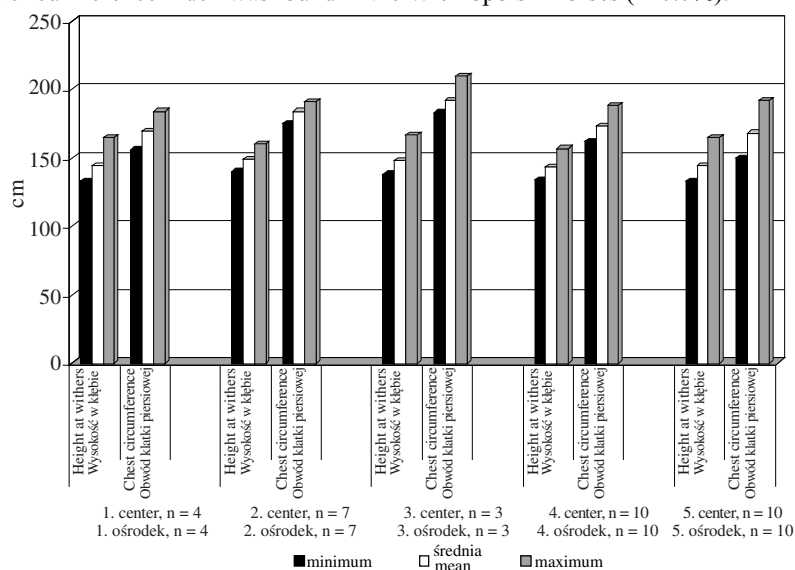


Fig. 1. Minimum, mean and maximum values for height at the withers and circumference of chest in horses in respective horse therapy centres

Rys. 1. Minimalne, średnie i maksymalne wartości wysokości w kłębie i obwodu klatki piersiowej koni w poszczególnych ośrodkach

Figure 1 presents minimum, mean and maximum values of the withers height and the chest circumference for the horses in respective horse therapy centres. As it is seen on it, all horse therapy centres had horses of differentiated measurements, with the number of horses used in hippotherapy ranging 3 to 10 in respective centres.

DISCUSSION

The absence of stallions in the discussed group of horses used in hippotherapy, showed in Table 1, is consistent with recommendations of many authors [Jasiak 1993, Cieśla 2000, 2002, Wasilewska 2001]; however the observations of Nowicka-Posłuszna and Bielawska [1993] demonstrated that there were horse therapy centres where stallions are used in this type of therapy. It is known commonly that stallions are usually characterised by their lively temperament and it is difficult to foresee their behaviour and reaction when a mare in rut is spotted or smelled by them, therefore their use in hippotherapy is controversial, although Patalon [2004] allows such a possibility. Also some mares can present an inappropriate behaviour, in particular when in rut. This refers mainly to increased susceptibility of the groin area [Jasiak 1993, Nowicka-Posłuszna and Bielawska 1993, Cieśla 2000, 2002, Wasilewska 2001, Patalon 2004]. The results presented at Table 1, are consistent with the recommendations mentioned above.

In Poland, there are not legal provisions that regulate the question of age in horses used in hippotherapy. Many authors report that minimum age of horses used in hippotherapy should be 5 years [Strauß 1991, Nowicka-Posłuszna and Bielawska 1993, Cieśla 2000, 2002, Wasilewska 2001, Patalon 2004], and Jasiak [1993] suggests a higher age limit (7 years). It is thought that young horses can be too excitable and do not have required skills to cope with therapeutic work. In the light of the above, the use of 4 years old horses in some horse therapy centres could raise objections. However, 4 years old horses in the discussed centres are being gradually trained to hippotherapy. They are not burdened with work equally as older animals and their use in therapeutic activities has been preceded by thorough analysis of their character and temperament. The oldest horse used for therapeutic activities in the discussed centres is 20 years old. The upper age limit of horses suitable for hippotherapy is not strictly defined. The authors are in agreement that it is determined by horse health condition. Senile lesions, such as stiffness and myatrophy, or other health problems exclude a horse from therapeutic work [Nowicka-Posłuszna and Bielawska 1993, Cieśla 2000, 2002, Wasilewska 2001]. As Strauß [1991] reports, some horses at the age of 12 years may not fulfil health criteria, while other – even 18 years old – are fully useful for that utility type. This is confirmed by the present findings, as well as by those of Nowicka-Posłuszna and Bielawska [1993], who found that in a group of 15 horses used in horse therapy 6 animals aged 18 and 19 years and 1 turned even 24 years. On the other hand, the average age determined by Kaproń and Nowak [2000] for different breed groups of horses used in hippotherapy in different horse therapy centres ranged 5 to 12 years.

