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Depressive Symptoms, Depletion, or Developmental Change? Withdrawal, Apathy, and Lack of Vigor in the Geriatric Depression Scale

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Purpose of the Study: Researchers have posited a depletion syndrome among older adults that resembles "depression without sadness." Disengagement-related theories such as socio-emotional selectivity and gerotranscendence also describe an adaptive narrowing of the older person's social world and decreasing investment in activities and social relationships. This study has dual goals of confirming the existence of a "Withdrawal/Apathy/[Lack of] Vigor" (WAV) dimension of the Geriatric Depression Scale (GDS) and exploring its properties for evidence that it may be descriptive of either depletion or disengagement-related change in older adults. ***Design and Methods:*** Data were obtained through a mailed survey of members 65 and older at a health maintenance organization. Respondents returned 327 completed surveys and 163 "decline" postcards. Principal-components analysis obtained a 6-item WAV factor for further analyses. ***Results and Implications:*** High endorsement rates for the items in WAV and its bivariate correlations with age and health problems suggest WAV may be congruent with disengagement or depletion and may lead to over-identification of depression in older adults. Interpretation of the GDS and similar measures may be improved by use of subscale scores and consideration of age and health status of the respondent.

Key Words: Depletion, Depression, Disengagement theory, the Geriatric Depression Scale, Socioemotional selectivity

This article links two phenomena: One, developmental changes suggested by the disengagement theory of aging (Cumming & Henry, 1961), the early and influential theory that stated there is a mutual social and affective withdrawal between the older adult and his or her social environment, and by disengagement's newer theoretical "cousins," socioemotional selectivity theory (Frederickson & Carstensen, 1990; Carstensen, 1992) and gerotranscendence (Tornstam, 1989, 1997, 2000), which also describe the narrowing of the older person's social world and decreasing investment in activities that were important in younger years. The second phenomenon is a postulated subtype of geriatric depression that has been termed *depletion*, represented by an aggregation of items in measurement studies using well-known depression screening scales (Newmann, Engel, & Jensen, 1991; Gallo, Anthony, & Muthen, 1994). The current study looks specifically at a group of items on the Geriatric Depression Scale (GDS; Brink, Yesavage, Lum, Heersema, Adey, & Rose, 1982) that compose a dimension of Withdrawal/Apathy and Lack of Vigor (WAV; Parmalee, Lawton, & Katz, 1989), and how this dimension behaves in relation to other dimensions of the GDS and to health and demographic measures in a convenience sample of community-dwelling elderly adults. The goals of the study include confirmation of a WAV subscale of the GDS and exploration of the behavior of the subscale in light of disengagement-related and depletion theories.

When Is Geriatric "Depression" Not Depression?

Clinical diagnosis of late-life depression is complicated by its differential assessment from somatic illness, from grief, from normal changes associated with aging, and from dementia (e.g., Blazer, 1989; Lewinsohn, Rohde, Seeley, & Fischer, 1991; Fogel & Fretwell, 1985). Overdiagnosis of depression in older persons may lead to the prescription of unnecessary or inappropriate medications, labeling individuals with mental health diagnoses unnecessarily, wasting scarce and costly health and mental health resources, and disseminating inaccurate research results. In a controversial article in *The Atlantic Monthly* titled "Overselling Depression to the Old Folks," the late

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psychotherapist Stanley Jacobson, then age 70, asserted that mental health professionals have overemphasized the diagnosis of depression in older adults.

> Health professionals want to reduce the struggle of the old to an illness. They label it "depression," search for biological explanations of the "disease," and call the psychological, spiritual, and social aspects of the conflict mere "risk factors." Unfortunately, by colluding in the denial that the fact of our mortality is significant to our mental health in late life, they contribute more to the prevalence of depression than to its cure. (Jacobson, 1995, p. 48)

Among the issues Jacobson referred to in his critique is the challenge of differentiating somatic symptoms that are due to physical illness or aging from those that represent depression. This difficulty means that an item on a depression screening scale may represent a symptom of depression, but it may alternatively be a "symptom" of old age. For example, a study of over 4500 adults concluded that a number of health and activity variables, including cognitive dysfunction, poorer health, reduced independent living skills, and less engagement in pleasant activities, were associated with both old age and depression (Lewinsohn et al., 1991). In addition, sleep disturbances and poor appetite are quite common in older people and have been found to be poor discriminators for clinical depression in this group (Dorfman, Lubben, Mayer-Oakes, et al., 1995).

