

## ***IDS EXPRESS ELECTRONICALLY DELIVERED ARTICLE***

### **COPYRIGHT RESTRICTIONS**

The Copyright Law of the United States governs the making of photocopies or other reproductions of copyrighted materials. Photocopies or other reproductions can be furnished only under certain conditions, if they will be solely for private study, scholarship, or research. Use of reproductions for other purposes may make the user liable for copyright infringement.

This institution reserves the right to refuse to accept a copyright order if, in its judgment, fulfillment of the order would involve violation of the Copyright Law.

### **Information Delivery Services**

Wallace Library  
90 Lomb Memorial Drive  
Rochester Institute of Technology  
Rochester, NY 14623  
585-475-2560 (voice/TTY)  
585-475-6490 fax  
illwml@rit.edu  
<http://ill.rit.edu>

Binghamton University Interlibrary

Loan



ILLiad TN: 245928

Borrower: RVE *In-AC*  
Lending String: ZLI,\*BNG,YSM,YSM,VYC

Patron: Hirsch, Jameson

Journal Title: Depression and anxiety.

Volume: ?? Issue:  
Month/Year: 2006 Pages: 1-6

Article Author:

Article Title: ; Future orientation moderates the relationship between functional status and suicide ideation...

Imprint: New York, NY ; Wiley-Liss, c1997-

ILL Number: 27411392



Call #:

Location: Science Library  
Periodicals

ARIEL

Charge

Maxcost: \$201EM

Shipping Address:

LAND - Rochester Institute of Tech Libra  
Wallace Memorial Library 90 Lomb Memoria  
Rochester, NY 14623-5604  
LAND

Fax: 475-6490

Arlel: 129.21.179.168

ARIEL

## Research Article

# FUTURE ORIENTATION MODERATES THE RELATIONSHIP BETWEEN FUNCTIONAL STATUS AND SUICIDE IDEATION IN DEPRESSED ADULTS

Jameson K. Hirsch, Ph.D.,<sup>1,2\*</sup> Paul R. Duberstein, Ph.D.,<sup>1</sup> Kenneth R. Conner, Psy.D., M.P.H.,<sup>1</sup> Marnin J. Heisel, Ph.D.,<sup>1,3</sup> Anthony Beckman, B.S.,<sup>1</sup> Nathan Franus, M.S.,<sup>1</sup> and Yeates Conwell, M.D.<sup>1</sup>

*Functional impairment might amplify suicide risk in later life. A positive view of the future may reduce this risk. We tested the hypothesis that hopelessness and positive future orientation moderate the association between functional status and suicide ideation in a sample of 136 patients, 55 years of age or older, in treatment for depression. Future orientation moderated the association between functional status and suicide ideation; hopelessness did not. Although prospective research is needed to test more rigorously the hypothesized protective role of positive future orientation, our data suggest that treatments designed to enhance future orientation might decrease suicide risk. Depression and Anxiety 0:1-6, 2006. Published 2006 Wiley-Liss, Inc.<sup>†</sup>*

**Key words:** future orientation; functional status; suicide ideation

## INTRODUCTION

Suicide is a significant public health problem for adults ages 55 and over [U.S. Public Health Service, 1999]. A large majority of suicides in this age group have a diagnosable mental illness at time of death, particularly mood disorders [Conwell et al., 2002]. Given that physical illness and impaired functional status may amplify risk for suicidal thoughts and behaviors in depressed patients [Conwell et al., 2000; Juurlink et al., 2004; Leibenluft and Goldberg, 1988], it is important to gain a better understanding of how such risk might be mitigated [Chochinov et al., 1997].

Cognitive theories and treatments suggest that risk-reduction could be accomplished by reducing maladaptive, negative cognitions [Szanto et al., 2001]. "Hopelessness," defined as a negative outlook toward the future, is associated with poor outcomes, including suicide ideation, attempts, and mortality in both psychiatric and medical samples [Barefoot et al., 2000; Beck et al., 1990; Chochinov et al., 1997]. "Positive future orientation," (FO) defined as a predisposition to think about and have a positive mood about the future and to strive toward achievement of identified goals, is related to enhanced well-being, better psychological adjustment, and reduced depression in patients with arthritis, HIV, multiple sclerosis, and Parkinson's disease [Downe-Wamboldt and

Melanson, 1995; Ridder et al., 2000; Safren et al., 2002]. Positive FO may decrease suicide risk among patients with other risk factors [Linehan et al., 1983; Ormel et al., 1997].

