Positive and Negative Affect and Health Functioning Indicators among Older Adults with Chronic Illnesses

By: Jie Hu, PhD, RN and Kenneth J. Gruber, PhD

Abstract:
Emotional states have been linked with physical and mental health outcomes. In this study the role of positive and negative affect was investigated as determinants of health functioning for a community-dwelling sample of 153 older adults (age 60 or older) with chronic illnesses. High positive affect and low negative affect were found to be associated with lower levels of symptom distress, fewer depressive symptoms, higher daily activity scores, and higher perceived physical and mental health-related quality of life. These results have important clinical implications for the use of positive and negative affect as an indicator of life functioning among older adults. The relationship of positive and negative affect to reported health functioning found in this study suggests that measuring affect can provide a valuable means for understanding how individuals view their mental health as well as their symptoms of illness.

Article:
INTRODUCTION
Chronic illnesses have a major impact on the physical, psychological, and social functioning of the elderly ([Ekman, Fagerberg, & Lundman, 2002]; [Husted, Gladman, Farewell, Cook, 2001]; [Wensing, Vingerhoets, & Grol, 2001]). These illnesses often are accompanied by chronic conditions such as pain, disability, and functional limitations that contribute to poor health-related quality of life ([Center for Disease Control and Prevention, 2006]). Emotional state seems to make a difference with positive mood and disposition associated with slower declines in health ([Benyamini, Idler, Leventhal, & Leventhal, 2000]) and negative attitudes and expectations with higher reporting of physical symptoms, stress, psychopathology, low satisfaction, negative subjective well-being, and poor health outcomes ([DeNeve & Cooper, 1998]; [Steptoe & Wardle, 2005]; [Watson & Pennebaker, 1989]).

One of the ways positive and negative emotional states have been conceptualized has been in terms of positive and negative affect ([Watson & Clark, 1984], [Watson, Clark, & Tellegen, 1988]). [Watson and Clark (1984)] characterized positive affect as reflecting the extent to which a person feels enthusiastic, active, and alert. Someone with high positive affect is in a state of high energy, full concentration, and pleasurable engagement, as contrasted with a low state of positive affect which is characterized by sadness and lethargy. In contrast, negative affect is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states. Individuals with low negative affect are considered in a state of calmness and serenity whereas high negative affect reflects conditions of distress and emotional pain. Supportive of this distinction are health congruence studies among older adults that find a protective effect of optimism (positive affect) and lower depressive levels and higher pessimism (negative affect) with poorer functional status and higher levels of depression ([Hong, Zarit, & Malmberg, 2004]).

Positive affect has been found to have a strong effect on older adults' perceptions of their health and has been

linked to fewer symptoms, less pain, and better health ([Cohen & Pressman, 2006]). It has been associated with favorable health outcomes such as reduced systolic blood pressure and stress ([Steptoe & Wardle, 2005]). A positive self-perception of aging has been shown to be associated with increased survival ([Levy, Slade, Kunkel, & Kasl, 2002]), whereas lower positive affect scores are predictive of mortality in older adults ([Blazer & Hybels, 2004]). [Jorm (2001)] reported a negative association between hypotension and positive affect among a sample of elderly community-dwelling individuals with those with hypotension reporting lower positive affect. Similarly, [Cohen, Doyle, Turner, Alper, and Skoner (2003)] suggested that positive affect was associated with less symptom reporting. Positive affect appears to be protective against physical decline and related to greater functioning levels in older adults ([Lord & Menz, 2002]). [Benyamini et al. (2000)] found that higher levels of positive affect predicted less decline in functional status in older adults. In a study of older Mexican Americans, [Ostir et al. (2000)] found positive affect to be a significant predictor of functional independence. [Keith (2004)] found that patients with chronic obstructive pulmonary disease (COPD) and high levels of positive affect reported lower levels of depression.

Negative affect usually coexists with chronic illness and may influence an individual's functional status, symptom perceptions, and health-related quality of life ([Wilson & Cleary, 1995]). Studies of chronic illnesses, such as cardiovascular disease and diabetes, have found a relationship between negative affect and illness symptoms ([Consedine, Magia, Cohen, & Gillespie, 2002]; [Schulz, Drayer, & Rollman, 2002]; [Suls & Bunde, 2005]). For example, a study by [Zautra et al. (1995)] found that individuals with arthritis, who experienced more activity limitations and pain, had lower levels of positive affect and higher levels of negative affect than those with low levels of pain and activity limitations. In individuals with COPD, negative affect has been found to have a significant effect on their perceived health-related quality of life ([Hu & Meek, 2005]). Similarly, [Koller et al. (1996)] reported that negative affect level was a significant predictor of physical symptoms and health-related quality of life.