Lewinsohn and colleagues (1991) have also noted that certain symptoms of depression, such as lack of social interest and greater self-involvement, mirror attributes of "normal" older adults according to disengagement theory (Cumming & Henry, 1961), the controversial theory that in its most well-known form was presented as a comprehensive theory of normal aging, and, by implication, a model of "successful" aging. Disengagement theory has been out of favor with gerontologists for over 3 decades (Achenbaum & Bengtson, 1994; Marshall, 1994), although a number of writers have acknowledged that disengagement seems to occur in some older persons (Neugarten, 1968; Youmans, 1969; Cath, 1975; Hochschild, 1975; Steinkamp & Kelly, 1987). More recently, Johnson and Barer (1992) reported finding clear signs of disengagement in approximately 50% of their sample of community-dwelling adults aged 85 years and older. Two newer theories, socio-emotional selectivity and gerotranscendence, each also assert that losing interest in some activities, not wanting to go out, and the like, may be a part of normal aging, reflecting a natural increased comfort with being alone and having a slower pace of life. Socio-emotional selectivity posits that the older adult becomes gradually less interested in forging new relationships as the focus turns toward conservation of energy for prioritized activities and comfortable, reliable relationships (Carstensen, 1992), and has found support in recent research (e.g., Potts, 1997). In gerotranscendence, the disengagement that occurs is interpreted as a transcendence of physical frailties and materialist concerns; being alone with time to contemplate is found to be more appealing to the older person (Tornstam, 2000).

Another reason assessment of late-life depression is so complex lies in the difference between a clinical diagnostic method of identification of depression, requiring a certain duration of symptoms, level of functional impairment, and combination of symptoms to be classified as depressed, and a measurement approach, for example, use of a depression screening scale based on endorsement of symptoms that are added up to reach a depression score. Because they are relatively inexpensive and nonintrusive means to identify elders who may be suffering from depression, brief screening instruments for geriatric depression have received a great deal of attention in the medical and mental health literature and continue to gain in popularity (Blazer, 1994; Brink et al., 1982; Burke, Nitcher, Roccaforte, & Wengel, 1992; Koenig, Meador, Cohen, & Blazer, 1992). Focusing on this issue, Newmann and associates (Newmann et al., 1991; Newmann, Klein, Jensen, & Essex, 1996) found that diagnoses often differ between a clinical diagnostic approach and a measurement approach. The authors speculated that this may explain why the prevalence of major depressive disorder is found to be lower among older persons than for younger adults, whereas scores on standard screening scales of depressive symptomatology are often higher for older persons (Newmann et al., 1996).

Newmann and her colleagues (1996) went on to identify two distinct symptom clusters in the elderly—those that strictly adhere to clinical diagnostic criteria, which they term "depression syndrome," and a unique cluster of symptoms normally associated with depression but without some of the criteria necessary for a depression diagnosis by the usual standards, which they call "depletion syndrome." Using factor analyses to identify loadings of particular symptoms onto the two syndromes, Newmann and colleagues (1996) reported that some symptoms are unique or nearly unique to each syndrome. Whereas both syndromes share the symptoms of low energy, feeling things are an effort, feeling blue, and trouble falling asleep, the depression syndrome includes feelings of guilt, worthlessness, and self-blame and crying easily. Loneliness, lack of interest, and lack of appetite load more strongly on the depletion syndrome. The depletion syndrome increased linearly with age in this study, whereas the depression syndrome did not.

In another study, Gallo and colleagues (1994) found that older adults were less likely than younger adults to endorse items about feeling sad, blue, or, specifically, depressed, in the Diagnostic Interview Schedule (DIS) based on the Diagnostic and Statistical Manual of Mental Disorders, DSM; 3rd ed., rev. (American Psychiatric Association, 1987) criteria for major depression, when they nevertheless endorsed other symptoms such as sleep difficulty, lack of hope,

and thoughts of death. These authors concluded that this "depression without sadness," or "depletion syndrome" appears to fit a proportion of their sample (Gallo et al., 1994.) It is interesting that the same term was used 20 years earlier in a critique of disengagement theory, in which Cath (1975) discussed the apparent similarity of disengagement to depression in older persons and described a kind of combination of the two by the term, "normal depletion . . . something which will occur if one but lives long enough" (p. 212). Fogel and Fretwell (1985) posited the same term, "depletion syndrome," to describe the depression of medically ill elderly persons whose symptoms do not fit neatly into the usual symptom clusters for younger persons. The empirical difference in symptoms noted by all of these researchers raises the question: Are the majority of these older adults who endorse some of the purported depressive symptoms other than sadness actually depressed, or is there a different category into which we should be placing them?

In light of the convergence of several theories of aging with a distinct response pattern found on depression screening scales described in the literature, the present study examined a group of "symptoms" from the GDS that may be normal for older adults. The items in question comprise two dimensions, Withdrawal/Apathy and Vigor, identified in a principal components analysis (PCA) of the scale (Parmalee, Lawton, & Katz, 1989). Three of these items were also featured in another study using the short form of the GDS (GDS–S; Sheikh & Yesavage, 1986). These withdrawal items—low energy, lack of interest in going out, dropping activities and interests—had a relatively lower positive correlation with the other two factors in the shortened scale—Dysphoria and Life Satisfaction—than they did with one another (Mitchell, Mathews, & Yesavage, 1993). The authors interpreted this lower correlation between factors to be indicative of clearly distinct dimensions of depression for older adults (Mitchell et al., 1993).

