Gruppo di ricerca geriatrica

5 Giugno 2009

Depressione e riabilitazione: quali interazioni?

Sara Morghen

Depressione e Riabilitazione: quali interazioni?
Sommario

- Introduzione
- Prevalenza
- Depressione e malattie somatiche
- Depressione e riabilitazione
- Riabilitazione e depressione
- Conclusioni
- Future directions

Introduzione

- In recent years, there has been a growing awareness of the mental health needs of people 65 years and older

- Depression is the most common mental disorders experienced by older adults

- With the demographic shift toward an ageing population it will further increase what will be a high demand for health and social care

Prevalenza

- Community dwelling → 15% depressive symptoms; 3% major depression
- Acute hospital settings → 20-30% depressive symptoms
- Nursing homes → 15% major depression; 40-60% depressive symptoms
- Rehabilitation ward → 29.5% depressive symptoms (Diamond et al., 1995)

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY
Int J Geriatr Psychiatry 2008; **23**: 1141–1147.
Published online 6 May 2008 in Wiley InterScience
(www.interscience.wiley.com) **DOI**: 10.1002/gps.2041

Prevalence of depression and anxiety symptoms in elderly patients admitted in post-acute intermediate care

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SUMMARY

Objectives Depression and anxiety symptoms are common in medically ill older patients. We investigated the prevalence and predictors of depression and anxiety symptoms in older patients admitted for further rehabilitation in post acute intermediate care.
Design Observational cohort study.
Setting An intermediate care unit, North West of England.
Participants One hundred and seventy-three older patients (60 male), aged mean (SD) 80 (8.1) years, referred for further rehabilitation to intermediate care.
Measurements Depression and anxiety symptoms were assessed by the Hospital Anxiety and Depression Scale, and severity of depression examined by the Montgomery Asberg Depression Rating Scale. Physical disability was assessed by the Nottingham Extended ADL Scale and quality of life by the SF-36.
Results Sixty-five patients (38%) were identified with depressive symptoms, 29 (17%) with clinical depression, 73 (43%) with anxiety symptoms, and 43 (25%) with clinical anxiety. 15 (35%) of the latter did not have elevated depression scores (9% of the sample). Of those with clinical depression, 14 (48%) were mildly depressed and 15 (52%) moderately depressed. Longer stay in the unit was predicted by severity of depression, physical disability, low cognition and living alone (total adjusted $R^2 = 0.24$).
Conclusions Clinical depression and anxiety are common in older patients admitted in intermediate care. Anxiety is often but not invariably secondary to depression and both should be screened for. Depression is an important modifiable factor affecting length of stay. The benefits of structured management programmes for anxiety and depression in patients admitted in intermediate care are worthy of evaluation. Copyright © 2008 John Wiley & Sons, Ltd.

Pazienti CdC “Ancelle della Carità” stratificati per presenza-assenza sintomi depressivi (n=615) Luglio 2008-Giugno 2009

	Assenza sintomi depressivi (n= 321) **52.2%**	**Presenza sintomi depressivi** (n=294) **48.8%**	**Presenza sintomi depressivi severi** (n=95) **15,5%**
Età	79.2 ± 6.8	81.2 ± 7.5	81.7 ± 7.2
Sesso femminile	224 (69.8)	226 (76.9)	77 (81.1)
Living alone	111 (36.9)	129 (44.9)	41 (45.1)
BMI	25.5 ± 5.6	24.4 ± 6.0	24.7 ± 5.7
Albumina	3.4 ± 0.5	3.5 ± .05	3.5 ± 0.4
CIRS comorbidity	3.4 ± 1.7	3.8 ± 1.6	3.7 ± 1.7
CIRS severity	1.7 ± 0.3	1.7 ± 0.3	1.7 ± 0.2
MMSE	24.0 ± 4.4	23.0 ± 4.1	21.9 ± 4.1
Demenza	59 (18.4)	76 (25.9)	25 (26.3)
Delirium	24 (7.5)	36 (12.2)	9 (9.5)
Barthel pre-amm	87.8 ± 15.7	81.9 ± 17.1	81.3 ± 14.7
Barthel ingresso	63.0 ± 22.5	59.1 ± 23.5	62.8 ± 22.6
Barthel dimissione	82.5 ± 19.9	78.4 ± 19.7	80.2 ± 17.1
FIM ammissione	85.3 ± 22.2	78.2 ± 22.0	79.4 ± 20.1
FIM dimissione	99.9 ± 20.8	94.8 ± 19.5	95.9 ± 18.5
Minuti fkt	1456.4 ± 645.7	1502.8 ± 702.7	1556.7 ± 730.6
Partecipazione media	4.6 ± 0.9	4.4 ± 0.8	4.3 ± 0.9
Durata degenza	26.7 ± 11.4	30.7 ± 12.4	31.9 ± 12.3

Quale prevalenza?

- Difference in the mood disorder studied
- Use of various depression rating scales
- Use of different cut-off
- Different timing of evaluation
- Different criteria for patients’ enrolment
- Different examiners

Principali strumenti di screening del paziente anziano

- BDI
- HAM-D
- Zung Self-Rating Depression Scale

- Hospital Anxiety and Depression Scale (HAD)
- Geriatric Depression Scale

A 2-Item Screen for Depression in Rehabilitation Inpatients

Jeffrey A. Cully, PhD, David P. Graham, MD, MS, Jennifer R. Kramer, PhD, MPH

2 item GDS:

1. Si è sentito spesso abbattuto e triste recentemente?
2. Si sente un inutile così come è oggi?

Table 2: Comparison of Performance of Screening Instruments

Performance Measures	GDS-SF (cutoff, 4/5)	5-Item GDS* (cutoff, 1/2)	3-Item GDS (cutoff, 0/1)	2-Item GDS (cutoff, 0/1)
True positives†	142 (28.4%)	135 (27.0%)	137 (27.4%)	135 (27.0%)
True negatives†	306 (61.2%)	265 (53.0%)	235 (47.0%)	257 (51.4%)
False positives	41 (8.2%)	82 (16.4%)	112 (22.4%)	90 (18.0%)
False negatives	11 (2.2%)	18 (3.6%)	16 (3.2%)	18 (3.6%)
Sensitivity	92.8%	88.2%	89.5%	88.2%
Specificity	88.2%	76.4%	67.7%	74.1%
PPV	77.6%	62.2%	55.0%	60.0%
NPV	96.5%	93.6%	93.6%	93.5%
AUC	0.961‡‖	0.905‖	0.880‖	0.864‖

Abbreviations: AUC, the area under the curve on ROC graph; PPV, positive predictive value.
*The 5-item GDS used a cutoff of 2 or more for depression. Using 1 or more resulted in a high number of misclassifications.
†For the total sample of 500, 153 patients were classified as depressed by the 30-item GDS.
‡$P<.02$. GDS-SF differs from the other 3 models, which do not differ from one another.
‖$P<.01$ (model different than chance).

Arch Phys Med Rehab, 2005

Riconoscimento sintomi depressivi nell'anziano - *Problematicità*

<u>Overlapping symptoms of depression/ symptoms caused by a physical illness</u>

⇩

Underestimation and underrecognition by medical staff

<u>Diagnosis often relies of patients' self-evaluation</u>

⇩

Underestimation and underrecognition of the phenomenon by the patient

"…Older patients are less likely to report depressive symptoms, may view depression as a moral weakness or character flaw, not an illness, and may be more likely to ascribe symptoms of depression to a physical illness…"

Ell K, Home Health Care Service Quarterly, 2006

Rehabilitation Therapists' Recognition of Cognitive and Mood Disorders in Geriatric Patients

Robert Ruchinskas, PsyD

Objective: To determine if physical and occupational therapists can recognize 2 known predictors of rehabilitation outcome, cognition and mood, in their geriatric patients.

Design: Survey.

Setting: Urban academic medical center rehabilitation unit.

Participants: One hundred two consecutive geriatric admissions rated by 20 physical and 8 occupational therapists for the presence of cognitive or affective disorders.

Interventions: Not applicable.

Main Outcome Measures: Mini-Mental State Examination, Geriatric Depression Scale, and therapists' ratings.

Results: Both disciplines had low rates of accurate detection of both cognitive abnormalities and symptoms of depression. Patients scoring in the intact range of either domain were more likely to be correctly identified by the therapists than were patients whose results were possibly or probably impaired.

