



IN COMMON SPORTS + FIT, FOOD  
AND FUN FOR ELDERLY!  
2021 - 2023

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## REPORT

# IN COMMON SPORTS + FIT, FOOD AND FUN FOR ELDERLY! 2021 – 2023



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**PROJECT IN COMMON SPORTS**  
**ERASMUS + SPORT**  
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# 1. Introduction

It is well known that the pandemic situation of COVID-19 imposed a confinement to the population limiting their daily activities. The practice of physical exercise in organized and in team groups was no exception. In this way, the entire IN COMMON SPORTS project had to be suspended, having restarted its activities according to the rules of each country. Due to that, the activities restart with assessments, to understand our new baseline data and state of health of those elderly groups.

In Portugal, it was possible to carry out the evaluations between May to June and start training in June. In Italy, the activities started in June, and the training sessions started on September. In Hungary, the data collection occurred during September until November, and the training sessions started between September and October. Spain started activities also in May, but they took place outdoors and the older adults had to wear a mask and the size of the groups was reduced in number.

Data from Bulgaria and Slovenia were not included in this report. Bulgaria had problems with hearing trainers for the project, therefore, the starting activities occurred quite late comparing to other countries. Slovenia, on the other hand, was the latest member of this project and has only tested 5 participants.

In order to avoid contacts, the competitions were not held in Portugal, Italy, Spain and Slovenia. Bulgaria was able to organize the competition, as well as Hungary, with 56 and 128 participants, respectively.

# 2. Methods

## 2.1. Participants

A total of 327 elderly people from four different countries participated in this evaluation, 70 participants from Portugal, 107 participants from Italy, 63 from Hungary and 87 from Spain.





## 2.2. Assessments

According to the WP1 tasks and supported from the assessment protocol documentations, this moment of evaluation it was measured the anthropometric and body composition characteristics (height, weight, BMI, all body fat and muscle mass percentage, total bone mass, total body water, visceral fat, basal metabolic rate, waist and hip circumferences – waist-hip index), it was applied the physical fitness tests (handgrip, 30 seconds chair stand, two minutes step test, 6 foot up and go, 6 minutes walking test, chair sit and reach and back scratch), and it was used the Participation Motivation Questionnaire (PMQ) [1] with six factors of analysis [2].

## 3. Results

Table 1 summarizes the number of participants by country and sex, being quite visible a greater women participation (70 versus 30%).

**Table 1-** Distribution of the sample (n = 327) by country and sex.

	Portugal	Italy	Hungary	Spain
Female (n= 229)	32	76	54	67
Male (n= 98)	38	31	9	20
<b>Total</b>	70	107	63	87

The anthropometric characteristics are exposed by sex on table 2 from the total sample and for each country.

Regarding the physical fitness tests applied, table 3 shows the values for each test considering their sex and country.

Finally, table 4 shows the results regarding the Participation Motivation Questionnaire (PMQ), expressing the values by each factor and also a final score, encompassing all factors.



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**Table 2-** Mean and standard deviation of anthropometric characteristics of the sample by country and sex.