The current study sought first to replicate the existence of a WAV dimension in the GDS in an independent sample of community-dwelling elders. Then, the endorsement rates and relationship of GDS factor scores to one another and to selected demographic and health characteristics were examined. Because the WAV items were hypothesized to reflect developmental change associated with age, their endorsement rates in a relatively well, high-functioning group of older adults were expected to be higher than those of the Dysphoria items. It was also anticipated that the WAV score would have a higher direct correlation with age than would the Dysphoria score from the GDS. We further hypothesized that WAV items contribute disproportionately to the identification of depression in this sample when using the score of 11 or above as a cut-off. A final goal for this study was to explore the WAV items in light of the above theories of aging and depletion. We reasoned that if WAV represents a depletion syndrome, then its score should be associated with health conditions and functional impairment as well as age. If WAV represents socio-emotional selectivity and gerotranscendence, then one would expect less association with dysphoria, anxiety, or stress, as well as positive association with age.

Method

Participants

Data for the study were obtained from a survey administered by mail to members over the age of 65 of a health maintenance organization (HMO) headquartered in Columbia, Maryland. Administrative personnel at the HMO made a random selection of 1000 out of the approximately 5000 available Medicare First members proportionate to the membership of three branches, Columbia, Annapolis, and Frederick, Maryland, assuring a good distribution across suburban, small urban, and rural locations. Members with recorded diagnoses of Alzheimer's disease or other primary dementias, mental retardation, or schizophrenia were screened out prior to selection.

Measures

The questionnaire for the survey was developed from a selection of scaled measures with the addition of demographic and health questions written specifically for the study. The final mailing included the questionnaire booklet; cover letters from the University of Maryland and from the HMO's Department of Psychiatry; a stamped return envelope; and a "decline" postcard, also postage paid, to be returned if the respondent did not wish to participate in the study. The cover letter offered completers of the questionnaire $5.00 cash on receipt of their materials. Unfortunately, no follow-up mailings could be sent. Some of the scaled measures included in the questionnaire were as follows:

The GDS.—The GDS (Brink et al., 1982), a 30-item self-rating scale, was developed specifically to screen older individuals for depressive symptoms and to correct some of the problems that researchers working with older persons had found with the existing depression scales up to that point (Yesavage, Brink, Rose, et al., 1983). For example, some of the well-known depression screening instruments, notably the Zung Self-Rating Depression Scale (SDS; Zung, 1965) and the Minnesota Multiphasic Personality Inventory Depression Scale, tend to overdiagnose depression with elderly respondents because they include many questions about physical symptoms (Blazer & Williams, 1980; Brink et al., 1982). Thus, the GDS was written with much less emphasis on somatic complaints. In addition, most of the existing scales, including the Center for Epidemiologic Studies Depression Scale (Radloff, 1977), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the Zung SDS, use a Likert response system with three or more anchor points in

answer to each question. This response format has been found to be confusing to a proportion of aged individuals, who, whether from mild dementia or the effects of depression, appear to misunderstand it (Yesavage et al., 1983), or to perseverate on the worst response, artificially elevating scores (Lyons, Strain, Hammer, Ackerman, & Fulop, 1989). The GDS was created using "yes/no" questions to reduce the problem of too many choices and to make the scale as simple as possible for self-rating (Brink et al., 1982; Yesavage et al., 1983). Finally, the GDS was written to maximize its acceptability to older adults in the cohort of the times, who were found to react negatively to questions about sexual interest or suicidal ideation on general depression scales (Yesavage et al., 1983).

The GDS has continued to gain prominence and acceptance in the gerontology literature. For example, it has been recommended as a standard instrument for research on depression in older adults to facilitate comparison and replication of studies (Koder, Brodaty, & Anstey, 1996). The GDS is also included as part of the Geriatric Review Syllabus curriculum for geriatric medicine (Beck, 1991). On the other hand, the GDS has received criticism for its simple dichotomous responses (Blazer, 1994) and, depending on the sample characteristics, for obtaining lower than desirable sensitivity (Parmalee et al., 1989), specificity (Blazer, 1994), or both (Koenig et al., 1992; Kafonek, Ettinger, Roca, Kittner, Taylor, & German, 1989). In addition, Norris and Woehr's (1998) item analysis of the GDS with a sample of 69 elderly medical patients obtained four item-to-scale correlations in their study that were quite low (two below .3, and two below .4), suggesting these items are not adequately related to the scale. Kafonek, Ettinger, Roca, and colleagues (1989) have noted that some GDS items "lack face validity" for older persons who have recently entered a long-term care facility, such as the item about giving up one's activities and interests. Additionally, despite the fact that the GDS avoids reference to purely somatic complaints, there are several items that appear to be susceptible to somatic conditions (Koenig et al., 1992).