Conclusion: Rehabilitation therapists had difficulty recognizing patients with cognitive and affective disorders. I recommend including a mental health professional on the treatment team, staff inservicing, and/or the use of standardized measures of mood and mental status to increase recognition of these syndromes in geriatric rehabilitation patients.

Table 2: Agreement Between Physical and Occupational Therapists' Ratings and Group Classification by the GDS

	Group		
	Probable Depression	Possible Depression	No Depression
PT ratings (%)	1/8 (13)	2/9 (22)	56/85 (66)
OT ratings (%)	0/8 (0)	1/9 (11)	56/85 (66)

Table 4: Mean GDS Score of Groups Rated as Not Depressed, Possibly Depressed, and Probably Depressed by Therapists

	Group		
	Not Depressed	Possibly Depressed	Probably Depressed
Physical therapy	5.27	5.61	5.83
Occupational therapy	5.09	6.13	4.50
Actual GDS score	3.34	10.86	16.38

Arch Phys Med Rehab, 2002

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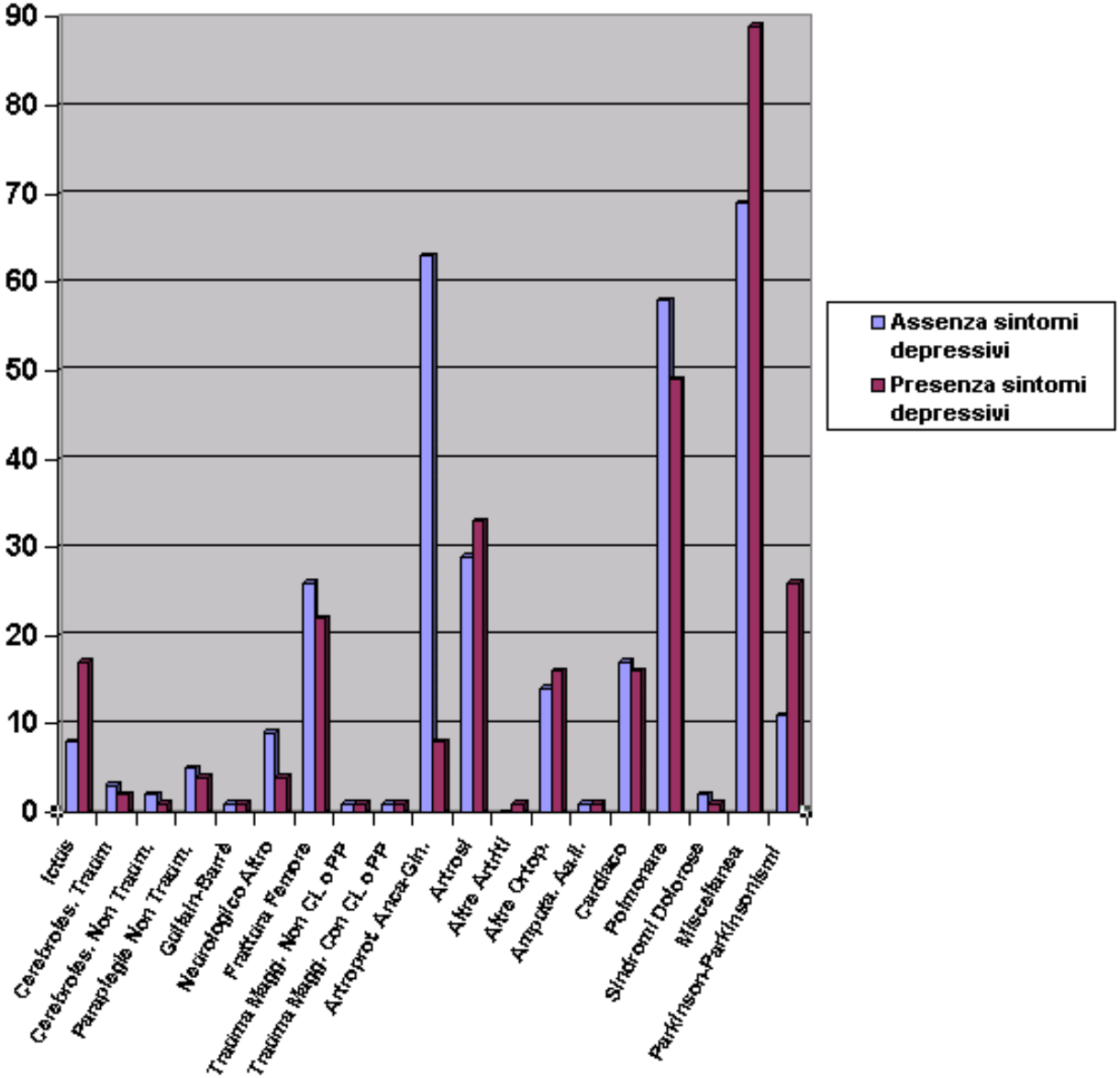
Sintomi depressivi e Rehabilitation Impairment Category
Luglio 2008-Giugno 2009



Psychological Medicine, 2006, **36**, 587–596. © 2006 Cambridge University Press
doi:10.1017/S0033291706007239 First published online 28 February 2006 Printed in the United Kingdom

Does co-morbid depressive illness magnify the impact of chronic physical illness? A population-based perspective

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Objective. To examine the relative and combined impact of depressive and chronic physical conditions on functional status and health-care use in the general population.

Method. Canadian, representative, population-based cross-sectional survey ($n = 130\,880$). Major depressive disorder (MDD) in the past 12 months was assessed by structured interview, and physical disorders, activity reduction, role impairment and work absence by self-report. The relative impact of MDD and six common chronic physical illnesses (asthma, arthritis, back problems, chronic obstructive pulmonary disease, heart disease and diabetes) was estimated using multivariate regression, adjusting for sociodemographic characteristics and overall chronic physical illness burden.

Results. After adjusting for sociodemographic characteristics, alcohol dependence and chronic physical illness burden, the presence of co-morbid MDD was associated with significantly greater (approximately double the) likelihood of health-care utilization and increased functional disability and work absence compared to the presence of a chronic physical illness without co-morbid MDD. This impact of MDD was seen across each of the six chronic physical illnesses examined in this study, with the strongest associations seen for work absence.

i.e. asthma, heart disease, arthritis, back problems, diabetes and COPD

Independent Effect of Depression and Anxiety on Chronic Obstructive Pulmonary Disease Exacerbations and Hospitalizations

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491 soggetti ricoverati e seguiti mensilmente per 1 anno

<u>Symptom based exacerbation</u> → peggioramento (almeno 48 ore) di almeno 1 sintomo tra: aumento nella quantità di espettorato, cambiamento di colore dell'espettorato, aumento della dispnea

<u>Event based exacerbation</u> → peggioramento di un sintomo + cambiamento di almeno un farmaco previsto nella terapia

Ospedalizzazioni

Am J Respir Crit Care Med, 2008

TABLE 3. CLINICAL OUTCOMES OF PATIENTS WITH STABLE CHRONIC OBSTRUCTIVE PULMONARY DISEASE ACCORDING TO DEPRESSION AND ANXIETY STATUS (n = 491)

Clinical Outcomes	No Depression (*n = 379*)	Depression* (*n = 112*)	*P* Value†	No Anxiety (*n = 444*)	Anxiety* (*n = 47*)	*P* Value†
Mortality						
No. (%) of deaths over 1 year	7 (1.8)	9 (8.0)	0.001	13 (2.9)	3 (6.4)	0.20
Time to death for deceased patients						
Mean (SD), d	254 (102.6)	187 (73.5)	0.15	226 (97.4)	172 (38.2)	0.36
Median (IQR), d	236 (152–334)	191 (128–263)	0.38	236 (131–282)	191 (128–197)	0.38
Exacerbations						
No. (%) of patients with symptom-based exacerbations						
0	152 (40.1)	33 (29.5)	0.04	169 (38.1)	16 (34.0)	0.003
1	82 (21.6)	28 (25.0)		99 (22.3)	11 (23.4)	
≥2	145 (38.3)	51 (45.5)		176 (39.6)	20 (42.6)	
No. (%) of patients with event-based exacerbations						
0	212 (55.9)	48 (42.9)	0.003	240 (54.0)	20 (42.6)	0.35
1	92 (24.3)	36 (32.1)		114 (25.7)	14 (29.8)	
≥2	75 (19.8)	28 (25.0)		90 (20.2)	13 (27.6)	
Overall length of event-based exacerbations for exacerbated patients (n = 304) over 1 year						
Mean (SD), d	20.4 (14.4)	24.6 (23.9)	0.14	20.7 (16.1)	27.4 (25.0)	0.07
Median (IQR), d	15 (10–29)	17 (10–26)	0.05	15 (10–28)	17.5 (10–40)	0.14
Hospitalizations						
No. (%) of patients with hospitalization						
0	304 (80.2)	79 (70.5)	0.03	348 (78.4)	35 (74.5)	0.11
1	46 (12.1)	17 (15.2)		56 (12.6)	7 (14.9)	
≥2	29 (7.7)	11 (14.3)		40 (9.0)	5 (10.6)	
Overall length of hospital stay for admitted patients (n = 101) over 1 year						
Mean (SD), days	25.6 (18.7)	37.7 (36.9)	0.05	26.9 (21.3)	49.1 (48.2)	0.03
Median (IQR), days	19 (13–34)	26 (14–44)	0.39	20 (13–35)	36.5 (25–49)	0.39
No. (%) of patients with ≥1 exacerbations requiring systemic corticosteroid use	37 (9.8)	9 (8.0)	0.57	40 (9.0)	6 (12.8)	0.40

Definition of abbreviation: IQR = interquartile range.