The opinions of authors on the withers height of horses suitable for hippotherapy are not consistent. Jasiak [1993] reports that this height should be 140–155 cm; Nowicka-

Posłuszna and Bielawska [1993] are of the same opinion, preferring horses with the height to 145 cm. On the other hand, Strauß [1991] reports that average size of horses for hippotherapy is 155–160 cm. Kosiniak-Kamysz et al. [2000] believe that both horses of 150–160 cm and 135–150 cm in the height at the withers are suitable for hippotherapy. In the light of the above, the average withers height of the horse group analysed in the present study (143.8 cm) is correct for horses preferred in hippotherapy, being similar to the average wither height of horses covered by the study of Nowicka-Posłuszna and Bielawska [1993] – 148.9 cm. All authors mentioned above are in agreement that horses used in hippotherapy should differ in respect of height at the withers. The smallest horse covered by the present study was 130 cm at the withers, whereas the largest was 167 cm. Similar range of withers height was observed by Nowicka-Posłuszna and Bielawska [1993] – 129.5–167 cm. On the other hand, it was found in the previous own studies carried out in the Western Pomerania region that the smallest horse (Shetland pony) used in hippotherapy was 65 cm at the withers, whereas the largest was 170 cm [Cieśla 2002].

The horses used for therapeutic activities in horse therapy centres under discussion differed fundamentally in respect of other parameters, i.e. of chest and cannon circumferences and boniness and chest circumferences indices (Table 1). In the horses covered by the present observations, the smallest circumference of chest was 156 cm, while the largest was 210 cm. They are more differentiated than the values reported by Nowicka-Posłuszna and Bielawska [1993] – 171 and 199 cm, respectively. Also chest circumference index differed largely. The minimum index was 108.5%, which is a correct value for horses representing the riding type according to Walkowicz and Jodkowska [1997]. The maximum index in therapeutic horses stated in the own study was 139.4% and did not exceed the maximum value determined by the authors mentioned above for draught horses at 130%. The smallest chest circumference index in therapeutic horses examined by Nowicka-Posłuszna and Bielawska [1993] was 110.91% and the largest was 132.58%, being thus slightly less differentiated than those obtained in the present study. Similar situation was observed with respect to cannon circumference and boniness index. Among the horses covered by the own study, the smallest circumference of cannon was 16 cm, while the largest was 26 cm. Nowicka-Posłuszna and Bielawska (1993) found in their study that the smallest circumference of cannon in therapeutic horses was 17.5 cm, while the largest was 23 cm. Larger differentiation in the values of cannon circumference in the horses covered by the present study was reflected in larger diversity of boniness index values. The minimum value of this index in the examined horse herd was 12%, while the maximum one was 18.2%. Similar boniness index values in the study of Nowicka-Posłuszna and Bielawska [1993] were 11.98 and 14.56%, respectively. It is known commonly that boniness index is considered to be the most important exterior index. It tells about horse boniness and it is important that its value was right. According to Walkowicz and Jodkowska [1997], the value of boniness index below 12% is evidence of horse thin-boniness. As these authors report, riding horses are characterised by boniness index with the range of 12–12.5%, general-purpose horses of 12.5–13.5% and harness horses of 14–15%, while all indices describing one horse should be right for the utility type represented by a given horse. In the light of the above, the boniness indices of 18.2% and 16.7%, which characterised 2 of five horses of unknown origin, are

evidence of not very harmonised constitution of these horses, in particular that their chest circumference indices were 125.09% and 116.7%, respectively.