Using the 30 items as a single additive scale with one point each for "depressed" responses, there are two cut-off scores for the GDS to distinguish depressed from nondepressed respondents. Brink and colleagues (1982) recommended the use of 11 points and above to designate depressed as the most conservative cut-off, with an obtained sensitivity of 84% and specificity of 95%, a determination based on responses of a sample of 20 nondepressed elderly persons and 51 who were receiving treatment for depression (Brink et al., 1982). Nevertheless, use of a 14-point cut-off has also been reported (Kafonek et al., 1989; Lyons et al., 1989).

Instrumental Activities of Daily Living (IADL).—Among noninstitutional elderly persons, it is appropriate to measure the degree of impairment in those everyday activities that go beyond self-care to functioning in and out of the home, referred to as IADLs (Lawton & Brody, 1969). IADLs can be considered a rough measure of global physical and cognitive functioning. The measure of IADLs used here was taken from the Duke University Older Adults Multidimensional Assessment (OARS; The Duke University Center for the Study of Aging and Human Development, 1978) study, a measure that has been used numerous times in large and small studies of older adults. The OARS IADL scale consists of seven items, rated as needing no help (2 points), needing some help (1 point), or being unable to do the item (zero). The summed score, therefore, reflects higher capabilities for higher scores.

Sense of Control.—The degree to which individuals feel they have some control, whether over their everyday life or over their health and health care, has been shown to be an important predictor of health and mental health outcomes. Internal or external locus of control can be formally measured, but scales for doing so are lengthy and complicated. In contrast, a one-item measure of perceived control for this study, taken from Menec, Chipperfield, and Perry (1999), has been found to predict adjustment to illness in prior research, and was related to health and functional disability status in their study. The question reads: "Thinking about life in general, some people generally feel out of control and helpless, while others feel in control and able to cope. How do you generally feel?" with a 0-to-10 rating.

Lubben Social Network Scale.—A brief scale assessing the respondent's living situation, contacts with friends and family, and the number of each that they feel close to, are able to confide in, and receive help from, the Lubben Social Network Scale (LSNS; Lubben, 1988) consists of 10 questions scored from 0 to 5. The scale was developed to be used as a screening instrument in health settings, under the widely supported assumption that social support and social networks provide a benefit to elders' mental and physical health and recovery from health problems (Lubben, 1988). Scores range from 0 to 50, with higher points indicating more social contact. A score of 20 or lower is considered to place an older person at risk for social isolation associated with extended hospital stays.

Results

Accounting for surveys returned for wrong addresses, 990 surveys were sent, from which 327 (33.0%) completed surveys and 163 (16.5%) decline postcards were returned, or a total response rate of 49.5%. The 327 completers were approximately the same age as the 663 combined nonresponders and decliners, ($M = 73.2$, $SD = 6.2$ years vs. $M = 73.65$, $SD = 7$ years, respectively) but completers were disproportionately male (48.3% of the completers were male vs. 41.0% of those who did not respond or declined). Completed surveys were checked against the

original mailing list, and in two cases the spouse of the designated respondent was found to have answered the survey. These proxy responses were retained in the sample.

Descriptive information on the sample is presented in Table 1. Of those who responded, 88.3% were Caucasian (8.9% were African American) with an age range of 65 to 94 and an average age of 73.2 years (SD = 6.2 years). About two thirds of the sample, 212 persons, were from 65 to 74 years old (the "young old") whereas 115 were 75 and over (the "older old"). The majority of respondents were Protestant (55.5%), had a spouse or steady partner (68.8%), and had at least one living child or stepchild (93.6%). Fourteen percent reported that they live in the same household with one of their children, 53.0% reported that at least one child lived within 5 miles, and only 12.2% reported the nearest child lived over an hour away.

Educational attainment was distributed across levels, with about 16% having less than a high school diploma, 45.2% being high school graduates, 22.1% having a college degree, and 16.5% having some graduate work or an advanced degree, or cumulatively 83.8% with at least a high school diploma and 38.5% with at least a college degree. The sample was primarily retired (76.1%), but 12.2% reported working part time, 4.0% were working full time, and another 4.0% reported being disabled. Yearly income was indicated in $10,000 ranges and distribution was fairly even with 12% to 16% of respondents reporting incomes at each step from $10,000 to $60,000. Seven percent reported income below $10,000 and 16% reported incomes above $60,000, with the median falling within the $30,000 to $39,000 range.