* Possible depression (8 ≤ Hospital Anxiety and Depression Scale–Depression [HADS-D] ≤ 10) and probable depression (HADS-D ≥ 11) were combined and referred to as depression (HADS-D ≥ 8). Possible anxiety (8 ≤ HADS-Anxiety [HADS-A] ≤ 10) and probable anxiety (HADS-A ≥ 11) were combined and referred to as anxiety (HADS-A ≥ 8).

† Unpaired two-tailed *t* test was used for continuous variable (compare two means); Wilcoxon sum rank test was used for continuous variable (compare two medians); χ^2 test was used for categorical variables (compare percentages).

Possible mechanisms explaining the effect of depression on COPD exacerbation

1. Depressed subjects may have changes in major immune cell classes (12–14), which may be responsible for the susceptibility to environmental triggers of COPD exacerbation (e.g., virus/bacteria infection and air pollutants).
2. Many patients with chronic diseases (e.g., COPD) are able to adapt to chronic symptoms (e.g., dyspnea). However, having comorbid depression may interfere this adaptation process and is related to increased awareness and focus on physical symptoms (18, 49). Therefore, depressed patients with COPD may be more sensitive to or report more respiratory symptoms change. This could also lead to more frequent doctor visits and an increased opportunity for pharmacologic prescription (18, 40).
3. Depressed patients may have lower self-confidence and a feeling of hopelessness (50). They may have suboptimal disease control due to poor self-care strategies and adherence to medications (48, 49). These patients tend to be vulnerable when exposed to a trigger of COPD exacerbation.

ORIGINAL INVESTIGATION

Depression Is a Risk Factor for Noncompliance With Medical Treatment

Meta-analysis of the Effects of Anxiety and Depression on Patient Adherence

M. Robin DiMatteo, PhD; Heidi S. Lepper, PhD; Thomas W. Croghan, MD

Background: Depression and anxiety are common in medical patients and are associated with diminished health status and increased health care utilization. This article presents a quantitative review and synthesis of studies correlating medical patients' treatment noncompliance with their anxiety and depression.

Methods: Research on patient adherence catalogued on MEDLINE and PsychLit from January 1, 1968, through March 31, 1998, was examined, and studies were included in this review if they measured patient compliance and depression or anxiety (with n>10); involved a medical regimen recommended by a nonpsychiatrist physician to a patient not being treated for anxiety, depression, or a psychiatric illness; and measured the relationship between patient compliance and patient anxiety and/or depression (or provided data to calculate it).

Results: Twelve articles about depression and 13 about anxiety met the inclusion criteria. The associations between anxiety and noncompliance were variable, and their averages were small and nonsignificant. The relationship between depression and noncompliance, however, was substantial and significant, with an odds ratio of 3.03 (95% confidence interval, 1.96-4.89).

Conclusions: Compared with nondepressed patients, the odds are 3 times greater that depressed patients will be noncompliant with medical treatment recommendations. Recommendations for future research include attention to causal inferences and exploration of mechanisms to explain the effects. Evidence of strong covariation of depression and medical noncompliance suggests the importance of recognizing depression as a risk factor for poor outcomes among patients who might not be adhering to medical advice.

Arch Intern Med. 2000;160:2101-2107

Health behaviour, depression and religiosity in older patients admitted to intermediate care

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[4]*Freemasons' Department of Geriatric Medicine, University of Auckland, Auckland, New Zealand*

SUMMARY

Objective To examine health behaviour, severity of depression, gender differences and religiosity in older patients admitted to intermediate care for further rehabilitation.

173 older in-patients > 23 MMSE

Clinical features + HADS + MADRS + kind of religion + 3 dimensions of religion

Int J Geriatr Psychiatry 2008

Table 1. Religious denomination, activities and attitudes ($n = 173$)

Religious affiliation	*n* (%)
No denomination	27 (16%)
Anglican (Church of England)	67 (39%)
Catholic	57 (33%)
Protestant (Presbyterian, Baptist, Assembly of God)	20 (11%)
Others	2 (1%)
Religious attendance	
Never	12 (7%)
Once a year or less	42 (24%)
A few times a year	5 (3%)
A few times a month	18 (10%)
Once a week	26 (15%)
More than once/week	70 (41%)
Private religious activities (prayer, bible study)	
Rarely or never	15 (9%)
A few times a month	69 (40%)
Once a week	11 (6%)
Two or more times/week	9 (5%)
Daily	14 (8%)
More than once a day	55 (32%)
Intrinsic religious attitudes (activities)	*n* (% true or tends to be true)
In my life, I experience the presence of the divine God.	89 (51%)
My religious beliefs are what really lie behind my whole approach to life	88 (50%)
I try hard to carry my religion over into all other dealings in life	87 (50%)

Conclusion In older patients with chronic diseases in intermediate care, religious attendance was associated with positive perceptions of health, less severe illness, and fewer pack years. Intrinsic religious activities were associated with less severe depression and lower likelihood of living alone.

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Depressione e riabilitazione – stroke

- PSD → prevalence estimated around 30-35%, ranging from 20 to 60%

- The peak prevalence of PDS appears to be from 3 to 6 months after stroke, and subsequently it declines to about 50% of the inizial rate at 1 year

- PSD seems to be more frequent in aphasic patients and in in-patient rehabilitative settings (probably because of their disability)

Lenzi et al., Rev Neurol 2008

Depressione e riabilitazione – stroke

- PSD pathophysiology is still debated
  - Biological hypothesis
  - Psychosocial hypothesis

Treated patients with PSD showed significanltly better rehabilitation outcome then untreated ones (mainly fluoxetine and nortriptyline within one month after stroke)

However, *only a minority of patients with PSD are diagnosed*, and even fewer are treated, mainly because of the high frequency of contraindications, adverse effects, and drug interaction.

Paolucci et al., Acta Psychiatr Scan 2005

ORIGINAL ARTICLE

Geriatric Depression, Medical Diagnosis, and Functional Recovery During Acute Rehabilitation

Jeffrey A. Cully, PhD, Jeffrey D. Gfeller, PhD, Richard A. Heise, PhD, Michael J. Ross, PhD, Cayla R. Teal, PhD, Mark E. Kunik, MD, MPH

Objective: to examine and compare the prevalence and functional impact of depressive symptoms for older adult stroke and non-stroke rehabilitation inpatients.