Negative affective states have been associated with increased anxiety and depression in patient populations ([Watson & Clark, 1988]) and have been identified as a prospective risk factor for hypertension ([Jonas & Lando, 2000]). [Leventhal, Hansell, and Diefenbach (1996)] found that individuals with higher levels of negative affect were more likely to report subjective complaints, physical symptoms, and high levels of anxiety. Also, individuals with high negative affect have been reported as more likely to have a negative perception of their health and report greater numbers of physical complaints ([Williams et al., 2002]). Finally, research has shown that health problems can aggravate negative affect ([Leventhal & Patrick-Miller, 2000]; [Watson & Pennebaker, 1989]), which in turn can exacerbate symptoms of disease and illness.

The literature makes it clear that positive and negative affect may have value for understanding the effects of health indicators such as symptom distress, depression, functional status, and health-related quality of life among older adults. Important to our further understanding of these relationships is whether levels (i.e., high and low) of positive and negative affect are different in terms of their association with differences among these kinds of health indicators among older adults with chronic illnesses. The purpose of this study was to investigate the differential effects positive and negative affect have on health functioning indicators (symptom distress, depressive symptoms, functioning, and health-related quality of life) among older adults with chronic illnesses. Specifically, this study addressed three questions:

1. Are gender, age, race, or education related to reported levels of positive and negative affect?
2. Are high and low positive and negative affect related to differences in symptom distress, depressive symptomatology, functioning, health-related quality of life (HRQOL) among older adults with chronic illnesses?
3. Is the combination of high and low levels of positive and negative affect related to differences in health indicators among persons with chronic illnesses?

METHOD
Participants

A convenience sample of community-dwelling older adults was recruited from three health centers operated by a School of Nursing in low-income high rise apartment buildings in a city in the southeastern United States. Adults age 60 or older were eligible for participation if they had a self-reported medical diagnosis of at least one of the following chronic illnesses (based on the leading causes of death or disability in this population—Center for [Chronic Disease Control and Prevention, 2005]): arthritis, cardiovascular disease, COPD, or diabetes. Flyers describing the study were distributed to residents who visited the health centers. Individuals with known or apparent moderate or greater cognitive impairment (e.g., not oriented to time and place) were excluded from study participation. A total of 160 older adults with chronic illnesses were recruited for the study; five were excluded due to known cognitive impairment and two because they did not complete the data forms, resulting in 153 participants. The study was approved by the University's Institutional Review Board and the local Housing Authority. Informed consent was obtained directly from the participants. Data were collected through face-to-face interviews conducted either by the first author or by trained research assistants in participants' homes. Each interview took approximately 40–50 minutes. Participants received a $10 grocery gift card upon completion of the interview.

Data Collection Instruments

Demographic information (e.g., age, gender, educational level, household income, and chronic illnesses) was collected using a general background questionnaire. Positive and negative affect were measured using the Positive and Negative Affect Scales (PANAS; [Watson et al., 1988]). Positive affect is measured by ratings on ten items: alert, inspired, active, interested, excited, strong, enthusiastic, determined, proud, and attentive. Negative affect is measured by responses to an additional ten items: afraid, ashamed, distressed, guilty, hostile, irritable, jittery, nervous, scared, and upset. Each item is rated on a 5-point scale ranging from 1 indicating "very slightly" to 5 "extremely." Total scores are computed for each scale, with lower scores representing lower affect levels. Reliability (Cronbach's α) has been reported between $\alpha = .84$ and .87, and good concurrent and construct validity have been reported by Watson and colleagues ([Watson & Clark, 1988]; [Watson, Clark, & Tellegen, 1988]) The scale has been used previously with older adults ([Mackinnon, Jorm, Christensen, Korten, Jacomb, & Rodgers, 1999]). The current study yielded excellent internal consistency values: $\alpha = .86$ and .83 for the positive and negative affect scales, respectively.