Table 1. Description of the Sample

Characteristic	*n*	% (nonmissing)
Age Category		
65–74 years	212	64.8
75–94 years	115	35.2
Gender		
Male	158	48.3
Female	169	51.7
Race		
Caucasian	286	88.3
African American	29	8.9
Other	9	2.7
Religion		
Protestant	181	55.5
Catholic	90	27.5
Jewish	11	3.4
Other	24	7.3
No Religion	20	6.1
Marital Status		
Married	200	61.2
Widowed	74	22.6
Separated/Divorced	40	12.2
Single	13	4.0
Relationship Status		
Has a Significant Other	221	68.8
No Significant Other	100	31.2
Educational Level		
Less than High School Graduate	53	16.2
High School Diploma	148	45.2
College Graduate	72	22.1
Advanced Degree	54	16.5
Work Status		
Working full time	13	4.0
Working part time	40	12.2
Retired/never worked	267	83.2
Yearly Household Income Range		
Under $10,000	21	7.0
$10,000–29,000	85	28.4
$30,000–49,000	85	28.4
$50,000–69,000	61	20.4
$70,000–89,000	21	7.0
$90,000 or more	26	8.7

Health and Functioning.—Respondents were asked to check off whether or not they currently suffered from a list of chronic health conditions. Most indicated two (31.5%) or one (26.6%) of these conditions. The mean number of conditions was 2.1. Among these, "arthritis that causes pain or limits activities" received the highest endorsement indicated by 45.3% of the sample. High blood pressure affected 44.3% of the sample. Heart disease received 22.9% endorsement and diabetes received 16.5%. Fewer indicated problems with emphysema or other breathing disorder (11.0%), depression (8.3%), anxiety or nerves (7.3%), and cancer (6.4%). Very small numbers, from 1% to 3%, endorsed effects of a stroke, history of alcoholism, Parkinson's disease, or liver disease.

General health-related problems that were listed separately included the experience of pain that is significant (endorsed by 25.1%), early morning wakening (18.1%), difficulty falling asleep (15.6%), failing eyesight that causes difficulty reading or driving (12.5%), and hearing difficulties (10.7%).

The sample rated their health from poor to excellent. The mean rating was 3.15, or a little above the "good" rating of 3.0. Only 25.1% of this community-dwelling sample rated themselves to be in "fair" or "poor" health. Forty-five percent indicated they visited a doctor from three to six times in the past year, whereas 43% said they saw a doctor seven or more times in the year. The remaining 12% said they saw the doctor never, once, or twice during the year.

There was little variance within the sample on the IADL scale. The majority of respondents (64.0%) reported not needing help with any of the activities. Twenty-six percent reported needing help with one, two, or three IADLs. Only 10% required help with four to seven of the activities. Housework was the most highly endorsed IADL with which respondents required help, followed by preparing meals, then shopping, and going places independently.

Social and Mental Health.—Responses to the one-item sense of control question were highly skewed toward the "in control" end of the range from 0 (out of control) to 10 (completely in control). The median rating was 8. Only 10 respondents indicated they felt less in control than the midpoint; 26 (8%) placed

their answer at the midpoint, neither in control nor out of control; and the remaining 89% placed their response as more in control than out of control.

LSNS scores in this sample ranged from a low of 9 points to a high of 47. Cronbach's alpha for this sample (N = 306 with complete data) was .6824, and 35 respondents (10.7%) scored in the at-risk range for social isolation.

Full-scale scores on the GDS were available for 272 out of the 327 respondents. Most of the 14.4% of the sample with missing data on the scale had one or two items missing. An average of 7.2 cases had missing data per item. Cases were retained for all areas in which their data were complete. Mean GDS score for the nonmissing sample was 4.92, with a range from 0 to 26 (where 30 is the maximum possible on the scale). Using the recommended cut-off of 0 to 10 for not depressed and 11 or above as suggestive of depression, 35 of the complete cases (12.9%) fell into the depressed category, whereas 87.1% were nondepressed. Using the more stringent cut-off of 0 to 13 versus 14 or above, 21 persons (7.7%) would be considered depressed. Cronbach's alpha was .8674 for the full scale for the 272 respondents in this sample.

A PCA was performed on the GDS with the nonmissing sample to ascertain whether it would be appropriate to use the subscales from Parmalee and colleagues (1989). Two subsets of GDS items from their PCA are of particular interest in this study, the 14-item Dysphoria factor and the Withdrawal/Apathy/[Lack of] Vigor factors with a total of seven items. A PCA with Pearson's r correlation matrices was used, as results have been shown to be nearly identical to those using the ideal polychoric type for dichotomous items (Liang, 1984; cited in Parmalee et al., 1989). This PCA on the GDS resulted in nine eigenvalues over 1, but Cattell's scree plot suggested a final solution of six components. Varimax rotation converged in nine iterations.