Table 1: Participant Demographics by Group Based on Diagnosis and Depression

	Stroke		Nonstroke	
Characteristic	No Depression	Depression	No Depression	Depression
n (%)	141 (68.1)	66 (31.8)	207 (68.5)	95 (31.5)
Women, n (%)	79 (56.0)	45 (68.2)	137 (66.2)	50 (52.6)
Age (y)	75.04±7.75	77.89±8.02	74.94±8.00	77.11±7.49
LOS (d)	17.52±7.72	19.45±8.35	15.30±7.31	16.39±8.43
GDS total	4.84±2.93	15.00±3.92	5.18±2.99	15.93±4.41

NOTE. Values are mean ± standard deviation (SD) or as indicated.

stroke → 31.8%

Non stroke → 31.5%

Arch Phys Med Rehab, 2005

Table 2: ANCOVA for Depression and Diagnosis

Source	*df*	Mean Square	F	Partial η^2
FIM self-care discharge score (n=421)				
LOS	1	42.69	4.60	.011
Age	1	38.64	4.17*	.010
Sex	1	22.82	2.46	.006
Self-care admission score	1	3459.27	373.07†	.475
Diagnosis‡	1	3.54	0.38	.001
Depression	1	91.64	9.88†	.023
Diagnosis by depression	1	20.90	2.25	.005
Error	413	9.27		
FIM body mobility discharge score (n=420)				
LOS	1	138.66	6.72†	.016
Age	1	36.48	1.77	.004
Sex	1	9.66	0.47	.001
Body mobility admission score	1	6821.69	330.76†	.445
Diagnosis‡	1	46.45	2.25	.005
Depression	1	214.02	10.38†	.025
Diagnosis by depression	1	11.56	0.56	.001
Error	412	20.63		
FIM communication/social interaction discharge score (n=420)				
LOS	1	207.32	35.60†	.080
Age	1	124.60	21.39†	.049
Sex	1	14.31	2.46	.006
Communication/social interaction admission score	1	9413.90	1616.40†	.797
Diagnosis‡	1	0.20	0.34	.000
Depression	1	25.79	4.43*	.011
Diagnosis by depression	1	19.48	3.35	.008
Error	412	5.24		
FIM sphincter control discharge score (n=419)				
LOS	1	3.93	0.75	.002
Age	1	7.39	1.41	.003
Sex	1	44.45	8.49†	.020
Sphincter control admission score	1	1400.73	267.49†	.394
Diagnosis‡	1	48.78	9.32†	.022
Depression	1	58.30	11.13†	.026
Diagnosis by depression	1	27.00	5.16*	.012
Error	411	5.24		

*$P<.05$.
†$P<.01$.
‡Diagnosis was broken down into 2 groups (stroke, nonstroke).

Rehabilitation outcome in stroke and non stroke patients

Tabella 7.6. Caratteristiche di 487 pazienti anziani ricoverati consecutivamente presso l'uo Riabilitazione specialistica e generale geriatrica istituto Ancelle della Carità di Cremona, dopo stratificazione per patologia (stroke *vs* non stroke) e sintomatologia depressiva (GDS ≥6/15)

	STROKE			NON STROKE		
	Depressi (n = 35)	*Non depressi (n = 30)*	*p**	*Depressi (n = 149)*	*Non depressi (n = 273)*	*p***
Età (anni)	77.5 ± 6,5	77,2 ± 8,2	0,838	78,7 ± 7,7	75,3 ± 7,3	0,000
Sesso femminile (%)	77,1	56,7	0,068	82,6	74,4	0,035
Charlson Index	5,0 ± 1,8	4,0 ± 1,5	0,019	2,5 ± 2,0	1,6 ± 1,8	0,000
Geriatric Depression Scale (0-15)	9,1 ± 2,2	3,5 ± 1,2	0,000	8,5 ± 2,2	2,5 ± 1,5	0,000
Geriatric Depression Scale ≥ 6/15 (%)	53,8			35,3		0,000
Mini Mental State Examination (0-30)	22,0 ± 4,2	24,2 ± 4,5	0,043	24,5 ± 4,0	26,5 ± 3,2	0,000
FIM all'ingresso (0-126)	60,5 ± 25,0	72,8 ± 28,6	0,104	74,9 ± 24,0	84,4 ± 23,6	0,001
FIM alla dimissione (0-126)	79,7 ± 27,6	87,2 ± 25,5	0,317	95,5 ± 22,0	106,1 ± 17,1	0,000
Barthel Index all'ingresso (0-100)	40,6 ± 25,6	52,2 ± 28,6	0,088	47,8 ± 23,3	59,1 ± 23,3	0,000
Barthel Index alla dimissione (0-100)	62,0 ± 28,1	71,1 ± 27,1	0,189	77,4 ± 21,0	88,1 ± 15,0	0,000
Durata della degenza	32,7 ± 15,2	30,1 ± 14,2	0,469	24,9 ± 7,8	21,2 ± 8,4	0,000

Note: i valori sono espressi come media ± deviazione standard, a meno che non specificato diversamente; la significatività è valutata mediante il test chi-quadro per le variabili categoriche e mediante il *t*-test per le variabili discrete.

Legenda: FIM = Functional Independence Measure; p* = significatività tra i due gruppi di pazienti colpiti da stroke; p** = significatività tra i due gruppi di pazienti affetti da altre patologie.

Bellelli e Trabucchi, 2009

Possibili effetti dei sintomi depressivi sul processo riabilitativo

- Riduzione della motivazione, apatia e scarsa energia (Gantner et al., Int J Psychiatry in Med, 2003)
- Il pessimismo induce il paziente a ritenere inutili gli sforzi che il trattamento riabilitativo comporta e ne riduce l'impegno (Gantner et al., Int J Psychiatry in Med, 2003)
- Condizionamento del terapista sulla progettazione dell'intervento riabilitativo → esercizi riabilitativi a minore complessità ed intensità (Bellelli e Trabucchi, 2009)

Independent and Mediated Contributions of Personality, Coping, Social Support, and Depressive Symptoms to Physical Functioning Outcome Among Patients in Cardiac Rehabilitation

Biing-Jiun Shen,[1,5] Charles P. McCreary,[2,3] and Hector F. Myers[4]

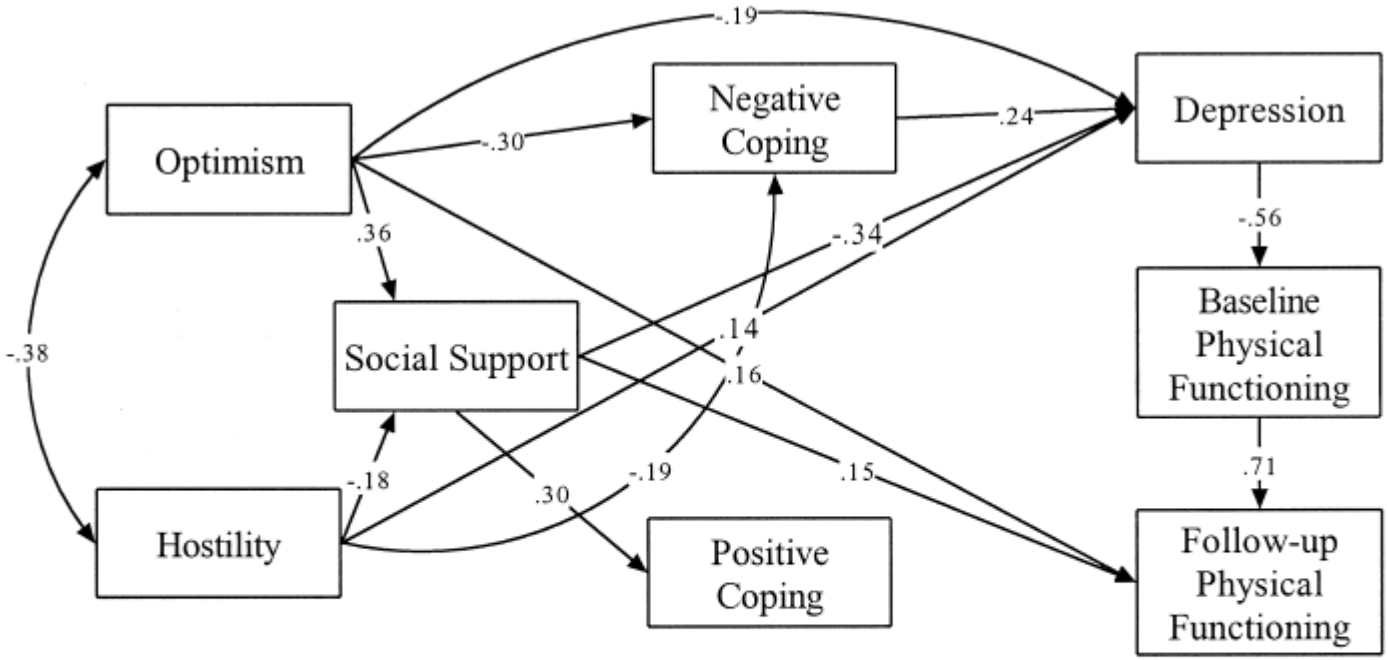

Fig. 2. Exploratory mediation model of psychosocial variables and physical functioning. Age and severity of illness are controlled in the model. Final model ($\chi^2 = 13.91$, df = 14, $N = 142$, $p > 0.05$; CFI = 1.00; RMSEA = 0.00) is presented with standardized path coefficients. All coefficients are significant at 0.01 level except for the path between hostility and depression at 0.05 level. Residual terms are not shown for clear presentation.

