

Supplementary Material

Additional file 2. Supplementary Tables for “Multidimensional Assessment of Home Safety and Fall Risk in Older Adults: The Role of Environmental and Functional Factors”

Table S1 Accident occurrence and reasons for accidents inside and around the residence

<i>No</i>	<i>Variable</i>	<i>No n (%)</i>	<i>Yes n (%)</i>	<i>Reason for accident</i>	<i>n (%)</i>
<i>1</i>	<i>Accident outside the residence</i>	343 (89.1)	34 (9)	Fall down chair	3 (9)
				Fall down stairs	7 (21)
				Traffic accident	6 (18)
				Other	16 (47)
<i>2</i>	<i>Accident inside the residence</i>	333 (86.5)	50 (13)	Fall down chair	10 (20)
				Fall down stairs	8 (16)
				Slippery floor	9 (18)
				Other	15 (30)
<i>3</i>	<i>Accident by a visitor (residence)</i>	358 (93.0)	24 (6)	Stairs	3 (13)
				Fall in the garden	3 (13)
				Other	6 (25)
<i>4</i>	<i>Accident in one's own residence</i>	383 (99.5)	73 (19)		

Percentages were calculated based on participants who had accidents.

Table S2: Frequency analysis of the overall safety section

A	Overall Safety	Yes (%)	No (%)
4	<i>Do you have a video doorbell in your residence?</i>	85(22)	299(78)
5	<i>Do you have a technological device that reports emergencies such as falls and injuries?</i>	91(24)	292(76)
6	<i>Is there an emergency kit at home for emergencies?</i>	109(28)	276 (72)
7	<i>Are you knowledgeable about the escape plan for disasters such as fire or earthquake in your apartment building or personal residence?</i>	123(32)	256(67)
8	<i>Is there a fire escape in your apartment building?</i>	75(20)	229(60)
9	<i>Is your fire escape usable?</i>	77(20)	252(66)
10	<i>Is it easy to reach the exit door in case of danger?</i>	234(61)	112(29)
11	<i>Is there emergency lighting in the apartment building in case of power outage?</i>	156(41)	185(48)
12	<i>Is there a fire extinguisher on every floor of the apartment building?</i>	144(37)	199(52)
13	<i>Have the electrical lines, sockets, and lighting elements in your residence been checked by a specialist in the last 10 years?</i>	193(50)	185(48)
14	<i>Is there a gas detector as a precaution against gas leaks?</i>	182(47)	196(51)
15	<i>Is there a fire extinguisher in your residence?</i>	98(26)	283(74)
16	<i>Are there any items lying around in your residence that could cause slipping and falling?</i>	129(34)	253(66)
17	<i>Have you ever received fire extinguishing training at any point in your life?</i>	75(20)	305(79)
18	<i>Have you ever received first aid training at any point in your life?</i>	112(29)	270(70)
19	<i>If there are carpets, rugs, etc. laid in the residence, are they secured to the floor?</i>	104(27)	280(73)
20	<i>If there are carpets, rugs, etc. laid in the residence, do they happen to curl or fold?</i>	225(58)	154(40)
21	<i>Are the doors wide enough for wheelchairs, etc. to pass through?</i>	336(87)	42(11)
22	<i>Are the light switches and sockets at an easily accessible height?</i>	361(94)	21(6)
23	<i>Do you use extension cords for electricity or antennas in your residence?</i>	294(76)	89(23)
24	<i>Do you use chairs or stools to get any items in your residence?</i>	304(79)	76(20)
25	<i>Do you think all the rooms in your residence receive sufficient daylight?</i>	337(88)	46(12)
26	<i>Do you think all the rooms in your residence have sufficient lighting?</i>	320(83)	62(16)
27	<i>Are the furniture in your residence secured to the wall for safety reasons?</i>	71(18)	307(80)
28	<i>Do children's toys lie scattered around the residence?</i>	43(11)	329(86)
29	<i>Do you take down and put up your curtains yourself?</i>	237(62)	143(37)
30	<i>Do you do tasks such as wiping chandeliers or changing lamps yourself?</i>	228(59)	156(41)

Table S3: Frequency analysis of the exterior (Building Entrance)

<i>B</i>	<i>Variable</i>	<i>Yes (%)</i>	<i>No (%)</i>
1	<i>Do you live in an apartment building?</i>	280 (73)	102(27)
2	<i>Is the exterior lighting sufficient for the residential area?</i>	320 (83)	53(14)
3	<i>Is there a staircase at the entrance of the apartment building or detached house?</i>	272 (71)	99(26)
4	<i>Can you climb the steps comfortably?</i>	237 (62)	107(28)
5	<i>Are there times when the steps are slippery?</i>	181 (47)	161(42)
6	<i>Is there an elevator in your apartment building? (If not, proceed to question 9.)</i>	191 (50)	130(34)
7	<i>Do elevator malfunctions occur frequently?</i>	60 (16)	168(44)
8	<i>Do you think the elevator width is adequate?</i>	150 (39)	75(20)
9	<i>Does the elevator stop at the same level as the floor level?</i>	174 (45)	57(15)
10	<i>Is the interior lighting of the apartment building sufficient?</i>	260 (68)	48(13)
11	<i>If there are stairs inside the apartment building, can you climb the steps comfortably?</i>	220 (57)	89(23)