Cross-sectional research has documented a relationship between functional impairment and depressive

<sup>1</sup>Center for the Study and Prevention of Suicide, Department of Psychiatry, University of Rochester School of Medicine and Dentistry, Rochester, New York

<sup>2</sup>Department of Psychology, Rochester Institute of Technology, Rochester, New York

<sup>3</sup>Department of Psychiatry and Department of Epidemiology and Biostatistics, Schulich School of Medicine and Dentistry, The University of Western Ontario, London, Ontario, Canada

Contract grant sponsor: U.S. Public Health Service; Contract grant number: T32MH20061, R01MH064579, and R01MH60285.

\*Correspondence to: Jameson K. Hirsch, Ph.D., Department of Psychology, Rochester Institute of Technology, 18 Lomb Memorial Drive, Rochester, NY 14623. E-mail: jkhgla@rit.edu

Received for publication 18 October 2005; Revised 21 March 2006; Accepted 7 April 2006

DOI 10.1002/da.20224

Published online in Wiley InterScience (www.interscience.wiley.com).

<sup>†</sup>This article is a US Government work and, as such, is in the public domain in the United States of America.

symptoms, and suicide ideation in older patients [Friedman et al., 2005]. Prospective studies suggest that this relationship is bidirectional, because depression amplifies functional impairment [Alexopoulos et al., 2005; Bruce et al., 1994], and functional impairment amplifies depression [Ormel et al., 2002]. Prognosis for depressed, functionally impaired patients includes risk of further functional decline, poor quality of life, and increased use of health care services [Jaffe et al., 1994; Paykel et al., 1995].

Although impaired functional status is associated with increased risk for suicidal thoughts and behaviors in older adults, poor outcomes are not inevitable. For instance, despite functional limitations, those who view their future in a positive manner may receive psychological benefits, and are thus less likely to consider suicide; in contrast, a person experiencing high levels of hopelessness may be unable to do so. Our study focused specifically on depressed patients given that mood disorders have been shown to increase risk for suicidal behavior in older adults [Conwell et al., 2002]. The development of targeted treatment and prevention programs requires a deeper understanding of why some depressed patients report thoughts of suicide and others do not. We hypothesized that high levels of positive FO and low levels of hopelessness would moderate the relationship between functional status and current suicide ideation, after accounting for sociodemographic characteristics and severity of depressive symptoms.

## METHODS

### PARTICIPANTS

Depressed patients ( $n = 136$ ) were recruited from inpatient and outpatient services of three teaching hospitals in Rochester, New York, including a tertiary care facility, an academic medical center, and a community hospital. Recruitment and informed consent procedures have been described elsewhere [Heisel et al., 2006], and were subject to the review and approval of an Institutional Review Board. Psychiatric diagnoses were established using the Structured Clinical Interview for DSM-IV Axis I disorders [First et al., 1997]. One hundred eighteen (87%) patients were diagnosed with major depressive disorder (MDD): 45 with single-episode MDD, and 73 with recurrent MDD. Eighteen patients (13%) had bipolar disorder. We excluded patients with cognitive disorder, psychotic or delusional disorder, substance-induced mood disorder, and current psychotic depression. Patients with bipolar affective disorder were excluded if the most recent episode was manic or unspecified. Mean (standard deviation) age of participants was 66.55 (9.71), and their overall education level was 12.98 years ( $SD = 2.85$ ). Fifty-seven patients (42%) were men, 130 (96%) were Caucasian, 61 (45%) lived alone, 43 (32%) were separated or divorced, and 102 (75%) were either retired or on disability.

### MEASURES

**Future orientation (FO).** We created a measure of FO by selecting the following items from the Reasons for Living Inventory—Older Adults Version [Edelstein et al., 2000]: (1) “Tomorrow I may feel better”; (2) “No matter how badly I feel, I know it will not last”; (3) “I believe I can learn to adjust or cope with my problems”; (4) “I have coped before and I can do it again”; (5) “I have the hope that things will improve and the future will be happier”; and (6) “I have future plans I am looking forward to carrying out.” Respondents rated each item on a Likert-scale according to how important it is in preventing them from taking their lives, from 1 (*extremely unimportant*) to 6 (*extremely important*); higher scores indicate greater FO. This FO scale showed high internal consistency in this sample ( $\alpha = .89$ ) and significantly distinguished suicide ideators from nonideators [odds ratio (OR) = .92, 95% confidence interval (CI) = .88–.96,  $P < .001$ , Wald score = 14.48] and death ideators from patients not thinking of death (OR = .95, 95% CI = .90–.99,  $P < .05$ , Wald score = 5.31). In a previous study, FO scores distinguished between mild and severe worst-point suicide ideation, and between lifetime suicide attempters and nonattempters [Hirsch et al., 2006].