J Behav Med, 2004

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY
Int J Geriatr Psychiatry 2004; **19**: 472–478.
Published online in Wiley InterScience (www.interscience.wiley.com). **DOI**: 10.1002/gps.1116

Adverse effects of depression and cognitive impairment on rehabilitation participation and recovery from hip fracture

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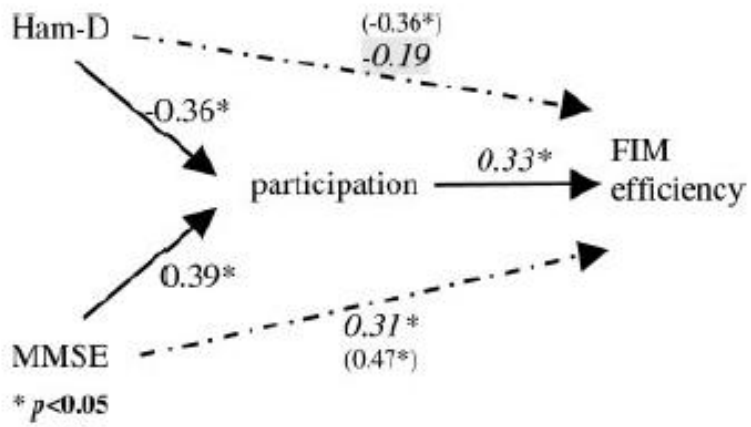
Objectives This study examines the effects of depression and cognitive impairment in elderly hip fracture patients receiving inpatient rehabilitation. Our goal was to determine whether any association of depression and cognitive impairment with rehabilitation outcome is accounted for by more immediate effects of these variables on rehabilitation participation.
Methods We measured depression using the Hamilton Rating Scale for Depression (Ham-D), cognition using the Mini Mental State Examination (MMSE), and rehabilitation outcomes using the motor scale of the Functional Independence Measure (motor FIM) in a prospective observational study of 57 elderly rehabilitation hospital patients admitted to a university-affiliated, freestanding rehabilitation hospital with primary diagnosis of hip fracture. We also assessed rehabilitation participation, to determine whether this accounted for (mediated) any relationship of depression and cognitive impairment with rehabilitation outcome.

Table 1. Correlations among demographic and clinical variables

	Ham-D	MMSE	Rehab partic	Motor FIM efficiency	Age	Length of stay	CIRS	Admission motor FIM	Change in motor FIM
Ham-D	—	−0.23	−0.46[c]	−0.44[c]	0.10	0.57[c]	0.17	−0.18	−0.18
MMSE		—	0.47[c]	0.52[c]	−0.23	−0.27[a]	−0.23	0.50[c]	0.50[c]
Rehab partic			—	0.57[c]	0.16	−0.32[a]	−0.32[a]	0.48[c]	0.60[c]
Motor FIM efficiency				—	−0.09	−0.71[c]	−0.24	0.49[c]	0.64[c]
Age					—	0.23	−0.12	−0.27[a]	0.10
Length of stay					—	—	0.02	−0.40[b]	−0.19
Admission motor FIM					—	—	—	—	0.15

[a] $p < 0.05$.
[b] $p < 0.01$.
[c] $p < 0.001$.
Ham-D = Hamilton Rating Scale for Depression; MMSE = Mini Mental Status Examination; Rehab partic = rehabilitation participation scale mean score; CIRS-G = Cumulative Illness Rating Scale for Geriatrics; Motor FIM Efficiency = (discharge motor FIM—admit motor FIM)/length of stay.



Anxiety, Depressive, or Cognitive Disorders in Rehabilitation Patients

Effect on Length of Stay

ABSTRACT

Clerc Bérod, A, Klay, M, Santos-Eggimann, Paccaud, F: Anxiety, depressive, or cognitive disorders in rehabilitation patients· effect on length of stay. *Am J Phys Med Rehabil* 2000;79:266–273.

TABLE 3

LOS in TRC (median; mean ± SD) by anxiety diagnosis, depression diagnosis, and cognitive disorders at admission

	Male	Female	All
Anxiety diagnosis			
Less-probable	22; 27 ± 19	23; 30 ± 23	23; 29 ± 22
Doubtful	21; 30 ± 26	27; 32 ± 20	25; 32 ± 21
Probable	23; 30 ± 20	27; 34 ± 23	26; 33 ± 22
			$P = 0.022$
Depression diagnosis			
Less-probable	22; 27 ± 18	23; 30 ± 21	23; 29 ± 20
Doubtful	21; 29 ± 21	28; 34 ± 23	27; 34 ± 23
Probable	27; 35 ± 29	27; 31 ± 18	27; 31 ± 21
			$P = 0.003$
Cognitive disorders			
Absence	22; 26 ± 18	22; 28 ± 19	22; 27 ± 19
Presence	28; 31 ± 21	30; 37 ± 26	29; 35 ± 24
			$P < 0.001$

1385 pazienti

Mean LOS 30 ± 20 gg.

HADS + MMSE

TABLE 4

Results of the multivariate analysis for exploring anxio-depressive independent effects on LOS[a]

Variable	Coefficient	SE	95% CI	P^b
Age (yr)	0.001	0.001	(−0.002; 0.003)	0.587
Gender				0.004
Female	0.103	0.036	(0.033; 0.174)	
LOS in acute care hospital (days)				<0.001
≤25	0.029	0.055	(−0.078; 0.137)	
>25	0.222	0.059	(0.105; 0.338)	
TRC				0.002
#2	−0.147	0.043	(−0.231; −0.063)	
#3	−0.068	0.038	(−0.142; 0.006)	
Diagnosis groups				0.159
Cardiovascular disease	0.030	0.075	(−0.116; 0.177)	
Mental-social troubles	−0.059	0.111	(−0.278; 0.158)	
Neurologic troubles	0.147	0.063	(0.022; 0.272)	
Other, surgery	0.024	0.044	(−0.063; 0.111)	
Other, not surgery	−0.019	0.047	(−0.112; 0.073)	
ADL score	−0.024	0.007	(−0.037; −0.010)	<0.001
Mobility score	−0.051	0.005	(−0.060; −0.041)	<0.001
Anxiety diagnosis				0.360
Doubtful	0.063	0.045	(−0.024; 0.151)	
Probable	0.026	0.049	(−0.070; 0.122)	
Depression diagnosis				0.107
Doubtful	0.082	0.049	(−0.015; 0.179)	
Probable	−0.053	0.060	(−0.171; 0.065)	

CI, confidence interval.

[a] Summary statistics: $N = 1042$; adjusted $R^2 = 0.29$; $F(17,1024) = 26.4$.

[b] Likelihood-ratio test for H_0: category coefficients are all 0.

Multivariate regression → admission HADS depression diagnosis predictive of change in mobility score → Depression and cognitive factors could affect the evolution of functional ability, and so indirectly affect reahabilitation LOS

NIH Public Access
Author Manuscript
Gen Hosp Psychiatry. Author manuscript; available in PMC 2007 April 20.

Published in final edited form as:
Gen Hosp Psychiatry. 2007 ; 29(2): 141–146.

Does depression, apathy, or cognitive impairment reduce the benefit of inpatient rehabilitation facilities for elderly hip fracture patients?