The Symptom Distress Scale (SDS) was used to measure symptom distress ([McCorkle, Cooley, & Shea, 2000]). The SDS includes 13 items measuring nausea (2 items), appetite, insomnia, pain (2 items), fatigue, bowel, concentration, appearance, breathing, outlook, and cough, rated on a scale of 1 ("no symptom") to 5 ("severe symptom"), with a total score range of 13–65. Higher scores indicate greater symptom distress. Reliability in previous studies of patients with chronic illnesses including older adults ([McCorkle et al., 2000]) has ranged between $\alpha = 0.70$ and 0.92. Construct validity has been reported ([McCorkle & Benoliel, 1983]). In this study, Cronbach's α was .76.

The Geriatric Depression Scale (GDS)-Short Form was used to assess general depressive symptoms. The 15-item GDS has been used widely to assess depression in the elderly. Items are scored 0 ("no depression") or 1 ("depressed"), with a total score range of 0–15. A total score of 9 or greater indicates depression. Reliability and convergent validity are well established with elderly populations ([Sheikh & Yesavage, 1986]). Cronbach's α was .81 in this study.

The Instrumental Activities of Daily Living (IADL) scale ([Lawton & Brody, 1969]) was used to measure functional status. This scale is commonly used to measure functioning in elderly community populations. The IADL is an 8-item scale; items are rated 0 ("unable to function") or 1 ("normal function"). Total scores may range from 0–8 with lower scores associated with lower functioning. Good reliability and sensitivity have been established ([Lawton & Brody, 1969]). Cronbach's α was .80 in this study.

The Medical Outcomes Study Short Form (SF-36) Health Survey was used to measure health-related quality of life. The SF-36 is a multidimensional generic measure of HRQOL that measures two major constructs: the Physical Component Summary (PCS) and the Mental Component Summary (MCS). Each scale consists of 18

items representing physical functioning, role physical, bodily pain, general health, vitality, social function, role emotional, and mental health. Subscale scores are transformed from normal scaling to a 0 to 100 standardized score, with higher scores indicating better health-related quality of life. The SF-36 has been reported as having good validity and internal-consistency reliability (ranging from α = 0.78 to α = 0.93) in a variety of patient populations ([McHorney, Ware, Rachel, & Sherbourne, 1994]). In this study, Cronbach's alphas were .90 and .87 for the PCS and MCS, respectively.

Statistical Analysis

Descriptive statistics were used to describe the sample and the five health functioning indicators examined in this study. One-way ANOVA analyses were conducted to examine the differences between positive and negative affect groups on symptom distress, depressive symptoms, functioning, and mental and physical health-related quality of life.

RESULTS

Characteristics of the Participants

The average age of the participants was 74 (±8.64) years with 75% female. Most (56%) had less than high school education and the majority (95%) had annual incomes less than $10,000. More than half of the participants were African Americans (56%). Descriptive data on the health indicators are presented in Table 1. Statistical comparisons by demographic category yielded few significant differences. Those with less than a high school education had significantly lower positive affect scores than respondents with a high school diploma or higher education status (F(2149) = 4.03, p < .02). African Americans reported significantly higher positive affect than Caucasians (F(1148) = 4.11, p < .05). Negative affect was significantly lower for respondents 80 and older (F(2147) = 4.47, p < .02). Caucasians reported significantly higher symptom distress levels (F(1148) = 16.42, p < .001), higher levels of depressive symptomatology (F(1148) = 13.28, p < .001), and lower scores on the PCS (F(1148) = 5.63, p < .02) and MCS (F(1148) = 11.74, p < .001) than their African American counterparts.