PCA items and their factor loadings appear in Table 2. The PCA explains 50.4% of the variance in the items. The first and fifth factors together comprise 13 of the 14 items of the Dysphoria factor in the Parmalee et al. (1989) analysis. (The omitted item is No. 27, "Enjoy getting up in the morning.") Because the first and fifth factors both relate to depressive affect, and they have a sufficiently robust Cronbach's alpha reliability in this sample (r = .8360), they were combined into this 13-item Dysphoria score for further analyses. The second factor in the PCA for this sample consists of six of the seven items that formed the Withdrawal/Apathy and Vigor factors in the Parmalee and colleagues study. The WAV items are: "Have you dropped many of your activities and interests?"; "Do you prefer to stay at home, rather than going

Table 2. Principal Components of the Geriatric Depression Scale (n = 272)

Item	Dys 1	WAV	Anxiety	Mental Impairment	Dys 2	Agitation
Downhearted and blue	*.662*					
Happy most of the time	*−.653*					
Feel life is empty	*.648*				.476	
Basically satisfied with life	*−.612*					
Most people better off	*.583*					
In good spirits	*−.569*					
Often get bored	*.502*					
Often feel like crying	*.452*					.320
Wonderful to be alive	*−.413*					
Prefer to stay home		*.682*				
Avoid social gatherings		*.663*				
Dropped activities & interests		*.630*				
Find life very exciting		*−.600*				
Hard to start new projects		*.527*		.322		
Full of energy		*−.430*		−.429		
Afraid something bad will happen			*.687*			
Worry about future			*.650*			
Bothered by thoughts			*.630*			
Worry a lot about past			*.623*			
Problems with memory				*.777*		
Trouble concentrating				*.722*		
Mind as clear as it used to be				*−.699*		
Easy to make decisions				*−.442*		
Feel situation hopeless					*.776*	
Often feel helpless					*.673*	
Worthless the way you are now					*.646*	
Hopeful about future					*−.480*	
Restless and fidgety						*.681*
Frequently get upset						*.600*
Enjoy getting up in the morning		−.310				*.444*

Notes: Italicized loadings indicate assignment to component. Dysphoria items are those in Components 1 and 5. Withdrawal/Apathy/[Lack of] Vigor (WAV) items are in Component 2. Anxiety items are in Component 3, Mental Impairment items in Component 4, Agitation items are in Component 6.

out and doing new things?"; "Do you find life very exciting?"; "Is it hard for you to get started on new projects?"; "Do you feel full of energy?"; and "Do you prefer to avoid social gatherings?". The missing item, "Mind as clear as it used to be," appears to relate less to disengagement from activities or interests than to trouble with memory or concentration. The six WAV items obtained Cronbach's alpha reliability of .7456, and are used as the WAV variable in further analyses. The third factor here consisting of four items relating to worry is an Anxiety factor (r = .6352). The fourth factor in this PCA is Mental Impairment (r = .6880). Three remaining items comprise an unreliable sixth factor, that might be called Agitation (r = .2723).

Mean WAV score for the complete cases was 2.17 (SD = 1.87, n = 306); mean for the 13-item Dysphoria score was significantly lower at 1.08 (SD = 2.07, n = 304; paired samples t (288) = 8.517, $p < .001$, n = 289). Mean Mental Impairment (0.9650, SD = 1.19) and Anxiety (0.4207, SD = 0.8400) subscales were lower still.

Table 3 displays the 30 GDS items, in descending order of their endorsement rates in this sample—that is, the percentage of respondents who answered the item in the depressed direction. Factor assignments are indicated with the initial after the item number (W = WAV, D = Dysphoria, A = Anxiety and M = Mental Impairment; there are 3 unassigned items). Item-to-total correlations are given in the far right column. The six WAV items had acceptable item-to-scale correlations, ranging from .3655 to .5848. The seven most highly endorsed items on the scale in the depressed direction were the six WAV items and No. 30, the "Mind as clear as it used to be" item that was grouped with these items by Parmalee and colleagues, 1989. The WAV items ranged from 24.8% endorsement (80 respondents) for Item 28, "Do you prefer to avoid social gatherings?" to 58.5% endorsement (186 respondents) on Item 21, "Do you feel full of energy?" One quarter to over one half of the respondents answered in the depressed direction on each of the WAV items. Of the 13 least endorsed items, 11 were from Dysphoria and 2 from the Anxiety subscale.

Another way to look at endorsement is to compare the proportion of the sample that had no score in the depressed direction on each subscale. Two thirds of the sample (62.2%, n = 304) received zero score out of the possible 13 items in Dysphoria. Three quarters (74.1%, n = 309) received no score on the four-item Anxiety subscale and about half (48.4%, n = 314) on the Mental Impairment subscale. In contrast, not quite one quarter of the sample (24.8%, n = 306) received a score of zero on the six-item WAV subscale.

The absolute value and the significance level of the intercorrelations among the four main subscales of the GDS in this sample are shown in Table 4. The correlation between the Withdrawal/Apathy/Vigor

Table 3. Geriatric Depression Scale Items With Depressed Direction Endorsement Rates and Item-to-Total Corelations in Sample (n = 327)