Eric J. Lenze, M.D.[1,2], **Elizabeth R. Skidmore, Ph.D.**[3], **Mary Amanda Dew, Ph.D.**[1], **Meryl A. Butters, Ph.D.**[1], **Joan C. Rogers, Ph.D.**[3], **Amy Begley, M.A.**[1], **Charles F. Reynolds III, M.D.**[1], and **Michael C. Munin, M.D.**[2]

- Patients with depression, apathy, or cognitive impairment who received rehabilitation in an IRF (inpatient rehabilitation facility) had similar outcomes as nondepressed, motivated and cognitively intact elderly of the same facility and significantly better functional outcomes then similarly patients at a SNF (skilled nursing facilities)

Depression in Older Patients Admitted for Postacute Nursing Home Rehabilitation

Adam P. Webber, BSc (Hons), MRCP(UK), Jennifer L. Martin, PhD,*† Judith O. Harker, PhD,* Karen R. Josephson, MPH,* Laurence Z. Rubenstein, MD, MPH,*† and Cathy A. Alessi, MD*†*

Table 1. Baseline Patient Characteristics (N = 151)

Characteristic	Depressed* (n = 42)	Not Depressed† (n = 109)	F value	*P*-value
Age, mean ± SD‡	82 ± 7.7	82 ± 6.9	0.06	.81
Female, %§	61.9	55.0		.47
GDS-15 score, mean ± SD (n = 144)‡	8.4 ± 2.8	2.5 ± 1.5	276.6	<.001
CSDD, mean ± SD (n = 7)	8.3 ± 4.2	1.0 ± 1.6	20.1	.02
Caucasian, %§	88.1	94.5		.18
Mini-Mental State Examination score, mean ± SD‡‖	22.1 ± 5.9	22.9 ± 6.9	0.39	.53
Reason for admission, %§				
Medical problem	42.9	45.0		.59
Orthopedic problem				
Hip fracture	14.3	15.6		
Other fracture	7.1	13.7		
Elective joint replacement	9.5	11.0		
Other surgical problem	21.4	11.0		
Stroke	4.8	3.7		

* Fifteen-item Geriatric Depression Scale (GDS-15) score ≥6 (range 1–15) or Cornell Scale for Depression in Dementia (CSDD) score ≥5 (range 0–38).
† GDS-15 <6 or CSDD <5.
‡ Examined using analysis of variance.
§ Examined using chi-square analysis.
‖ Range 0–30; higher scores indicate better cognitive functioning.
¶ Overall *P*-value.

JAGS, 2005

Table 2. Therapy Process and Outcomes (N = 151)

Therapy Process	Depressed* (n = 42)	Not Depressed† (n = 109)	F value	*P*-value
Amount of therapy received, minutes, mean ± SD‡	1,572.0 ± 587.27	1,473.0 ± 696.9	0.66	.42
Therapy quotient‡§	1.05 ± 0.15	1.04 ± 0.18	0.12	.74
Admission mFIM, mean ± SD‡‖	35.4 ± 9.5	37.1 ± 9.1	0.96	.33
Discharge mFIM, mean ± SD‡	52.7 ± 13.9	53.4 ± 13.8	0.08	.78
Discharge mFIM change, mean ± SD‡¶	17.3 ± 9.4	16.1 ± 10.9	0.38	.54
Length of stay in days, mean ± SD‡††	28.5 ± 12.6	22.8 ± 11.2	7.17	.01
mFIM efficiency, mean ± SD‡	0.68 ± 0.40	0.82 ± 0.55	2.2	.14
Discharged to community, n/N (%)#	31/41 (75.6)	92/105 (87.6)		.18
Follow-up mFIM, mean ± SD (n = 98)‡	56.4 ± 22.7	67.0 ± 23.7	4.10	.05
2-month mFIM change, mean ± SD (n = 98)‡**	2.4 ± 16.0	11.5 ± 19.0	4.92	.03
Independent at 2 months, n/N (%) (n = 98)#	9/27 (33.3)	46/71 (64.7)		.04
Living in the community at 2 months, n/N (%) (n = 109)#	29/38 (76.3)	80/93 (86.0)		.18

* Fifteen-item Geriatric Depression Scale (GDS-15) score (range 1–15) score ≥6 or Cornell Scale for Depression in Dementia (CSDD) score ≥5 (range 0–38).
† GDS-15 <6 or CSDD <5.
‡ Variables examined using analysis of variance.
§ Received therapy/prescribed therapy (higher scores indicate better process of therapy).
‖ Motor component of the Functional Independence Measure (mFIM) (range 13–91; higher scores indicate better functioning).
¶ Discharge mFIM–baseline mFIM.
\# Variables examined using chi-square analysis.
** 2-month mFIM–discharge mFIM.
†† Normalized scores.

JAGS, 2005

"…It is coinceivable that depressed patients can acheive similar levels of functional recovery as long as they affort the support and encouragement of an intensive inpatient rehabilitation program…"

Diamond et al., Am J Phys Med Rehab 1995

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY
Int J Geriatr Psychiatry 2003; **18**: 14–22.
Published online in Wiley InterScience (www.interscience.wiley.com). **DOI**: 10.1002/gps.768

The role of depressive symptoms in recovery from injuries to the extremities in older persons. A prospective study

Gertrudis I. J. M. Kempen[1]*, Robbert Sanderman[2], Winnie Scaf-Klomp[2] and Johan Ormel[3]

Background Previous research suggested that depressive symptoms play a role in recovery after hip fracture. However none of these studies were prospective and included only patients with hip fractures.
Objective To examine the effect of depressive symptoms on the recovery of (instrumental) activities of daily living after fall-related injuries to the extremities in older persons.
Design Prospective cohort study.
Methods Data were collected from 168 older persons at baseline, prior to their injuries (hip fractures, other fractures or contortions and dislocations), and 8 weeks, 5 months and 12 months after their accident. Hierarchical multiple regression analysis was used to study the impact of depressive symptoms (as assessed with the Hospital Anxiety and Depression Scale; HADS) on disability (as assessed with the Groningen Activity Restriction Scale; GARS) after the injury while adjusting for several covariates.
Results Depressive symptoms at baseline were not predictive for disability after the injury when covariates were taken into account. However, depressive symptoms 8 weeks after the fall were significantly related to disability at 8 weeks, 5 months and even 12 months after the injury. In addition, disability levels before the injury were highly predictive for recovery later on. Severity of injury was particularly predictive for disability at 8 weeks while age (which may generally represent the amount of physiological reserve) predicted disability at 5 and 12 months after the injury. Cognitive functioning 8 weeks post-injury was, in contrast to previous research, not predictive for recovery when covariates were taken into account.

Table 3. Hierarchical multiple regression analyses: disability at baseline, depressive symptoms at baseline, age, gender, chronic medical morbidity, level of injury, cognitive functioning 8 weeks post-injury and depressive symptoms 8 weeks post-injury on disability at 8 weeks, 5 months and 12 months post-injury

	Level of Disability[a]											
	8 weeks post-injury				5 months post-injury				12 months post-injury			
	β	p-value	β	p-value	β	p-value	β	p-value	β	p-value	β	p-value
Disability at baseline[a]	0.509	0.000	0.479	0.000	0.593	0.000	0.570	0.000	0.559	0.000	0.542	0.000
Depressive symptoms at baseline[a]	0.128	0.076	0.001	0.992	0.079	0.184	−0.021	0.749	0.019	0.761	−0.053	0.459
Age	−0.004	0.955	0.004	0.951	0.147	0.010	0.153	0.006	0.192	0.002	0.197	0.001
Gender (1 = male, 2 = female)	0.042	0.507	0.030	0.619	0.062	0.225	0.054	0.285	0.120	0.032	0.113	0.040
Number of chronic medical conditions	−0.040	0.546	−0.067	0.303	0.073	0.187	0.052	0.336	0.059	0.315	0.044	0.452
Level of injury[b]	−0.305	0.000	−0.311	0.000	−0.092	0.073	−0.097	0.053	−0.109	0.049	−0.113	0.040
Cognitive functioning 8 weeks post-injury[c]	−0.049	0.481	−0.034	0.612	−0.089	0.122	−0.077	0.167	−0.068	0.268	−0.060	0.327
Depressive symptoms 8 weeks post-injury[a]			0.259	0.001			0.203	0.001			0.147	0.032
R^2	0.400		0.442		0.595		0.620		0.530		0.544	
F-value	15.3	0.000	15.8	0.000	33.5	0.000	32.5	0.000	25.8	0.000	23.7	0.000
R^2 change			0.042				0.026				0.013	
F-change			11.9	0.001			10.7	0.001			4.7	0.032

β, Standardised regression coefficient; R^2, Amount of variance explained.
[a]Higher scores indicate poorer function.
[b]1 = hip fracture, 2 = other fracture, 3 = non-fracture.
[c]Higher scores indicate better function.

Conclusions Pre-injury levels of disability and post-injury depressive symptoms are associated with recovery and may warrant concern and special attention in clinical practice.

Sommario

- Introduzione
- Prevalenza
- Depressione e malattie somatiche
- Depressione e riabilitazione
- Riabilitazione e depressione
- Conclusioni
- Future directions

Possibili effetti del trattamento riabilitativo sui sintomi depressivi

- Azione neurotrasmettitoriale → cambiamenti del livello di endorfine nel sangue

- Azione funzionale → miglioramento nella disabilità con conseguente miglioramento dell'umore

- Azione psicosociale → potenziamento capacità di coping e miglioramento dell'autoefficacia, > opportunità di socializzazione e riduzione del senso di isolamento sociale

JAGS 2006

Mood Improvement in Elderly Women After In-Hospital Physical Rehabilitation

Piera Barbisoni, MD, Bruno Bertozzi, MD, Simone Franzoni, MD, Renzo Rozzini, MD, Giovanni B. Frisoni, MD, Marco Trabucchi, MD

Objective: to evaluate the relationship between change in depressive symptoms and in-hospital physical rehabilitation in elderly women.