The authors are in agreement that in correct hippotherapy the horse movement, in particular the walk, is of fundamental importance, which must be natural, regular, springy, flexible, soft and smooth [Strauß 1991, Jasiak 1993, Nowicka-Posłuszna and Bielawska 1993, Cieśla 2000, 2002, Wasilewska 2001]. The quality of gait was not assessed in the present study, but only the length of horse step in the walk. There are no data in the available literature referring to the length of step in horses used hippotherapy, which makes the interpretation of obtained results difficult.

Table 2 presents the participation of horse breeds used in hippotherapy in the analysed horse therapy centres. The most numerous were the Wielkopolski horses, the Hutsul horses and the Polish Koniks. This is consistent with recommendations of other authors to use in hippotherapy native half-bred horses from among large horses and primitive horses from among small breeds. [Jasiak 1993, Cieśla 2000, 2002, Patalon 2004]. The use of pure-bred breeds, Thoroughbreds and pure-bred Arabs, is not recommended due to their too lively temperament [Jasiak 1993, Cieśla 2000, 2002]. While pure-bred horses were not used in horse therapy centres under discussion, it was stated in the previous own studies that a Thoroughbred mare had been used for therapeutic activities, which had been fulfilling all conditions, also with respect to character and temperament [Cieśla 2002]. Also Kaproń and Nowak [2000] observed that among 59 horses used in hippotherapy in 22 horse therapy centers 4 of them represented pure-bred Arabs. In their study, the most numerous group were Hutsuls (22 individuals). Remarkable suitability of this breed for hippotherapy is also confirmed by Kosiniak-Kamysz et al. [2000]. The native primitive breed of Polish Koniks can be also used in hippotherapy with success, which is confirmed by the present study as well as by the observations of other authors [Nowicka-Posłuszna and Bielawska 1993, Kaproń and Nowak 2000]. However, as Jasiak [1993] reports, there are individuals among horses of this breed with unsuitable character traits.

Table 2 presents the exterior parameters of horses submitted to observations taking into account their breed-specific affinity. Kosiniak-Kamysz et al. [2000] and Kaproń and Nowak [2000], when analysing the exterior of Hutsul horses used in hippotherapy, determined mean values for their basic measurements as 135.7–178.9–17.7 cm and 135.7–168.4–18.15 cm. They are proper values for horses of that breed, just as the measurements of Hutsuls covered by the present study. The Hutsul horses covered by the own observations and by the study of Kaproń and Nowak [2000] were also characterised by the same values of boniness and chest circumference indices and the average age. The Polish Koniks used in hippotherapy in the study of Kaproń and Nowak [2000] surpassed twice in respect of age those included in the present study (12 years old on the average), were on the average by 2 cm smaller at the withers, and were characterised by larger circumference of cannon by almost 1 cm and by larger chest circumference index, being 126.16%. Apart from the Polish Koniks and Hutsuls, they distinguished another 6 breed groups, of which the Małopolski horses were characterised by the smallest chest circumference index [118.65%], while the Arab-Murinsulan horses and Arab-Polish Koniks by the largest (almost 129% and 126%, respectively). The average boniness indices in respective breed

groups in the study of authors mentioned above ranged 12.7% (pure-bred Arabs, half-bred Anglo-Arabs and Arab-Polish Koniks) to 15.46% (Shetland ponies). In the present study, the smallest values of this index were found in the Wielkopolski horses (12.9%), while the largest in the horses of unknown origin (15.4%).