Item/Subscale	Text Excerpt	Percent Endorsing	Item-to-Total r
21/W	Feel full of energy (No)	58.5	.4034
30/A	Mind as clear as it used to be	44.0	.3771
19/W	Find life very exciting (No)	37.2	.4333
20/W	Hard to start new projects	35.8	.5848
12/W	Prefer to stay home	32.1	.3655
2/W	Dropped activities and interests	31.7	.4703
28/W	Prefer to avoid social gatherings	24.8	.3847
29/M	Easy to make decisions (No)	20.9	.4059
26/M	Trouble concentrating	18.2	.4163
4/D	Often get bored	17.8	.4675
11—	Restless and fidgety	16.8	.3584
24—	Frequently get upset over small things	16.5	.2896
6/A	Bothered by thoughts	16.0	.4374
13/A	Worry about the future	15.9	.3964
27—	Enjoy getting up in morning (No)	15.0	.3486
17/D	Worthless the way you are	13.8	.3919
14/M	Problems with memory	13.5	.2875
16/D	Downhearted and blue	13.5	.6298
5/D	Hopeful about future (No)	12.2	.4205
9/D	Happy most of the time (No)	10.1	.4822
10/D	Often feel helpless	9.6	.4488
25/D	Often feel like crying	9.0	.4246
23/D	Feel most people better off	8.4	.3808
1/D	Basically satisfied with your life (No)	7.5	.4010
15/D	Wonderful to be alive now (No)	7.3	.3000
8/A	Afraid something bad will happen	6.9	.3708
3/D	Feel life is empty	6.1	.4261
18/A	Worry a lot about the past	6.1	.2736
22/D	Feel your situation is hopeless	5.0	.3904
7/D	In good spirits (No)	3.4	.4234

Note: W = Withdrawal/Apathy/[Lack of] Vigor; D = Dysphoria; A = Anxiety; M = Mental Impairment.

Table 4. Pearson's *r* Correlations Among Subscales of the Geriatric Depression Scale (GDS; *n* = 289–301)

Subscale	GDS Dysphoria	GDS Anxiety	GDS Mental Impairment
GDS WAV	.448**	.265**	.446**
GDS Dysphoria		.467**	.298**
GDS Anxiety			.313**

Note: WAV = Withdrawal/Apathy/[Lack of] Vigor.
**$p < .001$.

score and Dysphoria score was found to be moderately high, positive, and significant ($r = .448$, $p < .001$). The correlation between Anxiety and Dysphoria is higher in value than that between Anxiety and WAV, although both are significant and in a positive direction.

Direct correlations of the GDS subscale scores with major study variables were also compared (see Table 5). Several minor differences in the correlations to variables between WAV and Dysphoria are seen. For example, although all of the correlations are significant, WAV has a slightly higher absolute correlation to self-rating of health, number of health conditions, IADL, and income variables, and slightly lower correlation to self-report of a current depression condition and sense of control. WAV has a nonsignificant association with gender, whereas Dysphoria is significantly associated with female gender.

Age in years is associated with GDS WAV ($r = .263$, $p < .001$), but not with GDS Dysphoria ($r = .050$, *ns*). To further underscore the differences in how age relates to the two subscales, we conducted an independent-samples *t* test on mean scores of these two GDS subscales for the young-old group of those 65 to 74 years old ($n = 201$) versus the older-old group of those 75 to 94 years old ($n = 103$). For GDS Dysphoria, there was a nonsignificant difference between the two age groups ($t = -1.318$, $p = .188$), whereas for WAV, the older group's mean score was significantly higher ($t = -4.564$, $p < .001$).

Another question was how the WAV factor affects "case identification" in the GDS. Without the six WAV items, it was anticipated that fewer respondents would be classified as depressed. Using endorsement of up to one third of the responses for the nondepressed cut-off (0–10), I found that the prorated normal range for the 24-item scale without WAV items was 0 to 8 points out of 24. Removing the WAV items and prorating the scoring criteria did not affect the number of persons originally identified as *not depressed* by the full-scale score, but the cross-tabulation analysis in Table 6 shows that without the six WAV items, only 22 persons, 8.1% of the sample, would have scores in the new, prorated "depressed" range of 9 to 24 points, compared with the 35 persons, 12.9% of the sample, who scored in the depressed range using the full-scale GDS score. Thus, WAV items were responsible for approximately 37% (13 out of the 35) of those identified as depressed by the full-scale score. Further analysis revealed that 6 of these 13 individuals were from the young-old category and 7 were from the older old category.

Discussion

External validity in this study is limited by the relatively low response rate from a predominately Caucasian and middle-class sample of elders from a single region of Maryland. Potential response bias cannot be ruled out with regard to key study variables, although it is known those who replied to the mail survey were approximately the same average age as nonresponders or decliners, and a higher proportion of the latter were female. Nevertheless, results of a PCA, endorsement rates and correlations based on responses from this relatively high-functioning sample add to our knowledge of the performance of specific items and groups of items on the GDS and their possible reinterpretation according to several related theories of aging.