**Beck Hopelessness Scale [Beck et al., 1974].** The BHS assesses negative attitudes about the future via 20 true–false statements, and is associated with suicide ideation in older adults [Heisel et al., 2002]. Mean hopelessness scores for our sample are comparable to other studies of older adult psychiatric patients [Lynch et al., 2003; Mann et al., 1999]; higher BHS scores indicate greater hopelessness.

**Illness burden.** Burden of physical illness, a covariate, was assessed utilizing the Cumulative Illness Rating Scale [CIRS; Linn et al., 1968], which provides a rating of illness burden in each of 13 organ systems, and is valid and reliable when used with older adults [Conwell et al., 1993]. As in prior studies [Duberstein et al., 2003], scoring was based on a physician’s review of medical history from health records and interviews; higher scores indicate greater illness burden.

**Hamilton Rating Scale for Depression [HRSD; Williams, 1983].** The HRSD is a 24-item, interviewer-administered measure of the presence and severity of current depressive symptoms; higher scores indicate greater depression severity. The HRSD has adequate psychometric properties [Williams, 2001] and has been used extensively with clinical samples [Lyness et al., 1993]. HRSD scores for our sample were similar to other older adult inpatient samples [Soloff et al., 2000]. The HRSD served as a covariate in the analyses reported here; the HRSD item assessing suicide ideation was omitted to reduce collinearity with the dependent measure.

**Instrumental Activities of Daily Living [IADL; Lawton and Brody, 1969].** This measure of functioning assesses nine tasks, including meal preparation,

telephone use, shopping, transportation, housework, finance management, and medication adherence. The IADL has well-established reliability and validity [Hokoishi et al., 2001], and is associated with suicide ideation in older adults [Awata et al., 2005]. IADL scores in our sample were comparable to those in other older adult studies [Callahan et al., 2005]. Higher IADL scores indicate higher levels of functional impairment.

**Scale for Suicide Ideation [SSI; Beck et al., 1979].** The main outcome variable in this study is suicide ideation, assessed via the SSI, a 19-item, observer-rated measure tapping suicide ideation, presence of a suicide plan, deterrents to suicidal behavior, preparations for a suicide attempt, and anticipation of attempting suicide. SSI scores are associated with risk of suicide attempt and completed suicide among mental health outpatients [Beck et al., 1997]. The mean for the current sample was 4.03 (*SD* = 7.88), and the internal consistency coefficient (Cronbach's  $\alpha$ ) was .83. The SSI yields a single score; higher scores indicate greater severity of suicide ideation.

**STATISTICAL ANALYSES**

We conducted multivariate linear regression analyses to test whether positive FO and hopelessness moderate the association between functional status and current suicide ideation. Consistent with recommendations for conducting moderator analyses [Baron and Kenny, 1986], we entered covariates and predictors on the first step of the regression model and interaction terms on the second. Predictor variables were centered prior to creating interaction terms. Covariates were age, gender, depression severity, and medical morbidity. The interaction term between hopelessness and functional status was not significant; therefore, hopelessness and the hopelessness–functional status interaction term were removed from the final analytic model. To ensure that depression severity was not exerting a suppressive effect on hopelessness, we conducted additional analyses without covariate coverage of HRSD scores; the pattern of findings did not change (i.e., hopelessness remained nonsignificant). HRSD scores were retained in the final model reported in the text.