There is an unanimous opinion among the authors that horses used in hippotherapy in a horse therapy centre should differ in respect of their exterior due to a cardinal rule that speaks about choosing a horse individually to a patient [Strauß 1991, Cieśla 2002, Wasilewska 2001, Patalon 2004]. Therefore, well-prepared horse therapy centres should have several horses of different exterior, in particular as height at the withers and chest circumference are concerned. As it is seen on Fig. 1, in all horse therapy centres under observation there were at least 3 horses that differed in respect of the traits mentioned above. The presence of larger horses in these centres, with a height of 150 cm at the withers, certainly enables and facilitates also rehabilitation activities for higher and heavier patients.

CONCLUSIONS

Horses used in hippotherapy in the horse therapy centres covered by the study complies with the conditions of horse selection with respect to that utility type as far as their sex, age, breed and exterior parameters are concerned. The carried out observations confirm a possibility of training gradually 4 years old horses to rehabilitation activities, i.e. the younger ones that are recommended by the literature, provided that they have been thoroughly evaluated in advance in respect of their psychological features and skills. From among large horses, native half-bred breeds (Wielkopolski horses) were most frequently used in hippotherapy, while native primitive breeds – the Hutsul horses and the Polish Koniks – out of smaller breeds. A notable group was also horses of unknown origin. With regard to the exterior of therapeutic horses, they represented the riding type, as well as general-purpose and draught ones. The analysis showed that also horses of non-harmonious constitution were used successfully for activities, which proves that exterior is not the most important criterion in selecting horses for hippotherapy. All horse therapy centres had several horses of different size, which allows for choosing a horse individually for a patient and enables conducting activities for different age groups.

It should be always remembered that a fundamental element determining the usefulness of a horse for hippotherapy is a proper (well fit) character and psychic constitution (temperament). The analysis of psychic features is yet another extensive issue and was not the object of the presented paper, however all the horses observed were even-tempered and of gentle and friendly nature in the opinion of instructors working with them.

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CHARAKTERYSTYKA KONI UŻYTKOWANYCH W HIPOTERAPII W WYBRANYCH OŚRODKACH REHABILITACYJNYCH W POLSCE

Streszczenie. Celem pracy była charakterystyka koni użytkowanych do hipoterapii w pięciu wybranych ośrodkach rehabilitacyjnych w Polsce. Wszystkie ośrodki objęte są patronatem Polskiego Towarzystwa Hipoterapeutycznego, a zajęcia prowadzą tam wykwalifikowani instruktorzy hipoterapii w porozumieniu z lekarzami. Analizą objęto łącznie 34 konie. Zebrano dane dotyczące płci, wieku, rasy i podstawowych wymiarów zoometrycznych. Dane zestawiono w tabelach i na wykresie, z uwzględnieniem płci oraz grupy rasowej. Stwierdzono, że w omawianych ośrodkach wykorzystywano do hipoterapii wyłącznie wałachy (71%) oraz klacze (29%). Średni wiek stada wyniósł 8,4 roku, najmłodszy koń liczył 4 lata, a najstarszy 20 lat. Wysokość w kłębie koni wahała się od 130 do 167 cm, obwód klatki piersiowej 156–210 cm. Nie stwierdzono istotnego zróżnicowania omawianych parametrów pomiędzy grupą wałachów i klaczy, natomiast liczne różnice istotne zaobserwowano pomiędzy grupami rasowymi. Najliczniej reprezentowane były konie wielkopolskie (25%) oraz konie huculskie (21%), 15% grupy stanowiły konie o nieznanym pochodzeniu. Konie reprezentowały typ wierzchowy, ogólnoużytkowy i pociągowy. We wszystkich ośrodkach liczba (minimum 3) i zróżnicowanie koni pod względem pokroju pozwalają na indywidualny dobór konia do wieku i schorzenia pacjenta.

Słowa kluczowe: hipoterapia, konie, płeć, rasa, rehabilitacja, wiek

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