This study supports earlier findings that the GDS, originally presented and frequently used as a unidimensional measure, encompasses several subscales. The endorsement rates differed markedly between two subscales of the GDS examined here, suggesting that one set of items, those representing Withdrawal, Apathy, and Lack of Vigor (WAV), are more commonly experienced in this sample of community-dwelling elders. Unlike a calculation of hit rates us-

Table 5. Pearson's *r* Correlations of Geriatric Depression Scale (GDS) Subscales with Demographic and Health Variables (*n* = 282–325)

Variable	GDS Total Score	WAV	DYS	ANX	M. Imp.
Age	.217**	.263**	.050	.052	.242**
Gender	.106	.041	.160*	.160*	.068
No. Health Conditions	.401**	.409**	.230**	.275**	.210**
Self-Rating Health	−.514**	−.542**	−.396**	−.273**	−.304**
IADL	−.372**	−.431**	−.216**	−.237**	−.275**
Lubben Social Network	−.243**	−.297**	−.242**	−.058	−.148*
Income Range	−.244**	−.298**	−.237**	−.110	−.078
Sense of Control	−.446**	−.341**	−.400**	−.299**	−.390**
Current Depression	.418**	.253**	.403**	.321**	.172**

Note: WAV = Withdrawal/Apathy/[Lack of] Vigor; DYS = Dysphoria; ANX = Anxiety; M. Imp. = Mental Impairment; IADL = instrumental activities of daily living.
*$p < .01$; **$p < .001$.

Table 6. Cross-Tabulation of Categorization by Geriatric Depression Scale (GDS) Full Scores and GDS Without (n = 272)

GDS Full-Scale Score	Not Depressed	Depressed	Total
Not Depressed	237	0	237
Depressed	13	22	35
Total	250	22	272

ing the scale score and cut-off as a benchmark against which to compare the performance of each item, or item-to-total correlations that use responses from all the scale's other items, simple item endorsement rates are not influenced by the answers to the other items on the scale. Thus, despite a positive correlation between the WAV and Dysphoria subscales, the difference in endorsement rates and mean subscale scores of the two tells us that low energy, having difficulty starting new projects, and so on are experienced more frequently than sadness, crying, hopelessness, and the like. In fact, subscale scores for WAV showed that only 25% of the sample did not have any WAV score, a lower proportion than that for Dysphoria or the other subscales.

Behaviors and feelings similar to those in the WAV items are described in the disengagement theory of aging, socio-emotional selectivity, and gerotranscendence theories and in work by Newmann and colleagues (1989, 1991, 1996) and Gallo, Anthony and Muthen (1994), whose "depletion syndrome" differs somewhat from clinical depression in symptom configuration, a constellation of behaviors not identical with the GDS WAV, but with some overlap. In the present study, the number of WAV items endorsed has a significant association with increasing age, as does the depletion syndrome in Newmann and colleagues (1996), whereas the Dysphoria subscale score is unrelated to age. Slight differences in bivariate correlations in which the correlations with health and functioning variables are stronger with WAV than with Dysphoria are also suggestive. WAV's intercorrelation with the GDS Anxiety subscale is also somewhat lower than that of Dysphoria, whereas its relation to the Mental Impairment subscale is somewhat higher. These findings taken together may be cautiously interpreted as suggesting that endorsement of WAV items could be tapping a disengagement-like or depletion condition, something that may naturally occur in elders, particularly those over 75 or in poor health, rather than a mental disorder such as depression. We may speculate that this condition represents the psychological and social adaptations to the physical and perhaps cognitive decrements that eventually come with advancing age.

The six WAV items, one fifth of those on the scale, have contributed disproportionately to the total GDS depression score, pushing 37% of those who were classified as depressed by the total scale over the 10-point cut-off. Without the WAV items, 8.1% of the sample would be categorized as depressed, instead of the 12.9% who were classified as depressed with the full scale. On the GDS, each item counts uniformly as one point toward the depressed category, whereas by another diagnostic method such as the DSM–IV, certain key symptoms are "required" for a depression diagnosis and others merely tend to covary with the required symptoms. The WAV items appear to fall in the latter category of symptoms—they may accompany depression, but they also may be due to illness, extreme old age, or a depletion–disengagement syndrome due to changes and losses of old age. Unfortunately, equal weighting of the items on the GDS and similar screening scales may give clinicians and researchers who use the scale the impression that each item describes an equally important symptom, perpetuating the idea that older persons' development and depression profiles differ little from those of younger adults.

As Stanley Jacobson (1995) wrote in his article on overselling depression, it is wise to evaluate an older person's mood and affect carefully before labeling or medicating him or her for depression. "Depression without sadness," on second look, may be socio-emotional selectivity or gerotranscendence—effects of "normal" aging and ways to cope with those effects. If practitioners and researchers choose to use depression screening scales such as the GDS, their validity may be improved by examining reliable subscale scores and concurrently considering the client's age and functional limitations. Although more work is needed, this article proposes a WAV subscale that appears to tap a unique dimension of the experience of older adults, thus adding to the information provided by a total GDS score.

It will be appropriate to continue to explore this relationship of depletion, depression, and developmental changes of old age and further refine their definitions and measurement. Theories of aging, both new and old, should guide us in this effort.

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