Table S4: Frequency analysis of living spaces

C- LIVING SPACES				
C	Variable	C.1 CORRIDORS	Yes (%)	No (%)
1.1	<i>Are there any items that interrupt continuity such as radiators, furniture, etc. in the corridors?</i>		125(33)	248(64)
1.2	<i>Are there electrical and telephone cable groups in the corridors?</i>		113(29)	265(69)
1.3	<i>Do the corridors receive sufficient daylight?</i>		269(70)	104(27)
1.4	<i>Do the corridors have sufficient lighting for walking around at night?</i>		337(88)	42(11)
1.5	<i>Is there a threshold at the entrances to the rooms from the corridors?</i>		104(27)	274(71)
1.6	<i>Are there lamp control switches at both the beginning and end of the corridors?</i>		127(33)	247(64)
1.7	<i>Are there grab bars (handrails) in the corridors?</i>		76(20)	300(78)
C.2- STAIRS				
2.1	<i>Are there stairs in the residence? (If your answer is no, you can skip this section.)</i>		85(22)	247(64)
2.2	<i>Can you go up and down the stairs comfortably? (Only for those with stairs)</i>		66(82)	15 (19)
2.3	<i>Are the stairs slippery? (Only for those with stairs)</i>		12(15)	68 (85)
2.4	<i>If there is step covering on the stair steps, is it in good condition? (Only for those with stairs)</i>		61(76)	19(24)
2.5	<i>Are the staircase turns sharp? (Only for those with stairs)</i>		21(26)	59(74)
2.6	<i>Is there a handrail on the side of the stairs, even if it is bordered by a wall? (Only for those with stairs)</i>		60(74)	21(26)
C.3- LIVING ROOM OR SITTING ROOM				
3.1	<i>Are there any items lying around in the living room that could cause falls?</i>		115(30)	263(68)
3.2	<i>Are the furniture in the living room secured to the wall for safety reasons?</i>		67(17)	310(81)
3.3	<i>Is the TV in the living room secured to the wall for safety reasons?</i>		127(33)	250(65)
3.4	<i>Can you sit and stand comfortably on the sofas in the living room?</i>		321(83)	57(15)
3.5	<i>Do you think the lighting in the living room is adequate?</i>		338(88)	41(11)
C.4- KITCHEN				
4.1	<i>Do you eat your meals in the kitchen?</i>		338(88)	41(11)
4.2	<i>Are the kitchen appliances at an easily accessible height?</i>		320(83)	58(15)
4.3	<i>Can you easily tell whether the switches of the stove and other electrical appliances are on or off?</i>		318(83)	60(16)
4.4	<i>Are there any easily flammable materials near the stove and oven?</i>		136(35)	245(64)
4.5	<i>Can you use the oven without having to bend down?</i>		204(53)	176(46)
4.6	<i>Is there a fire extinguisher near the stove in the kitchen?</i>		48(13)	330(86)
4.7	<i>Is the kitchen floor made of shiny material?</i>		225(58)	154(40)
4.8	<i>Is the kitchen floor slippery when wet?</i>		199(52)	178(46)
4.9	<i>Do you use chairs, stools, etc. to reach the upper cabinets?</i>		280(73)	98(26)