**TABLE 1. Frequencies and bivariate correlations of study variables**

	<i>M (SD)</i>	Range	Female	BHS	CIRS	IADL	HRSD	FO	Suicide ideation
Age	66.55 (9.71)	55–88	–.20*	–.16	.25**	.25**	–.20*	–.03	–.23**
Female [ <i>N</i> (%)]	79 (58%)	—	—	–.03	–.24**	–.22*	.03	.01	.02
BHS	9.81 (6.15)	0–20	—	—	.22*	.24*	.33**	–.23*	.20
CIRS	6.28 (4.51)	0–21	—	—	—	.34**	.12	–.20	–.04
IADL	7.54 (7.68)	0–34	—	—	—	—	.38**	–.04	.20*
HRSD	25.38 (7.51)	8–44	—	—	—	—	—	–.22*	.24**
FO	23.20 (8.88)	6–36	—	—	—	—	—	—	–.28**

\**P* < .05; \*\**P* < .01.

**RESULTS**

Hopelessness and FO were modestly associated with one another (*r* = –.20, *P* < .05), indicating that they could be entered into the analysis simultaneously (see Table 1 for bivariate correlations). Table 2 shows that FO moderated the relationship between functional status and current suicide ideation; the association between functional status and suicide ideation is weaker for patients with higher levels of FO (see Fig. 1). Hopelessness did not moderate the association between functional status and suicide ideation. An inverse relationship between age and suicide ideation was observed after controlling for covariates.

**DISCUSSION**

We found that FO moderated the association between functional status and suicide ideation, after we controlled for age, gender, depression severity, and illness burden. Although hopelessness has been shown to be associated with increased suicidal ideation in many studies [Szanto et al., 2002], negative findings

**TABLE 2. Potential moderators of suicide ideation: multivariate regression analysis**

Predictor	Current suicide ideation (SSI)			
	Step 1		Step 2	
	<i>t</i> -value	Unstandardized $\beta$ ( <i>SE</i> )	<i>t</i> -value	Unstandardized $\beta$ ( <i>SE</i> )
Constant	3.21**	19.90 (6.19)	2.99**	18.16 (6.06)
Age	–3.03**	–.22 (.07)	–2.70**	–.19 (.07)
Female	–.03	–.05 (1.39)	.31	.42 (1.37)
HRSD	.24	.03 (.10)	.07	.01 (.10)
CIRS	–1.26	–.20 (.16)	–1.25	–.19 (.15)
IADL	2.78**	.29 (.10)	3.26**	.33 (.10)
Positive FO	–3.98***	–.32 (.08)	–3.88***	–.29 (.08)
IADL $\times$ positive FO	—	—	–2.74**	–.03 (.01)

\**P* < .05; \*\**P* < .01; \*\*\**P* < .001.

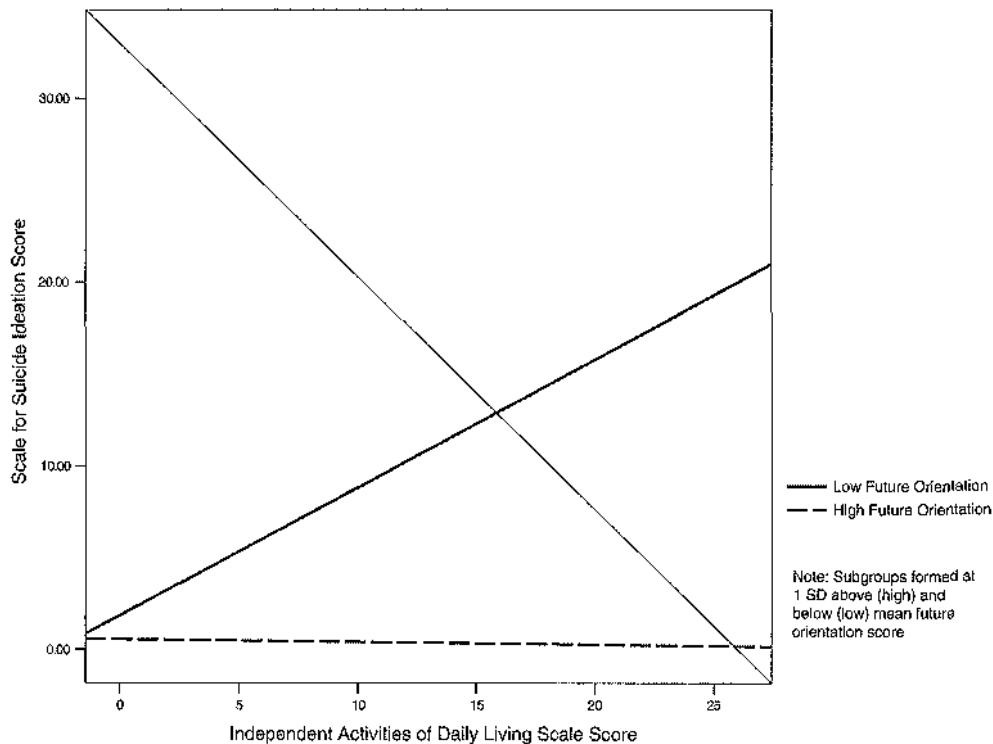


Figure 1. Interaction of FO, functional status, and suicide ideation.