		Age (yrs)	Height (cm)	Weight (kg)	Fat mass (%)	Waist circumference (cm)	Hip circumference (cm)	BMI (kg/m <sup>2</sup> )
<b>Global</b>	Female (n= 229)	68.59 ±5.22	156.87 ±6.32	67.46 ±12.42	37.00 ±20.29	93.08 ±13.45	107.06 ±41.26	27.32 ±4.57
	Male (n=98)	70.64 ±5.83	168.94 ±7.29	79.91 ±13.74	26.22 ±6.05	98.99 ±15.23	102.04 ±10.33	27.63 ±3.51
<b>Portugal</b>	Female (n=32)	68.78 ±4.18	155.50 ±5.14	66.30 ±9.93	37.22 ±6.26	90.31 ±10.87	102.67 ±7.85	27.39 ±3.59
	Male (n=38)	70.55 ±5.84	169.17 ±6.10	77.64 ±10.07	26.47 ±4.63	96.86 ±8.91	101.14 ±5.38	27.09 ±3.22
<b>Italy</b>	Female (n=76)	67.05 ±4.13	158.22 ±6.12	80.10 ±10.84	36.51 ±34.45	87.26 ±12.00	108.82 ±69.40	26.25 ±4.00
	Male (n=31)	68.81 ±5.83	172.26 ±6.11	65.26 ±10.78	25.25 ±8.17	96.84 ±14.75	100.61 ±5.52	26.81 ±3.88
<b>Hungary</b>	Female (n=54)	68.04 ±1.19	160.51 ±5.42	68.23 ±11.97	38.12 ±5.24	97.76 ±12.16	110.00 ±10.86	26.29 ±5.38
	Male (n=9)	69.78 ±3.56	173.49 ±5.06	93.64 ±30.09	29.03 ±3.09	105.00 ±8.40	109.11 ±5.09	27.69 ±1.61
<b>Spain</b>	Female (n=67)	70.67 ±6.38	153.03 ±5.50	69.87 ±15.04	36.53 ±6.12	97.24 ±14.44	104.79 ±16.10	29.31 ±4.29
	Male (n=20)	74.05 ±5.46	161.32 ±6.32	77.73 ±9.73	25.96 ±5.62	103.70 ±24.49	102.75 ±20.00	29.87 ±3.31



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**Table 3-** Mean and standard deviation of the physical fitness tests.

		Handgrip (kg)	Chair stand (reps)	6 min walking (m)	Chair sit & reach (cm)	Timed up & go (sec)	Back scratch (cm)	Arm curl (reps)
<b>Global</b>	Female (n= 229)	29.04 ±11.51	16.05 ±6.75	524.74 ±85.66	4.50 ±9.71	5.41 ±1.07	-6.04 ±11.59	19.35 ±4.86
	Male (n=98)	49.15 ±20.99	17.31 ±4.97	592.41 ±90.96	-2.44 ±10.73	4.96 ±0.98	-15.40 ±18.52	20.04 ±4.94
<b>Portugal</b>	Female (n=32)	44.78 ±16.21	16.38 ±4.80	584.41 ±55.55	4.75 ±13.18	4.73 ±0.87	-5.95 ±8.07	21.75 ±5.29
	Male (n=38)	60.37 ±25.91	18.66 ±4.92	642.31 ±73.85	-1.32 ±10.96	5.38 ±1.51	-9.67 ±16.05	20.58 ±4.14
<b>Italy</b>	Female (n=76)	26.76 ±4.66	18.27 ±10.11	491.70 ±90.94	7.15 ±6.98	5.10 ±0.83	-1.41 ±10.34	20.14 ±5.91
	Male (n=31)	41.13 ±7.29	17.77 ±18.27	567.48 ±94.74	-1.71 ±10.16	4.81 ±0.76	-10.42 ±16.64	21.71 ±5.87
<b>Hungary</b>	Female (n=54)	24.60 ±6.59	14.83 ±3.66	538.94 ±98.26	5.61 ±9.85	5.43 ±1.07	-2.54 ±6.73	18.74 ±3.80
	Male (n=9)	42.77 ±15.35	14.78 ±1.72	621.00 ±90.00	-1.44 ±11.37	4.55 ±0.74	-9.44 ±11.10	18.22 ±2.49
<b>Spain</b>	Female (n=67)	27.69 ±11.41	14.40 ±3.34	525.00 ±53.78	0.52 ±9.22	5.75 ±0.98	-14.16 ±13.18	17.77 ±3.28
	Male (n=20)	43.15 ±18.60	15.15 ±5.48	524.01 ±50.69	-6.10 ±10.92	5.81 ±1.16	-36.70 ±12.65	17.25 ±4.40





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**Table 4-** Mean and standard deviation of the six factors of motivation to be involved in physical exercise.