Table 1: Sociodemographic, Clinical, and Functional Characteristics of 123 Women (48 Responders and 75 Nonresponders to Physical Therapy) With Mini Mental State Examination Score of 13 or Higher in a Geriatric Evaluation and Rehabilitation Unit

	Admission				Discharge			
	Responders		Nonresponders		Responders		Nonresponders	
	Mean(SD)	Range	Mean(SD)	Range	Mean(SD)	Range	Mean(SD)	Range
Age (yr)	78.7 (7.4)	60-93	78.2 (6.5)	60-91				
Education (yr)	5.4 (2.9)	3-16	5.2 (2.2)	1-14				
MMSE	23.4 (5.4)	13-30	23.0 (5.1)	13-30	24.7 (5.0)*	12-30	24.0 (5.0)¶	12-30
GDS	15.2 (6.7)	3-27	13.8 (6.1)	1-29	12.8 (6.1)†	1-26	12.8 (6.2)§	1-28
Tinetti scale	14.0 (7.4)	0-25	18.0 (9.9)‡	0-28	21.2 (5.0)†	10-28	18.3 (10.0)‖	1-28
BADL (functions lost)	2.3 (1.8)	0-6	2.2 (1.8)	0-6				
IADL (functions lost)	5.02 (2.3)	0-8	4.6 (2.6)	0-8				
Diseases (no.)					5.3 (1.6)	3-10	5.1 (1.5)	1-8
Drugs (no.)					4.7 (1.8)	1-8	4.6 (1.9)	1-10
Length of stay (days)					27.3 (10.7)	10-62	24.8 (13.7)	5-89

*$P < .01$, † $P < .001$ on t test for difference with admission in responders.
‡$P = .01$ on t test for difference with responders on admission.
§$P < .05$, ‖$P < .005$, ¶$P < .0005$ on t test for difference with admission in nonresponders.

Arch Phys Med Rehab 1996

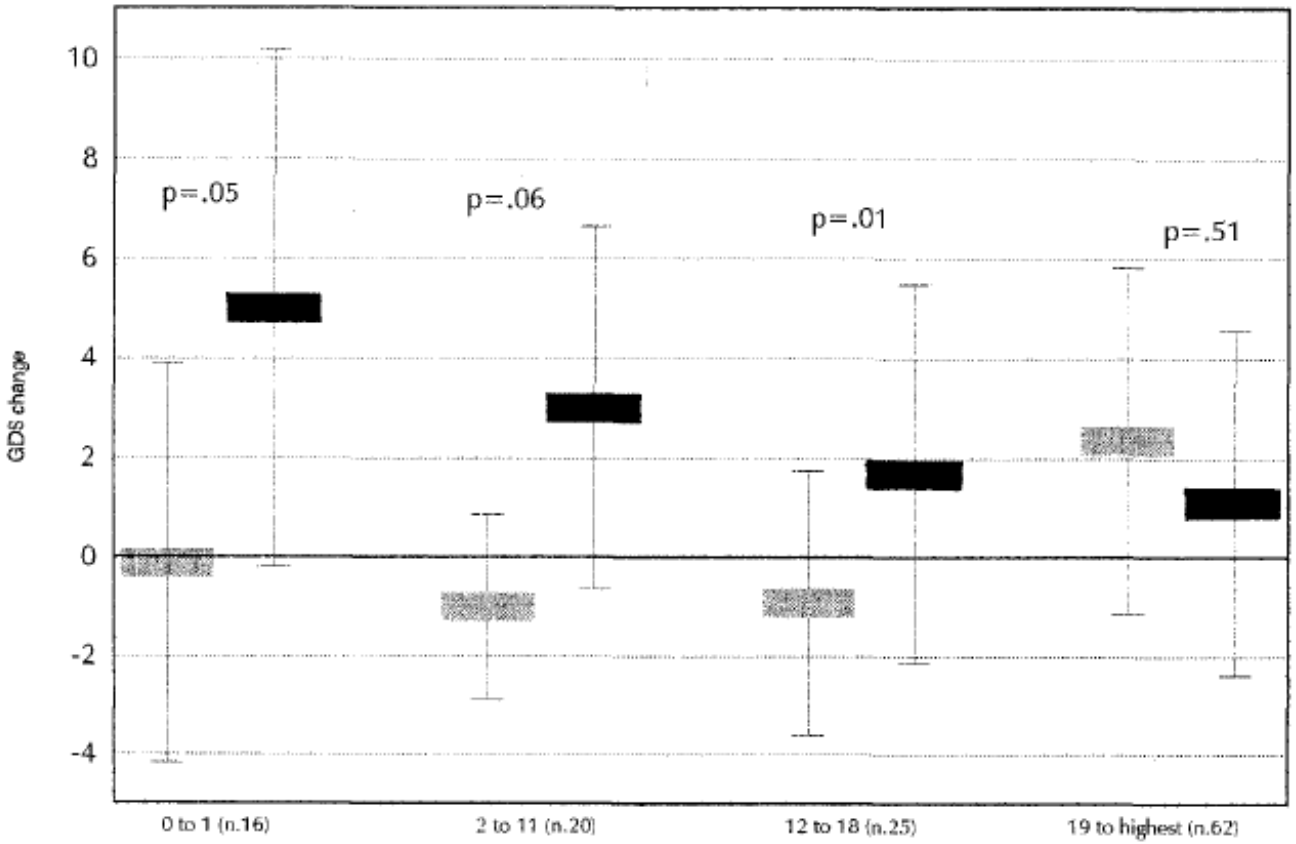


Fig 1. Relationship of GDS change during hospitalization and response to physical therapy after stratification for Tinetti score on admission in 123 elderly patients. Positive values of GDS change indicate improvement of mood. Responsive (■) and nonresponsive (▩) patients were defined as those with a score of 3 or more points and 2 or less points, respectively, on the Tinetti scale; *p* values show significance of the difference in GDS change in responders and nonresponders for each disability group.

"…It could be hypothesized that functional improvement in patients with slight disability cannot modify their quality of life; on the contrary, patients with a high level of disability at hospital admission obtained, after physical treatment, a dramatic improvement of their physical performance and **quality of life**…".

ORIGINAL INVESTIGATION

Effects of Exercise Training on Older Patients With Major Depression

James A. Blumenthal, PhD; Michael A. Babyak, PhD; Kathleen A. Moore, PhD; W. Edward Craighead, PhD; Steve Herman, PhD; Parinda Khatri, PhD; Robert Waugh, MD; Melissa A. Napolitano, MA; Leslie M. Forman, MD; Mark Appelbaum, PhD; P. Murali Doraiswamy, MD; K. Ranga Krishnan, MD