have been reported as well [Mendonca and Holden, 1996; Young et al., 1994]. In our sample, the nonsignificance of hopelessness may be due to shared variance with FO. The inverse association between age and suicide ideation is consistent with some [Duberstein et al., 1999] but not all [Szanto et al., 1996] research on age-restricted samples of patients with mood disorders.

Previous research suggests that functional impairment is a more robust marker of depression and suicidal ideation and behaviors than medical illness alone [Zeiss et al., 1996]. With increasing age, likelihood of functional decline also increases, potentially elevating suicide risk. Many depressed older adults, however, do not experience suicidal thoughts in the context of declines in health or function. Our findings suggest that depressed and functionally impaired patients who have a greater sense of FO have relatively lower levels of suicide ideation.

Although functional limitations increase risk for suicidal ideation and behaviors [Conwell et al., 2000], poor outcomes are avoidable. An individual with a positive outlook toward the future may reduce his or her distress and thereby lessen risk [Vaillant, 2003] despite experiencing functional impairment and depression. Higher levels of optimism are associated with improved physical and psychological outcomes in patients with chronic disease [Downe-Wamboldt and

Melanson, 1998; Ridder et al., 2000], although negative findings have been reported [Schofield et al., 2004]. Achievement of identified goals may provide at-risk individuals with a reason to continue living, offering some protection from suicide risk [Linehan et al., 1983; Ormel et al., 1997].

Our findings have implications for the treatment of suicidal ideation and behavior in patients with physical illness and declines in functional status. Individuals with a positive FO appear to be protected from other unfavorable medical and psychological outcomes [Achat et al., 2000]. Because observational studies have shown that optimism is prospectively associated with increased well-being, and better health and recovery from cancer and cardiovascular illness [Carver et al., 1994; Kubzansky et al., 2001], interventions designed to promote optimism and help patients cultivate a positive FO may be important goals in efforts to reduce suicide ideation and behaviors in depressed, medically ill, and functionally impaired patients.

The relationships between suicide ideation and behavior, however, have yet to be fully defined; many people with thoughts of suicide do not act on them [Kessler et al., 1999], and some people will deny having thoughts of suicide prior to taking their lives [Fawcett et al., 1993]. In a study of suicide deaths in older adults, Waern et al. [1999] found that 38% expressed thoughts of suicide to a clinician, but 8% denied having suicidal

thoughts even when asked directly. Although past history of suicidal behavior is an important risk marker for suicide [Heisel and Duberstein, 2005], those who have never previously engaged in suicidal behavior nonetheless account for 58% [Rubenowitz et al., 2001] to 75% [Phillips et al., 2003] of deaths by suicide in older age. Although our data suggest that there is a relationship between FO and suicide ideation, the implications of FO for lethal and nonlethal self-harm are unknown.

The current novel and robust findings must be interpreted in the context of the study's limitations. Generalizability to other demographic subgroups, nondepressed or untreated patients, and patients seen in primary and specialty medical care settings is unknown. We were unable to distinguish functional impairment occurring as a result of depression from impairment due to medical illness; however, we included depression severity and medical illness burden as covariates. Given the myriad influences on self-reported functional status, future research should also incorporate objective measures of function. Potential covariates (e.g., social support, and type and duration of treatment) that are not included in our study might affect the association of functional status and suicide ideation, and should be examined in future research.

Prospective research suggests that a positive FO could confer benefits regardless of whether depression is contributing to functional impairment, or vice versa [Achat et al., 2000]. The cross-sectional design precluded us from examining this issue. Prospective research is needed to determine whether risk of suicidal thoughts and attempts are lower in medically ill or functionally impaired and depressed patients who have a positive FO. Investigation of the mechanisms by which FO might exert a protective effect is warranted, and any potentially harmful consequences of a positive FO on physical functioning need to be explored [Segerstrom, 2005]. Better understanding of factors that influence the development and expression of suicidal thoughts and behaviors may facilitate improved medical and functional outcomes.