Table S5: Frequency analysis of personal spaces

D- PRIVATE AREAS D.1- BEDROOM			
D		Yes (%)	No (%)
1.1	Can you easily reach the items in the wardrobe?	335(87)	45(12)
1.2	Can you easily get in and out of the bed in the room?	304(79)	77(20)
1.3	Is there a grab bar next to the bed to get up easily?	73(19)	302(78)
1.4	Is there a lighting element next to your bed that you can easily reach?	207(54)	173(45)
D.2- BATHROOM			
		Yes (%)	No (%)
2.1	Does the bathroom have a shiny floor?	267(69)	111(29)
2.2	Is the bathroom floor slippery?	195(51)	183(48)
2.3	If there is a carpet on the bathroom floor, is it secured to the floor (adhesive, non-slip tapes, etc.)?	92(24)	282(73)
2.4	Is the bathroom spacious enough?	314(82)	62(16)
2.5	Can you move around comfortably in the bathroom?	331(86)	49(13)
2.6	Can you sit down and get up from the toilet comfortably?	294(76)	85(22)
2.7	Is there a grab bar next to the toilet?	88(23)	283(74)
2.8	What type of shower do you have?	Shower cabin 76 (20)	Bathtub 297 (77)
		Yes (%)	No (%)
2.9	Can you comfortably get into the shower cabin or bathtub?	332(86)	43(11)
2.10	Is the floor of the shower cabin or bathtub slippery?	140(36)	236(61)
2.11	If you use a seat in the shower, is the seat secured to the floor or wall?	101(26)	274(71)
2.12	Does the water temperature change suddenly while showering?	149(39)	231(60)
2.13	Can you easily reach the items in the bathroom?	353(92)	26(7)
2.14	Do you use electrical appliances such as extension cords and triple sockets in the bathroom?	58(15)	318(83)
2.15	Do you think the lighting in the bathroom is sufficient?	322(84)	53(14)
2.16	Is there a grab bar in the shower?	88(23)	288(75)
2.17	Do you perform ablution at home?	265(69)	104(27)
2.19	Do you lift your foot to the washbasin when performing ablution?	149(39)	175(46)
D.3- TOILET (If present)			
		Yes (%)	No (%)
3.1	Is there a separate toilet at home? (If not, do not answer this section.)	221(57)	120(31)
3.2	Is the toilet floor slippery?	85(40)	127(60)
3.3	If there is a carpet on the toilet floor, is it secured to the floor (adhesive, non-slip tapes, etc.)?	36(17)	173(83)
3.4	Is there a grab bar next to the toilet?	29(14)	183(86)
3.5	Can you easily reach the items in the toilet?	206(97)	7(3)
3.6	Do you think the lighting in the toilet is adequate?	198(93)	15(7)
2.18	Where do you perform ablution for prayer at home?	Washbasin 142(37)	Shower cabin 120(31) Private place 23(6)

Table S6: Homogeneity of Variance Test (Levene) for Index Sub-Dimensions

<i>Variable</i>	<i>Overall safety p</i>	<i>Building entrance p</i>	<i>wet areas p</i>	<i>indoor environment p</i>	<i>separate toilet p</i>	<i>indoor stairs p</i>
<i>Your age?</i>	0.926	0.001*	0.190	0.144	0.166	0.098
<i>Estimated age of residence</i>	0.116	<0.001*	0.004	<0.001	0.517	0.321
<i>Type of residence</i>	0.102	<0.001*	0.059	<0.001*	<0.001*	0.277
<i>Use of orthosis</i>	0.130	<0.001*	0.200	0.001*	0.236	0.003*
<i>Fracture/prosthesis</i>	0.374	0.526	0.299	0.456	0.027*	0.108
<i>Number of residents</i>	0.007*	0.001*	0.354	0.002*	0.519	0.138
<i>Physical health problem</i>	0.061	0.003*	0.117	<0.001*	0.268	0.363
<i>Residential renovations made after the age of 65</i>	0.962	0.021*	0.044*	0.081	0.436	0.139

* Welch ANOVA was used for sub-dimensions with $p < 0.05$.

Table S7: One-way ANOVA and Welch ANOVA results of Index sub-dimensions according to socio-demographic and residence characteristics

	<i>Age of the individual</i>		<i>Age of residence</i>		<i>Type of residence</i>		<i>Use of orthosis</i>	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
<i>overall safety</i>	5.83	0.001	14.14	<0.001	8.94	<0.001	5.99	0.001
<i>building entrance</i>	10.03	<0.001	10.95	<0.001	9.45	<0.001	12.13	<0.001
<i>wet areas</i>	5.72	0.001	2.15	0.096	3.69	0.012	5.33	0.001
<i>indoor environment</i>	9.30	<0.001	8.88	<0.001	4.31	0.007	7.02	<0.001
<i>separate toilet (if present)</i>	2.58	0.055	3.18	0.025	0.46	0.713	0.08	0.972
<i>indoor stairs (if present)</i>	1.68	0.177	1.15	0.333	0.38	0.770	1.43	0.384
	<i>Fracture-prosthesis status</i>		<i>Number of residents</i>		<i>Health problem</i>		<i>Residential renovation</i>	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
<i>overall safety</i>	0.44	0.644	6.63	0.001	2.68	0.031	4.63	0.010
<i>building entrance</i>	6.50	0.002	8.56	<0.001	3.67	0.007	4.62	0.016
<i>wet areas</i>	3.77	0.024	6.00	0.001	4.30	0.002	0.07	0.934
<i>indoor environment</i>	2.76	0.065	9.72	<0.001	6.35	<0.001	2.82	0.061
<i>separate toilet (if present)</i>	4.39	0.019	2.52	0.059	6.63	<0.001	0.44	0.647
<i>indoor stairs (if present)</i>	5.83	0.004	2.55	0.060	0.26	0.900	4.60	0.012

$p < .05$ level is considered significant.