		Social	Fitness	Recognition	Challenge	Medical	Involvement	Total
<b>Global</b>	Female (n= 229)	2.68 ±0.40	2.78 ±0.32	1.96 ±0.55	2.58 ±0.37	2.67 ±0.40	2.62 ±0.44	2.55 ±0.31
	Male (n=98)	2.56 ±0.46	2.69 ±0.38	1.81 ±0.51	2.54 ±0.40	2.61 ±0.93	2.49 ±0.48	2.45 ±0.39
<b>Portugal</b>	Female (n=32)	2.59 ±0.42	2.58 ±0.41	2.01 ±0.53	2.49 ±0.37	2.37 ±0.46	2.52 ±0.45	2.43 ±0.37
	Male (n=38)	2.44 ±0.40	2.52 ±0.42	1.67 ±0.42	2.36 ±0.32	2.23 ±0.45	2.30 ±0.47	2.25 ±0.32
<b>Italy</b>	Female (n=76)	2.66 ±0.42	2.78 ±0.31	1.79 ±0.50	2.57 ±0.33	2.81 ±0.27	2.64 ±0.42	2.54 ±0.28
	Male (n=31)	2.57 ±0.59	2.79 ±0.29	1.75 ±0.56	2.64 ±0.37	2.80 ±0.26	2.57 ±0.46	2.52 ±0.32
<b>Hungary</b>	Female (n=54)	2.50 ±0.42	2.74 ±0.34	1.90 ±0.59	2.46 ±0.42	2.73 ±0.37	2.43 ±0.48	2.46 ±0.35
	Male (n=9)	2.58 ±0.39	2.67 ±0.36	1.71 ±0.40	2.32 ±0.43	2.69 ±0.27	2.37 ±0.42	2.39 ±0.28
<b>Spain</b>	Female (n=67)	2.90 ±0.19	2.93 ±0.13	2.19 ±0.50	2.78 ±0.28	2.59 ±0.43	2.83 ±0.32	2.71 ±0.18
	Male (n=20)	2.79 ±0.27	2.88 ±0.30	2.24 ±0.46	2.84 ±0.31	2.57 ±0.53	2.82 ±0.37	2.77 ±0.44



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## 4. Discussion and Conclusions

Considering the data collected, clearly a greater participation is visible on women than men (70 versus 30%, respectively). In fact, before the COVID-19 set in, participation already tended more towards women, but the difference was not so noticeable. Possibly this whole different context may have triggered these differences. Nevertheless, despite that, it was possible to reach a total number of 327 participants, with strong participation by Italy (107 participants).

The participants seem to have very similar mean ages across all countries, with values around 68 years for female and 70 for male. A similar result was observed for height, with Hungary showing a slightly higher values in both, male and female. When observing the weight values, there are two results that stand out, the weight of Italian females and Hungarian males. Those two values are shown to be higher compared to the other countries, however, neither the fat mass percentage, nor the waist circumference do not seem to keep up on the same proportion. Those two last results are alarming, since both the amount of fat mass and the waist circumference, in average, are all above the values considered healthy by the WHO [3], for men and women. In the same vein, the BMI values are all above 25 kg/m<sup>2</sup>, the considered threshold value of a healthy BMI. All those results may reflect a greater inactivity imposed by the confinement.

Regarding the physical fitness assessments, very similar results were observed, when comparing the four different countries, only a few values should be highlighted. In the handgrip test, the values of Portugal stand out, both in male (60.37±25.91 versus the mean value of 49.15±20.99) and female (44.78±16.21 versus the mean value of 29.04±11.51). Also, in the 6 minutes walking test, Portugal presented the highest results both in male (642.31±73.85 versus the mean value of 592.41±90.96) and female (584.41±55.55 versus the mean value of 524.74±85.66). Hungary showed slightly lower mean values in the chair stand tests, for both male (14.78±1.72 versus the mean value of 17.31±4.97) and female (14.83±3.66 versus the mean value of 16.05±6.75). In flexibility tests, both in the lower (chair sit and reach) and upper (back scratch) limbs, as expected, women always showed better results compared to men.







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When analyzing the reasons that lead this age-group to practice physical exercise, it is possible to verify that the recognition factor is the less important, following their reports. On the other hand, the fitness factor, seems to play an important role to be involved in physical activity. Nevertheless, in the general point of view, there is a strong motivation on the part of the respondents to practice physical exercise.

## 5. Practical implications

The data support the empirical notions that, COVID-19 pandemic impose special considerations special in the development of the assessments and the need to give special attention to body composition.

## 6. References

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