**Acknowledgments.** We appreciate the assistance of Stephanie Gamble, Ph.D., Ben Chapman, Ph.D., Holly Wadkins, B.A., Patrick Walsh, B.A., and Madalina Chiriac, M.D.

## REFERENCES

- Achat H, Kawachi I, Spiro A, DeMolles DA, Sparrow D. 2000. Optimism and depression as predictors of physical and mental health functioning: The normative aging study. *Ann Behav Med* 22:127-130.
- Alexopoulos GS, Katz IR, Bruce ML, Heo M, Have TT, Raue P, Bogner HR, Schulberg HC, Mulsant BH, Reynolds CF, III. 2005. Remission in depressed geriatric primary care patients: A report from the PROSPECT study. *Am J Psychiatry* 162:718-724.
- Awata S, Seki T, Koizumi Y, Sato S, Hozawa A, Omori K, Kuriyama S, Arai H, Nagatomi R, Matsuoka H, Tsuji I. 2005. Factors associated with suicidal ideation in an elderly urban Japanese population: A community-based, cross-sectional study. *Psychiatry Clin Neurosci* 59:327-336.
- Barefoot JC, Brummett BH, Helms MJ, Mark DB, Siegler IC, Williams RB. 2000. Depressive symptoms and survival of patients with coronary artery disease. *Psychosom Med* 62:790-795.
- Baron RM, Kenny DA. 1986. The moderator mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J Pers Soc Psychol* 51:1173-1182.
- Beck AT, Brown G, Berchick RJ, Stewart BL, Steer RA. 1990. Relationship between hopelessness and ultimate suicide: A replication with psychiatric outpatients. *Am J Psychiatry* 147:190-195.
- Beck AT, Brown GK, Steer RA. 1997. Psychometric characteristics of the Scale for Suicide Ideation with psychiatric outpatients. *Behav Res Ther* 35:1039-1046.
- Beck AT, Kovacs M, Weissman A. 1979. Assessment of suicidal intention—Scale for Suicide Ideation. *J Consult Clin Psychol* 47:343-352.
- Beck AT, Weissman A, Lester D, Trexler L. 1974. Measurement of pessimism: Hopelessness Scale. *J Consult Clin Psychol* 42:861-865.
- Bruce ML, Seeman TE, Merrill SS, Blazer DG. 1994. The impact of depressive symptomatology on physical disability: MacArthur Studies of Successful Aging. *Am J Public Health* 84:1796-1799.
- Callahan CM, Kroenke K, Counsell SR, Hendrie HC, Perkins AJ, Katon W, Nool PH, Harpole L, Hunkeler EM, Unutzer J. 2005. Treatment of depression improves physical functioning in older adults. *J Am Geriatr Soc* 53:367-373.
- Carver CS, Pozokaderman C, Harris SD, Noriega V, Scheier MF, Robinson DS, Ketcham AS, Moffat FL, Clark KC. 1994. Optimism versus pessimism predicts the quality of women's adjustment to early-stage breast-cancer. *Cancer* 73:1213-1220.
- Chochinov HM, Wilson KG, Enns M, Lander S. 1998. Depression, hopelessness, and suicidal ideation in the terminally ill. *Psychosomatics* 39:366-370.
- Conwell Y, Duberstein PR, Caine ED. 2002. Risk factors for suicide in later life. *Biol Psychiatry* 52:193-204.
- Conwell Y, Forbes NT, Cox C, Caine ED. 1993. Validation of a measure of physical illness burden at autopsy: The Cumulative Illness Rating Scale. *J Am Geriatr Soc* 41:38-41.
- Conwell Y, Lyness JM, Duberstein P, Cox C, Seidlitz L, DiGiorgio A, Caine ED. 2000. Completed suicide among older patients in primary care practices: A controlled study. *J Am Geriatr Soc* 48:23-29.
- Downe-Wamboldt BL, Melanson PM. 1995. Emotions, coping, and psychological well-being in elderly people with arthritis. *Western J Nursing Res* 17:250-265.
- Downe-Wamboldt BL, Melanson PM. 1998. A causal model of coping and well-being in elderly people with arthritis. *J Adv Nursing* 27:1109-1116.
- Duberstein PR, Conwell Y, Seidlitz L, Lyness JM, Cox C, Caine ED. 1999. Age and suicidal ideation in older depressed inpatients. *Am J Geriatr Psychiatry* 7:289-296.
- Duberstein PR, Sorensen S, Lyness JM, King DA, Conwell Y, Seidlitz L, Caine ED. 2003. Personality is associated with perceived health and functional status in older primary care patients. *Psychol Aging* 18:25-37.
- Edelstein BA, McKee DR, Martin RR. 2000. Development of the Reasons for Living Scale for Older Adults: A suicide assessment instrument. Poster presented at the Harvard Symposium on Future Research Trends and Opportunities in Aging, September 2000. Boston, MA.