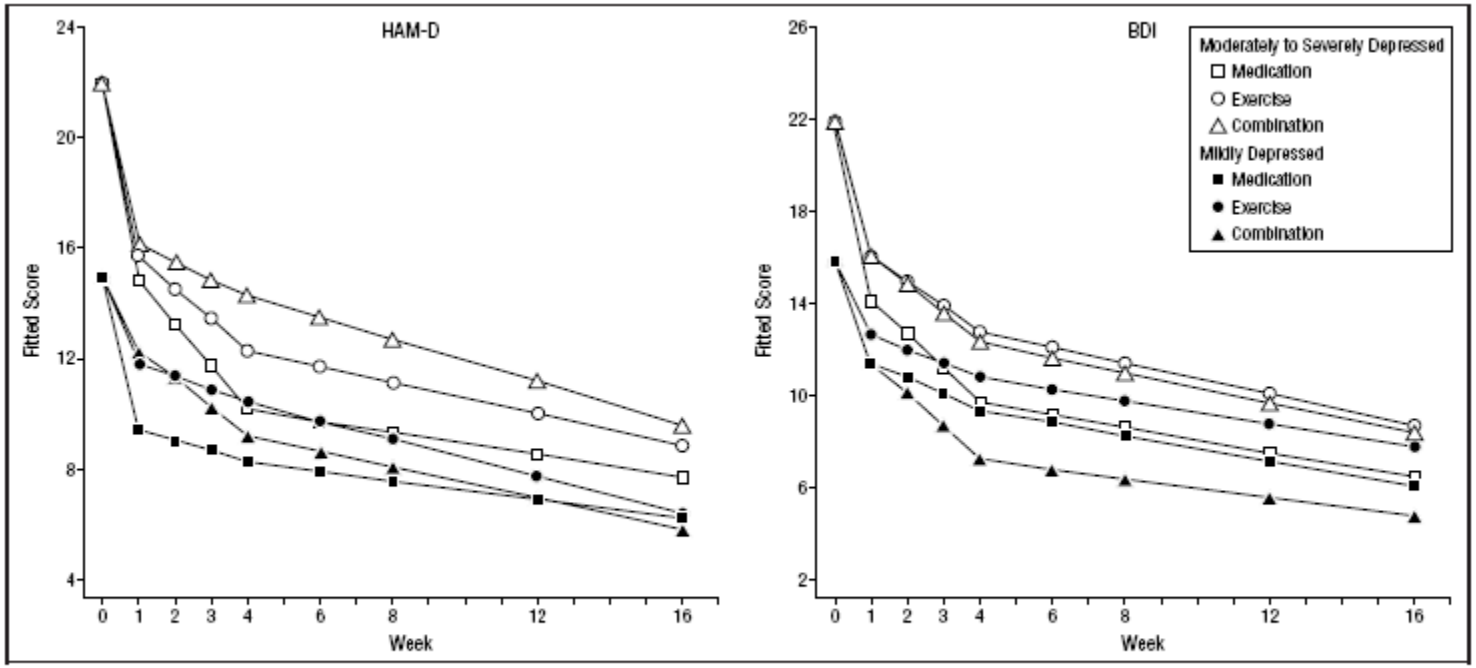


Figure 4. *Fitted values for Hamilton Rating Scale for Depression (HAM-D) (left) and Beck Depression Inventory (BDI) (right) across 16 weeks of treatment. Values represent the fitted scores in each treatment group for 2 selected values of baseline depression treatment (22 for moderate to severe and 16 for mild). Week 0 values represent the baseline starting points selected for this illustration and were not generated by the model. Depression ratings of mild and moderate to severe are at baseline.*

Arch Intern Med, 1999

Therapeutic Exercise and Depressive Symptoms After Stroke

Sue-Min Lai, PhD, MS, MBA,[*] Stephanie Studenski, MD, MPH,[§‖] Lorie Richards, PhD,[¶] Subashan Perera, PhD,[§] Dean Reker, PhD,[†#] Sally Rigler, MD, MPH,[‡] and Pamela W. Duncan, PhD, PT, FAPTA[**]

Table 2. Effects of a Therapeutic Exercise Program on Depressive Symptoms, Emotional Health, and Antidepressant Use at 3 and 9 Months

	Three Months (Immediately Postintervention)		Nine Months (6 Months Postintervention)	
Measure of Depression	Exercise (n = 44)	Usual Care (n = 49)	Exercise (n = 40)	Usual Care (n = 40)
GDS score, mean ± SD	2.5 ± 2.5[‡]	4.4 ± 3.4	2.0 ± 1.8	3.4 ± 3.2
GDS score ≥6, n (%)	6 (14.0)[†]	16 (35.6)	3 (7.5)[*]	10 (25.0)
Stroke Impact Scale emotion score, mean ± SD	83.0 ± 12.1[†]	76.5 ± 16.2	81.1 ± 14.1	80.1 ± 16.8
Medical Outcomes Study 36-Item Short Form emotion score, mean ± SD	93.0 ± 22.5[†]	77.5 ± 37.9	95.8 ± 13.5	85.8 ± 31.9
Antidepressant use, n (%)	11 (22.5)	12 (27.3)	N/A	N/A

[*] $.05 < P < .10$; [†] $.01 < P < .05$; [‡] $P < .01$ for comparing treatment groups. Analyses were adjusted for baseline age, Orpington Prognostic Scale, and initial status on the depressive symptom/emotion score.
GDS = Geriatric Depression Scale; SD = standard deviation; N/A = not available.

JAGS 2006

Terapia farmacologica

Table 3. Consensus Treatments of Late-Life Depression

Diagnosis	Treatment
Major depression	SSRIs plus psychotherapy. Citalopram (20–30 mg) first choice, followed by sertraline (50–100 mg) and paroxetine (20–30 mg); 1-y continued therapy if treatment successful; ECT if the depression is severe and unresponsive to antidepressant medications
Unipolar psychotic major depression	SSRIs plus an antipsychotic agent (risperidone and olanzapine); move quickly to ECT if therapy not effective
Dysthymic disorder	SSRIs plus psychotherapy
Minor depression	Education plus watchful waiting for depression lasting <2 wk; SSRIs plus psychotherapy if symptoms persist

Note: From Alexopoulos et al. (239). SSRI = selective serotonin reuptake inhibitor; ECT = electroconvulsive therapy.

Alexopoulos et al., Postgrad Med 2001

Socio-demographic, clinical, pyhisical characteristics and long-term functional outcome of HF patients, according to the presence of absence on DS at baseline

Characteristics	**Hip fracture patients**		***p***
	Without depressive symptoms (n=136)	**With new-onset depressive symptoms (n=102)**	
Female gender n, (%)	116 (85.3)	90 (88.2)	.323
Living alone n, (%)	48 (35.3)	44 (43.6)	.124
Age, years	80.0 ± 7.2	81.0 ± 7.1	.297
MMSE	24.3 ± 3.6	23.3 ± 4.5	.071
Demented n, (%)	43 (31.6)	39 (38.2)	.177
Delirium during RACU stay n, (%)	28 (20.6)	26 (25.5)	.230
BMI	23.5 ± 4.7	23.7 ± 5.1	.778
Barthel Index pre-fracture	92.3 ± 13.5	88.3 ± 14.3	.029
Barthel Index on admission	38.7 ± 13.8	34.0 ± 14.5	.010
Motor sumscore on admission	5.2 ± 5.0	4.6 ± 5.6	.579
Barthel Index at discharge	78.5 ± 18.8	75.1 ± 19.3	.170
Motor sumscore at discharge	29.4 ± 8.9	27.6 ± 9.4	.125
Change in motor sumscore	24.2 ± 8.5	22.7 ± 8.9	.195
CCI	1.5 ± 1.3	1.9 ± 1.8	.095
Albumin serum levels	2.8 ± 0.3	2.8 ± 0.3	.538
Number of drugs	4.8 ± 2.1	5.6 ± 2.6	.015
Lenght of RACU stay	26.2 ± 10.5	27.8 ± 7.9	.202
Functional decline (motor sumscore) at 1 year n, (%)	58 (43.9)	65 (65.0)	.001

Independent predictors of functional gain after in-hospital rehabilitation

Predictors	OR	95% CI	p-value
Age	0.9	0.86 – 0.97	.004
Gender	--	--	--
Living alone	--	--	--
Dementia	--	--	--
Depressive symptoms	--	--	--
BMI	--	--	--
Barthel pre-admission	1.1	1.04 – 1.11	< .0001
Number of drugs	--	--	--
Albumin serum level	--	--	--
CCI	0.7	0.06 – 0.09	.013

Independent predictors of 1 year functional decline in motor sumscore

Predictors	**OR**	**95% CI**	***p-value***
Age	0.9	0.88 – 0.99	.029
Female gender	--	--	--
Living alone	--	--	--
Dementia	--	--	--
Depressive symptoms	0.4	0.18 – 0.96	.039
BMI	--	--	--
Barthel at discharge	--	--	--
Number of drugs	--	--	--
Albumin serum levels	--	--	--
CCI	0.7	0.49 – 1.00	.048

Conclusioni

- La prevalenza di sintomi depressivi in riabilitazione è molto elevata,e probabilmente ancora sottostimata
- La presenza di sintomi depressivi in riabilitazione sembra avere un impatto sullo stato funzionale, osservabile particolarmente nel lungo termine
- Educare il paziente depresso rendendolo consapevole delle possibili conseguenze
- Educare il personale riabilitativo al riconoscimento/gestione della sintomatologia depressiva

Future directions

- Rilevazione realistica dei disturbi depressivi in riabilitazione
- Necessità di supportare con ulteriori dati l'efficacia dell'attività fisica (trattamento riabilitativo) sulla depressione
- Monitoraggio degli effetti *a lungo termine* dell'attività fisica sulla sintomatologia depressiva