TABLE 1 Mean Health Indicator Scores by Demographic Characteristics

Variable	(N)	Negative Affect		Positive Affect		Symptom Distress		Geriatric Depression Scale (GDS)		Daily Functioning (IADL)		Physical HQOL (MCS)[1]		Mental HQOL (MCS)[1]	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Gender															
Male	39	1.81	.73	3.08	.90	25.00	8.68	4.26	3.79	6.82	1.78	48.72	23.73	67.39	22.11
Female	113	.68	1.68	3.02	3.02	24.65	6.87	3.26	2.67	6.98	1.25	49.68	22.10	67.50	21.15
Race															
Caucasian	66	1.73	.66	2.93*	.89	27.23***	8.15	4.39***	3.37	6.79	1.49	45.11*	22.80	61.73***	22.23
African American	84	1.70	.65	3.14	.72	22.63	5.72	2.69	2.35	7.06	1.33	53.81	21.88	73.11	18.44
Age															
Less than 70	55	1.93*a	.73	3.11	.76	25.33	8.29	4.04	3.46	6.75	1.52	46.26	24.98	66.09	23.24
70–79	50	1.72a	.63	3.09	.83	24.98	7.21	3.42	3.00	7.18	1.45	50.32	20.84	68.04	20.18
80 and older	45	1.43b	.44	2.90	.84	23.85	6.21	2.83	2.10	6.89	1.20	53.40	21.51	70.91	18.87
Education															
Less than High School	85	1.75	.72	2.92*a	.85	25.48	7.83	3.66	3.00	6.80	1.53	48.53	23.45	64.80	21.38
High School Graduate	41	1.75	.56	3.06ab	.74	25.10	6.28	3.68	3.05	7.00	1.38	49.29	22.57	69.07	22.00
College or Other Higher Education	26	1.52	.47	3.40b	.72	21.85	6.19	2.73	3.08	7.40	.76	54.31	20.08	76.08	17.09

Less than half (47.7%) of the sample reported their health as good or better; 14.8% reported their health as poor. All respondents had at least one chronic illness (arthritis, cardiovascular disease, COPD, or diabetes); the average number of illness was 2.96 (SD = 1.09). Approximately one-third had at least two additional conditions.

Demographic Characteristics by High and Low Positive and Negative Affect Groups
High-low affect groups were created based on a median split of the positive affect (median = 3.10) and negative affect (median = 1.55) scores. High Positive Affect (HPA) represents the most optimistic outlook, whereas Low Positive Affect (LPA) is associated with a more pessimistic perspective. High Negative Affect (HNA) reflects a view of distress and emotional pain (lowest negative affect), and Low Negative Affect (LNA) represents calmness and tranquility ([Watson et al., 1988]). Comparison of affect by race revealed that African Americans were significantly more likely than Caucasians to be in the HPA group (X2(df 1) = 4.06, p < .05). Participants with less than a high school degree were significantly more likely to be in the LPA group in comparison with participants with a college degree or other higher education (X2(df 2) = 7.80, p <. 02). The oldest respondents (80 and older) were significantly more likely to be in the LNA group than respondents in the younger age groups (X2(df 2) = 8.60, p < .02).

Health Indicators by High and Low Positive and Negative Affect Group
Comparison by positive affect group produced significant differences on all five health measures: symptom distress (F(1151) = 10.18, p < .002), depressive symptomatology (F(1151) = 24.73, p < .001), daily functioning (F(1151) = 6.07, p < .02), physical HQOL (F(1151) = 15.04, p < .002), and mental HQOL (F(1151) = 18.31, p < .001). The HPA group reported more positive ratings on all the health indicators (see Table 2). Significant differences were observed between the low and high negative affect groups on symptom distress (F(1151) = 29.68, p < .001), depressive symptomatology (F(1151) = 22.16, p < .001), physical HQOL (F(1151) = 10.23, p < .002), and mental HQOL (F(1151) = 21.01, p < .001). Only for daily functioning was no significant difference detected. The HNA (those with the most negative affect) reported significantly greater levels of symptom distress and depressive symptomatology and lower levels of physical HQOL and mental HQOL (see Table 2).

TABLE 2 Mean Health Indicator Score by High-Low Affect Group

Variables	N	Symptom Distress M	SD	Geriatric Depression Scale (GDS) M	SD	Daily Functioning (IADL) M	SD	Physical HQOL[1] M	SD	Mental HQOL (MCS) M	SD
Positive Affect											
High	75	22.84[a]	6.98	2.36[a]	2.17	7.23[a]	1.11	56.48[a]	22.47	74.68[a]	18.25
Low[3]	78	26.53[b]	7.30	4.62[b]	3.30	6.68[b]	1.59	42.94[b]	20.70	60.67[b]	21.98
Negative Affect											
Low	76	27.71[b]	7.20	4.59[b]	3.40	6.80	1.52	43.88[b]	19.64	60.05[b]	22.19
High[2]	77	21.77[a]	6.27	2.44[a]	2.11	7.09	1.27	55.20[a]	23.93	74.93[a]	17.75

[1]From the SF-36.

