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STUDY REGARDING THE USE OF MODERN MEANS OF VIDEO RECORDING AND GPS-TRACKING IN MONITORING THE DIPSIC BEHAVIOR IN DOMESTIC CATS

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Abstract: The aim of this research was to establish a direct correlation between the physical activity level and the dipsic behavior in adult cats, and also to investigate and perfect the modern GPS tracking and video recording means in monitoring different types of behaviors and performing complex ethograms in domestic cats.

***Key words**: dipsic behavior, GPS tracking, domestic cats.*

INTRODUCTION

In the present study we performed the behavioral analysis of domestic cats living strictly indoors with an emphasis on the level of physical activity, as a physiological factor with impact on the dipsic behavior.

MATERIAL AND METHOD

The study was conducted on 15 healthy individuals, adults - aged between 1 and 8 years old, whose physical activity level was monitored using the IKATI GPS collar correlated with the Tractive IKATI software, while the dipsic behavior was monitored using the MiHome video camera. The GPS tracking and the video monitoring was performed 24 hours a day, 5 days in a row for each individual.

Fig. 1. The Xiaomi Smart Camera C300 – monitoring the dipsic behaviour in cats *(original photos)*

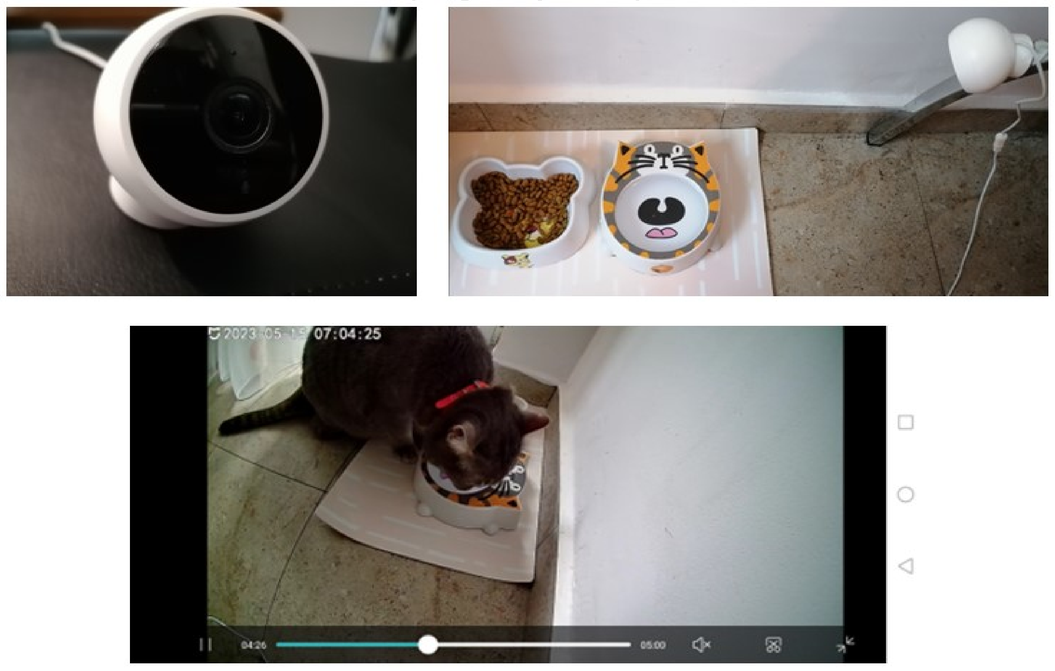

Table 2. The synthetic data regarding the physical activity level for the studied group of patients – 3rd day of monitoring

Patient no.	Mean active time minutes/24 hours	Mean number of calories consumed/24 hours	Time interval of the day when the cat was most active
1	118	254	4^{00} P.M. – 7^{00} P.M.
2	112	249	2^{00} P.M. – 5^{00} P.M.
3	182	312	1^{00} P.M. – 4^{00} P.M.
4	210	336	11^{00} A.M. – 2^{00} P.M.
5	192	321	6^{00} P.M. – 9^{00} P.M
6	226	342	10^{00} A.M. – 1^{00} P.M
7	178	296	7^{00} A.M. – 10^{00} A.M
8	154	281	10^{00} P.M. – 1^{00} A.M
9	108	188	11^{00} A.M. – 2^{00} P.M
10	214	203	1^{00} P.M. – 4^{00} P.M
11	232	216	9^{00} A.M. – 0^{00} P.M
12	148	196	4^{00} P.M. – 7^{00} P.M
13	164	203	7^{00} P.M. – 10^{00} P.M
14	156	198	11^{00} P.M. – 0^{00} A.M
15	110	242	3^{00} P.M. – 6^{00} P.M

RESULTS AND DISCUSSIONS

We observed, for the 3rd day of monitoring that in individuals with high levels of physical activity the frequency of the dipsic behavior manifestation was higher (individuals #4, #6, #10 and #11), this individuals being also the youngest patients in our study (1, 2, 1,5 and 2 years old). This cats also had the highest mean active time/24 hours and the highest number of calories consumed.

Table 1. Ethogram of the dipsic behavior in the studied group of patients - 3rd day of monitoring -

Time interval	PATIENT NO.														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0^{00}-1^{00}				21s			32s			24s					
1^{00}-2^{00}			38s					46s			33s		29s		
2^{00}-3^{00}					32s										42s
3^{00}-4^{00}						29s			39s						
4^{00}-5^{00}		44s		17s						31s		41s			
5^{00}-6^{00}							38s				21s				
6^{00}-7^{00}													34s		
7^{00}-8^{00}	32s		26s			18s		33s						41s	
8^{00}-9^{00}					43s										
9^{00}-10^{00}											19s				
10^{00}-11^{00}	29s			19s										20s	
11^{00}-12^{00}		27s				21s									
12^{00}-13^{00}												32s			
13^{00}-14^{00}				11s						30s					
14^{00}-15^{00}															
15^{00}-16^{00}							43s								
16^{00}-17^{00}													36s		
17^{00}-18^{00}						16s			45s						
18^{00}-19^{00}											25s				36s
19^{00}-20^{00}					33s										
20^{00}-21^{00}			28s												
21^{00}-22^{00}	40s			26s				48s			16s			23s	
22^{00}-23^{00}						19s				37s			18s		
23^{00}-0^{00}				12s								36s			
Drinking sessions/ 24 hours	3	2	3	6	3	5	3	3	2	4	5	3	4	3	2
Average number of drinking sessions/ 24 hours	3.53 times														
Mean time / drinking session	37 sec	36 sec	31 sec	18 sec	36 sec	21 sec	38 sec	42 sec	42 sec	31 sec	23 sec	36 sec	29 sec	28 sec	39 sec
Mean time / drinking session /group	32.46 sec.														

Dipsic behaviour
Nutritional behaviour

CONCLUSIONS

- The modern monitoring means, video recording and GPS-tracking, proved to be extremely suitable for performing ethograms and establishing direct correlations between the level of physical activity and the manifestation of the dipsic behaviour in cats.
- Individuals with the most intense physical activity levels, translated into long periods of active time per 24 hours and a high number of consumed calories, also showed a more pronounced manifestation of the dipsic behaviour, translated into a higher frequency of the drinking sessions in 24 hours.

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