- Fawcett JA, Clark DC, Bush KA. 1993. Assessing and treating the patient at risk for suicide. *Psychiatr Ann* 23:244-256.
- First MB, Spitzer RL, Gibbon M, Williams JBW. 1997. Structured clinical interview for DSM-IV Axis I Disorders—Patient Edition (SCID-I/P, Version 2.0, 4/97 revision). New York: Biometrics Research Department, New York State Psychiatric Institute.
- Friedman B, Heisel MJ, Delavan RL. 2005. Psychometric properties of the 15-Item Geriatric Depression Scale in functionally impaired, cognitively intact, community-dwelling elderly primary care patients. *J Am Geriatr Soc* 53:1570-1576.
- Heisel MJ, Duberstein PR. 2005. Suicide prevention in older adults. *Clin Psychol Sci Pract* 12:242-259.
- Heisel MJ, Duberstein PR, Conner KR, Franus N, Beckman A, Conwell Y. 2006. Personality and reports of suicide ideation among depressed adults 50 years of age or older. *J Affect Disord* 90:175-180.
- Heisel MJ, Flett GL, Besser A. 2002. Cognitive functioning and geriatric suicide ideation: Testing a mediational model. *Am J Geriatr Psychiatry* 10:428-436.
- Hirsch JK, Duberstein P, Conner KR, Heisel MJ, Beckman A, Conwell Y. 2006. Future orientation and suicide ideation and attempts in depressed adults ages 50 and over. *Am J Geriatr Psychiatry*. Forthcoming.
- Ihokoshi K, Ikeda M, Maki N, Nomura N, Torikawa S, Fujimoto N, Fukuhara R, Komori K, Tanabe H. 2001. Interrater reliability of the Physical Self-Maintenance Scale and the Instrumental Activities of Daily Living Scale in a variety of health professional representatives. *Aging Ment Health* 5:38-40.
- Jaffe A, Froom J, Galambos N. 1994. Minor depression and functional impairment. *Arch Family Med* 3:1081-1086.
- Juurlink DN, Herrmann N, Szalai JP, Kopp A, Redelmeier DA. 2004. Medical illness and the risk of suicide in the elderly. *Arch Internal Med* 164:1179-1184.
- Kessler RC, Borges G, Walters EE. 1999. Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Arch Gen Psychiatry* 56:617-626.
- Kubzansky LD, Sparrow D, Vokonas P, Kawachi I. 2001. Is the glass half empty or half full?: A prospective study of optimism and coronary heart disease in the Normative Aging Study. *Psychosom Med* 63:910-916.
- Lawton M, Brody E. 1969. Assessment of older people: Self-maintaining and instrumental activities of daily living. *Gerontologist* 9:179-186.
- Leibentluft E, Goldberg RL. 1988. The suicidal, terminally ill patient with depression. *Psychosomatics* 29:379-386.
- Linehan MM, Goodstein JL, Nielsen SL, Chiles JA. 1983. Reasons for staying alive when you are thinking of killing yourself: The Reasons for Living Inventory. *J Consult Clin Psychol* 51:276-286.
- Linn BS, Linn MW, Gurel L. 1968. Cumulative illness rating scale. *J Am Geriatr Soc* 16:622-626.
- Lynch TR, Morse JQ, Mendelson T, Robins CJ. 2003. Dialectical behavior therapy for depressed older adults: A randomized pilot study. *Am J Geriatr Psychiatry* 11:33-45.
- Lyness JM, Caine ED, Conwell Y, King DA, Cox C. 1993. Depressive symptoms, medical illness, and functional status in depressed psychiatric inpatients. *Am J Psychiatry* 150:910-915.
- Mann JJ, Waternaux C, Haas GL, Malone KM. 1999. Toward a clinical model of suicidal behavior in psychiatric patients. *Am J Psychiatry* 156:181-189.
- Mendonca J, Holden RR. 1996. Are all suicidal ideas linked to hopelessness? *Acta Psychiatr Scand* 93:246-251.