[2]Highest negative affect group.

[3]Lowest positive affect group.

Means with different superscripts are significantly (*p* < .05) different.

Health Indicators by Combination of High-Low Positive/Negative Affect Group

To determine whether a combination of positive and negative affect group assignment might be associated with differences among the five health indicators, the four affect groups (high and low positive affect and high and low negative affect) were crossed to form four new groups: Low Positive Affect/High Negative Affect— LPA/HNA (lowest on both scales), Low Positive Affect/Low Negative Affect—LPA/LNA, High Positive Affect/High Negative Affect—HPA/HNA, and High Positive Affect/Low Negative Affect—HPA/LNA (highest on both scales). The results of this are presented in Table 3. Comparisons of the five measures by the combination affect groupings revealed significant differences for all five health indicators: symptom distress ($F(3149) = 15.30$, $p < .001$), depressive symptomatology ($F(3149) = 19.44$, $p < .05$), daily functioning ($F(3148) = 5.27$, $p < .05$), physical HQOL ($F(3149) = 9.99$, $p < .001$), and mental HQOL ($F(3149) = 15.26$, $p < .001$). Health status was the most positive (lowest levels of negative reports) for respondents in the HPA/LNA group and the least positive (most problematic) for the LPA/HNA group.

TABLE 3 Mean Health Indicator Score by Negative-Positive Affect Status

Positive/Negative-Affect Group	N	Geriatric Symptom Distress M	SD	Daily Depression Scale M	SD	Physical Functioning (IADL) M	SD	Mental HQOL[1] (PCS) M	SD	HQOL (MCS) M	SD
HPA/LNA	37	20.27^a	6.62	1.51^a	1.52	7.46^a	.87	64.74^a	23.93	82.62^a	12.61
LPA/LNA	40	23.15^{ab}	5.67	3.30^b	2.22	6.75^{ab}	1.48	46.38^a	19.64	67.82^b	18.96
HPA/HNA	38	25.34^b	6.46	3.18^b	2.40	7.00^{ab}	1.27	48.43^a	22.47	66.95^b	19.67
LPA/HNA	38	30.08^c	7.20	6.00^c	3.69	6.61^b	1.72	39.32^b	20.70	53.15^c	22.65

[1]From the SF-36.

HNA = High Negative Affect; LNA = Low Negative Affect; HPA = High Positive Affect; LPA = Low Positive Affect.

Means with different superscripts are significantly (*p* < .05) different.

DISCUSSION

Both positive and negative affect were found to relate to levels of symptom distress, depression, daily activity of living, and health-related quality of life among older adults with chronic illnesses. Higher positive and lower negative affect were associated with lower levels of symptom distress, fewer depressive symptoms, higher daily activity living scores, and higher perceived physical and mental health-related quality of life. These findings are congruent with [Cohen and Pressman (2006)], who found that positive affect was associated with better self-reported health and less severe symptom reporting. The data also suggest that greater negative affect is positively associated with a number of health indicators (e.g., [Consedine et al., 2002]; [Leventhal et al., 1996]; [Williams et al., 2002]).

Race and education were associated with differing levels of positive affect, while age was related to differences in negative affect. The oldest respondents in the sample (80 and older) had significantly lower scores on negative affect than younger age groups. This is consistent with previous findings that older individuals are less likely to experience high levels of negative affect (e.g., [Carstensen, Mayr, Pasupathi, & Nesselroade, 2000]; [Gross, Carstensen, Pasupathi, Skorpen, Tsai, & Hsu, 1997]).

African Americans were more likely to report higher positive affect than Caucasians. Consistent with this was the finding that Caucasians reported significantly higher levels of symptom distress, depressive symptomatology, lower physical functioning, and lower levels on physical and mental health-related quality of life than African American older adults. The more negative health functioning reported by older Caucasians

may indicate that they were more affected by their higher levels of symptom distress and physical functioning relating to higher levels of reported depressive symptomatology, which also appears to have manifested in lower levels of health-related quality of life.

The lower depressive symptomatology among the African Americans in the study sample contrasts with some recent studies that have reported that older African Americans are more likely to report greater amounts of depressive symptomatology ([Jang, Borenstein, Chiriboga, & Mortimer, 2005]; [Miller et al., 2004]; [Skarupski et al., 2005]). For example, [Jang et al. (2005)] compared reports of depressive symptoms in separate black and white older (age 60 to 84) adult samples and found that Blacks reported significantly more depressive symptoms than Whites. Similarly, [Skarupski et al. (2005)] found among an older sample (65 years and older) that Blacks were significantly more likely report symptoms of depression than Whites.

