

# Impact of the Level of Dependence on Functionality and Health of Institutionalized Older Adults

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## Abstract

**Background.** The population ageing can be considered both a medical success and a challenge to our society. According to the World Health Organization, people aged 60 or more will reach to 2,000 million in 2050, this is, 22% of the world population. Therefore, it is expected an increased amount of institutionalized elderly in the coming years.

**Objectives:** our study was aimed to assess and describe the functionality, health, and quality of life of institutionalized older adults as well as to analyze the influence of their dependence level on these variables.

**Methods.** A cross-sectional study was carried out. Institutionalized older adults over 60 years were included. The study variables were the level of dependence (Barthel index), the level of functionality (TUG), the state of balance and gait (Tinetti), the level of physical activity (IFIS), quality of life (SF questionnaire 36), sleep quality index (Pittsburgh) and the level of anxiety and depression (HADS).

**Results.** 35 older adults were included. The results showed that those who had a better dependence level also exhibited better functionality, balance and gait, level of physical activity and quality of life, and lower anxiety and depression levels.

**Conclusions.** Institutionalized older adults with total or severe dependence had significantly worse levels of functionality and health.

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## BACKGROUND

The population ageing can be considered both a medical success and a challenge to our society. According to the World Health Organization, people aged 60 or more will reach to 2,000 million in 2050, this is, 22% of the world population. Therefore, it is expected an increased amount of institutionalized elderly in the coming years.

## OBJECTIVES

Our study was aimed to assess and describe the functionality, health, and quality of life of institutionalized older adults as well as to analyze the influence of their dependence level on these variables.

## METHODS

A cross-sectional study was carried out. Institutionalized older adults over 60 years were included. The study variables were the level of dependence (Barthel index), the level of functionality (TUG), the state of balance and gait (Tinetti), the level of physical activity (IFIS), quality of life (SF-36), sleep quality index (Pittsburgh) and the level of anxiety and depression (HADS).

## RESULTS

35 older adults were included. The results showed that those who had a better dependence level also exhibited better functionality, balance and gait, level of physical activity and quality of life, and lower anxiety and depression levels.

VARIABLE	MEAN (SD)	TOTAL/SEVERE DEPENDENCE Mean (SD), N=12	MILD DEPENDENCE Mean (SD), N=14	SLIGHT DEPENDENCE/INDEPENDENCE Mean (SD), N=9	p		TOTAL/SEVERE DEPENDENCE Mean (SD), CI N=12	MILD DEPENDENCE Mean (SD), CI N=14	SLIGHT DEPENDENCE/INDEPENDENCE Mean (SD), CI N=9	p
<b>Age (years)</b>	80,02 (9,57)	82,5 (10,24)	80,43 (7,36)	76,11 (11,43)	0,321					
<b>Sex (%)</b>										
Woman	77,1	66,7	92,9	66,7			5,08 (3,52), (2,84-7,32)	9,21 (2,22), (7,93-10,50)	10,89 (1,26), (9,91-11,86)	<0,001
Man	22,9	33,3	7,1	33,3	0,195		6,06 (4,65), (3,04-8,96)	12,07 (2,23), (10,78-13,36)	13,89 (1,26), (12,91-14,86)	<0,001
<b>BMI</b>	27,23 (4,58)	26,21 (4,02)	27,85 (4,78)	27,64 (5,25)	0,641		11,08 (7,92), (6,05-16,12)	21,21 (4,15), (18,82-23,61)	24,76 (2,43), (22,90-26,65)	<0,001
<b>Study level (%)</b>										
No education/Primary studies	85,7	83,3	100	66,6						
High school/job training	5,7	0,0	0,0	22,2						
University	8,6	16,7	0,0	11,1						
<b>Estado Civil (%)</b>										
Married	14,3	16,7	14,3	11,1						
Single	22,9	8,3	28,5	33,3						
Widowed	62,9	76,0	57,1	55,6	0,721					
<b>TUG (sg)</b>										
Tinetti							5,08 (3,52), (2,84-7,32)	9,21 (2,22), (7,93-10,50)	10,89 (1,26), (9,91-11,86)	<0,001
Mancha Equilibrio							6,06 (4,65), (3,04-8,96)	12,07 (2,23), (10,78-13,36)	13,89 (1,26), (12,91-14,86)	<0,001
Total							11,08 (7,92), (6,05-16,12)	21,21 (4,15), (18,82-23,61)	24,76 (2,43), (22,90-26,65)	<0,001
<b>IFIS</b>										
SF-36							13,92 (3,63), (11,61-16,22)	15,64 (4,27), (13,18-18,11)	18,56 (1,59), (17,33-19,78)	0,020
Physical Functioning							17,08 (14,99), (7,56-26,61)	45,71 (26,22), (30,57-60,86)	74,44 (10,73), (66,19-82,70)	<0,001
Role Physical							29,17 (33,42), (7,93-50,41)	48,21 (31,72), (29,90-66,53)	86,11 (18,16), (72,15-100,07)	0,001
Bodily pain							31,42 (21,58), (17,70-45,13)	51,64 (31,57), (33,41-69,88)	69,88 (21,97), (65,89-99,67)	<0,001
General Health							34,67 (20,16), (21,86-47,48)	59,14 (20,81), (47,24-71,05)	63,44 (19,55), (48,41-78,48)	0,004
Social Functioning							35,33 (20,16), (21,86-47,48)	59,14 (20,81), (47,24-71,05)	63,44 (19,55), (48,41-78,48)	0,004
Role Emotional							68,75 (38,94), (50,36-87,14)	72,32 (34,73), (52,27-92,37)	80,55 (38,59), (60,11-101,00)	0,684
Mental Health							41,67 (37,93), (17,56-65,77)	69,05 (33,24), (49,85-88,24)	70,37 (45,47), (35,42-105,32)	0,138
Physical Component							43,33 (23,12), (28,64-56,03)	58,57 (25,37), (43,92-73,22)	64,44 (18,80), (49,99-78,90)	0,102
Mental Component							29,49 (4,70), (26,51-32,48)	38,17 (9,20), (32,86-43,48)	50,64 (6,92), (45,32-55,96)	<0,001
Pittsburgh							40,57 (10,23), (34,06-47,07)	45,86 (13,14), (36,27-53,45)	43,55 (16,70), (30,71-56,39)	0,603
HADS										
Anxiety							10,25 (4,41), (7,45-13,05)	10,14 (5,00), (7,25-13,03)	6,78 (2,43), (4,90-8,65)	0,136
Depression							13,67 (5,66), (10,07-17,26)	9,93 (7,60), (5,54-14,32)	7,89 (7,20), (2,35-13,42)	0,159
							13,58 (6,76), (9,29-17,88)	9,57 (7,04), (5,50-13,64)	6,11 (3,75), (3,22-9,00)	0,035



Resource: UED Mirador de Cenes, Granada

## CONCLUSIONS

Institutionalized older adults with total or severe dependence had significantly worse levels of functionality and health.



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de Granada