- Ormel J, Kempen GJ, Penninx BWJH, Brilman EI, Beekman ATF, van Sonderen E. 1997. Chronic medical conditions and mental health in older people: Disability and psychosocial resources mediate specific mental health effects. *Psychol Med* 27:1065-1077.
- Ormel J, Rijdsdijk FV, Sullivan M, van Sonderen E, Kempen GJ. 2002. Temporal and reciprocal relationship between IADL/ADL disability and depressive symptoms in late life. *J Gerontol B Psychol Sci Soc Sci* 57:338-347.
- Paykel ES, Ramana R, Cooper Z, Hayhurst H, Kerr J, Barocka A. 1995. Residual symptoms after partial remission: An important outcome in depression. *Psychol Med* 25:1171-1180.
- Phillips MR, Yanping Z, Gonghuan Y. 2003. Elderly suicides in China: A controlled psychological autopsy study. Paper presented at the 11th International Congress of the International Psychogeriatrics Association, Chicago, IL.
- Ridder D, Schreurs K, Bensing J. 2000. The relative benefits of being optimistic: Optimism as a coping resource in multiple sclerosis and Parkinson's disease. *Br J Health Psychol* 5:141-155.
- Rubenowitz E, Waern M, Wilholmson K, Allebeck P. 2001. Life events and psychosocial factors in elderly suicides—a case-control study. *Psychol Med* 31:1193-1202.
- Safren SA, Radomsky AS, Otto MW, Salomon E. 2002. Predictors of psychological well-being in a diverse sample of HIV-positive patients receiving highly active antiretroviral therapy. *Psychosomatics* 43:478-485.
- Schofield P, Ball D, Smith JG, Borland R, O'Brien P, Davis S, Olver I, Ryan G, Joseph D. 2004. Optimism and survival in lung carcinoma patients. *Cancer* 100:1276-1282.
- Segerstrom SC. 2005. Optimism and immunity: Do positive thoughts always lead to positive effects? *Brain Behav Immun* 19:195-200.
- Soloff PH, Lynch KG, Kelly TM, Malone KM, Mann JJ. 2000. Characteristics of suicide attempts of patients with major depressive episode and borderline personality disorder: A comparative study. *Am J Psychiatry* 157:601-608.
- Szanto K, Gildengers A, Mulsant BH, Brown G, Alexopoulos GS, Reynolds CF. 2002. Identification of suicidal ideation and prevention of suicidal behaviour in the elderly. *Drugs Aging* 19:11-24.
- Szanto K, Mulsant BH, Houck PR, Miller MD, Mazumdar S, Reynolds CF. 2001. Treatment outcome in suicidal vs. non-suicidal elderly patients. *Am J Geriatr Psychiatry* 9:261-268.
- Szanto K, Reynolds CF, Frank E, Stack J, Fasiczka AL, Miller M, Mulsant BH, Mazumdar S, Kupfer DJ. 1996. Suicide in elderly depressed patients—Is active vs passive suicidal ideation a clinically valid distinction? *Am J Geriatr Psychiatry* 4:197-207.
- U. S. Public Health Service. 1999. The Surgeon General's call to action to prevent suicide. Washington, DC: Author.
- Vaillant GE. 2003. Mental health. *Am J Psychiatry* 160:1373-1384.
- Waern M, Beskow J, Runcson B, Skoog I. 1999. Suicidal feelings in the last year of life in elderly people who commit suicide. *Lancet* 354:917-918.
- Williams JBW. 1988. A structured interview guide for the Hamilton Rating Scale for Depression. *Arch Gen Psychiatry* 45:742-747.
- Williams JBW. 2001. Standardizing the Hamilton Depression Rating Scale: Past, present, and future. *Eur Arch Psychiatry Clin Neurosci* 251.
- Young MA, Fogg LE, Scheftner WA, Fawcett JA. 1994. Interactions of risk factors in predicting suicide. *Am J Psychiatry* 151:434-435.
- Zeiss AM, Lewinsohn PM, Rohde P, Seeley JR. 1996. Relationship of physical disease and functional impairment to depression in older people. *Psychol Aging* 11:572-581.