Participants with higher education levels were significantly more likely than those with less education to have high positive affect scores. Somewhat surprisingly, gender was not found to be related to positive affect or negative affect, which is contradictory to findings that women report more negative affect than men among both Whites and Blacks ([Jonas & Lando, 2000]). The lack of gender differences for any of the health indicators may account for our findings of no gender effects for affect, which is consistent with gender and affect findings reported by [Hilleras, Aguro-Torres, and Winblad (2001)].

Participants with high positive affect reported significantly better functioning than those with low positive affect, while those with high negative affect reported poorer functioning than those with low negative affect. These results are in accord with other studies that found that physical functioning in older adults was associated with positive affect ([Benyamini et al., 2000]; [Lord & Menz, 2002]).

When the combined effects of low positive affect and high negative affect on health indicators were examined, participants with the least positive and most negative affect (LPA-HNA) reported the highest levels of symptom distress and depressive symptomatology, lowest daily activity functioning, and lowest perceived physical and mental health quality of life scores. This suggests that positive and negative affect may have additive or complementary roles as predictors of heath status.

Limitations
Several limitations of this study must be acknowledged in order to evaluate its contributions. First, because the sample was recruited from low income, relatively low educated older adults living in independent care high-rise apartments, the findings may not generalize to independent living samples with higher average incomes or levels of education. Second, although the number of specific chronic illnesses was collected, this is only one measure of health status, and other health parameters such as length and severity of illness were not obtained. Therefore, the general health of this sample relative to other samples cannot easily be compared. Finally, the PANAS may not adequately represent the range of possible emotional dispositions, particularly when the context was about overall state of functioning and not directed at specific abilities and disabilities.

Implications for Mental Health Nurses
Older individuals who suffer from physical illnesses and the consequences of chronic health problems are at risk for developing clinical depression ([Jang et al., 2005]; [Lenze et al., 2005]; [Wrosch, Schultz, & Heckhausen, 2004]). Because depression can lead to mortality, it is important for nurses to recognize changes in motivational and behavioral factors that may suggest the onset of depression or exacerbation of depressive symptomatology. Negative affect has been identified as an indicator of vulnerability to anxiety and depression ([De Beurs et al., 2005]), and the measures of affect can provide a quick screening tool.

Affect levels also can indicate other indications of problematic health functioning or risks to health. Research has shown that negative affect is predictive of stress response symptoms, which can exacerbate physical symptoms and illness. For example, negative emotional states such as depression and anxiety are clearly linked to complications of coronary heart disease ([Suls & Bunde, 2005]). Negative emotional states may lead to

adverse health behaviors such as smoking and poor adherence with health regimens, or by aggravating conditions such as hypertension or inflammation.

The results of this study suggest that both positive and negative affect may be useful as indicators of life functioning among the elderly. This has important clinical impact given the strong relationship between affect and depressive symptomatology. Obtaining a measure of affect might provide an alternative or supplemental indicator of an individual's functioning and possibly represent a distinct indicator for risk of debilitative functioning, especially in older adults. Further, affect assessment may be one tool to help separate organic disability due to illness and disease from functional disability stemming from negative or non-positive emotional states ([Cohen & Pressman, 2006]). Also, given its demonstrated link as an indicator of positive health function, affect might provide a valuable means for understanding how individuals view their health and symptoms of disease and illness. Finally, it is important for nurses to assess for high levels of negative affect and be aware of the relationships among negative affect, physical symptoms, and functioning. Early intervention, such as group support, should be provided to this population.

CONCLUSION

Health care providers need to be better aware of the effect that negative affect may have on symptom distress, depression, functional status, and health-related quality of life among older adults with chronic illnesses and provide resources that could potentially improve positive affect. For example, providing support to individuals and their families and offering therapeutic recreation activities might help older adults increase their positive affect ([Badger, Segrin, Meek, Lopez, & Bonham, 2005]; [Stewart, Craig, MacPherson, & Alexander, 2001]). Finally, interpersonal counseling also might be employed to decrease depression and negative affect.

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