

Personality Disorders and Depression in Community-Dwelling Older Adults

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This study examined the prevalence and nature of 13 personality disorders and the relationship between personality disorder and depression among community-dwelling elderly without a history of psychiatric hospitalization ($N = 189$, males = 57, females = 132; age range = 55-96; mean = 76.2). Participants recruited from senior centers completed the Personality Diagnostic Questionnaire- Revised (PDQ-R; Hyler & Reider, 1987) and Geriatric Depression Scale (GDS; Yesavage et al., 1983). Results indicated that 37% of respondents did not meet full criteria for any personality disorder, 63% of respondents received at least one personality disorder diagnosis, and 42% fulfilled criteria for two or more diagnoses. Most frequent diagnoses were paranoid (40%), histrionic (32%), narcissistic (22%), borderline (22%), and avoidant (16%) disorders. There was a strong positive relationship between self-reported levels of depression and summed positive personality disorder criteria. Multiple regression revealed that borderline, paranoid, and passive-aggressive disorders were the strongest predictors of depression, while histrionic personality disorder was significantly negatively related to depression. Possible explanations for the high prevalence rates for personality disturbances are discussed, and implications for research and clinical practice are provided.

Clinical lore suggests that personality disorders mostly manifest themselves in young and middle-aged adults, and tend to "burn out" as these individuals age. Our clinical experience at an outpatient psychological services center for older adults provides some anecdotal evidence to the contrary. Indeed, our recent review of the literature (Segal, Hersen, Van Hasselt, Silberman, & Roth, 1996) suggests that personality disorders in

older people are often underrecognized and possibly underdiagnosed. This view has been proffered by other researchers as well (Casey & Schrodt, 1989; Rose, Soares, & Joseph, 1993; Rosowsky & Gurian, 1991).

Fortunately, interest in personality disorders in older adults has increased considerably in the last decade. Several case studies describing the manifestations of personality disorders in older individuals have recently been documented. For example, a lucid case description of an older female with borderline personality disorder has been described by Siegel and Small (1986), and detailed case studies of antisocial (Howard, Bandyopadhyay, & Cook, 1992), histrionic, borderline, and avoidant personality disorders in older adults have been presented (Rose et al., 1993).

To date, several large-scale epidemiological studies have investigated prevalence of DSM-III or DSM-III-R personality disorders in the general adult community (e.g., Maier, Lichterman, Klinger, Heun, & Hallmayer, 1992; Reich, Yates, & Nduaguba, 1989; Samuels, Nestadt, Romanoski, Folstein, & McHugh, 1994; Zimmerman & Coryell, 1989). Rates for diagnosis of any personality disorder were as follows: 5.9% (Samuels et al., 1994), 10% (Maier et al., 1994), 11.1% (Reich et al., 1989), and 17.9% (Zimmerman & Coryell, 1989). Typically, however, these studies focused on young and middleaged adults, although Samuels et al. (1994) provided at least some data specific about older adults. In that study, psychiatrists used a homemade semi-structured interview to diagnose DSM-III personality disorders. Prevalence of personality disorders for 200 respondents over age 64 was 6.8%. Similarly, Cohen et al (1994) reported data from a subsample of elders ($n = 289$) in a community survey and found that 6.6% had a personality disorder. However, both the Samuels et al. (1994) and the Cohen et al. (1994) investigations focused on DSM-III personality disorders and criteria which were substantially more vague and less reliable than the behaviorally operationalized criteria provided by DSM-III-R and DSM-IV (for further discussion, see Segal, 1997). Other limitations of both studies were the reliance on clinical judgment in assigning diagnoses (and the absence of reliability checks) rather than employing more reliable and validated structured interview or self-report inventories.

Overall, however, epidemiological and prevalence data for Axis II disorders in *older adults* are presently limited, and this represents a major gap in the research literature. Development of appropriate outreach and remedial strategies will be hampered until prevalence and consequences of personality disorders in older adults are more firmly understood. As such, it behooves clinical researchers to thoroughly investigate the nature and clinical correlates of personality disorders in the older population. Our recent review of the literature pertaining to diagnosis and assessment of personality disorders in older adults has also highlighted the lack of normative data for many objective personality assessment measures that have been constructed (Segal et al., 1996). In the absence of normative data for a given instrument, it is difficult for clinicians and researchers to interpret scores or personality profiles from older respondents.

Depression is another psychological disorder experienced by many older adults. In fact, current estimates suggest that between 1% and 4% of community-dwelling elders suffer from diagnosable major depression (Blazer, Hughes, & George, 1987), while an additional 9%-30% of older adults suffer from subclinical but still significant levels of depression (Baker, 1991; Blazer, 1993). Notably, more research has been conducted on depression than on any other mental disorder in the elderly, and some of this research has

looked at the relationship between depression and personality disorders. Several studies have assessed the effects of personality dysfunction on the treatment of late-life depression (see classic report by Thompson, Gallagher, & Czirr, 1988; see also Fiorot, Boswell, & Murray, 1990; Kunik et al., 1993; Molinari & Marmion, 1995), whereas other studies have looked at rates of personality dysfunction in elders with and without a history of major depression (Abrams, Alexopoulos, & Young, 1987; Schneider, Zemansky, Bender, & Sloane, 1992). However, still other empirical studies investigating the correspondence between specific dysfunctional personality traits and axis I disorders, such as depression and anxiety in the elderly, have been slow to emerge, and studies on elders in community settings are few and far between. Continued research investigating the relationship between personality dysfunction and depression in the elderly is warranted, as an understanding of underlying personality dynamics can have prognostic significance in the treatment of depression. In this study, we were interested in understanding which specific personality disorders were the most closely related to depressive symptoms in the elderly. The purpose of the present study, therefore, was to investigate the prevalence and nature of personality disorders and their relationship to depression in a sample of purportedly normal community-dwelling, older adults.

METHOD

Participants

Initially, 251 elderly community residents were recruited to volunteer from senior centers in metropolitan South Florida. Thirty-nine participants were unable to fully complete the measures, or showed evidence of careless or random responding as detected by PDQ-R "suspect questionnaire" validity scale (described below). A self-report demographics questionnaire and sample PDQ-R item were used to screen for gross cognitive impairment as evidenced by inability to understand the instructions or respond appropriately. However, participants were not formally screened for cognitive impairment due to time constraints, and also because we closely observed the participants and used the PDQ-R validity scale to detect unusual responses. Incomplete data largely came from participants at two senior centers that had a significant minority of frail or cognitively impaired elders mixed in with a preponderance of well elderly. Data from ill participants were excluded from analyses. To eliminate a response bias in the direction of psychopathology, data from an additional 23 participants were excluded because they reported that they had previously been hospitalized for a psychiatric problem. This information was obtained using the self-report demographics questionnaire. The final sample consisted of 189 participants. Mean age was 76.2 years ($SD = 8.3$, range = 55-96), 132 (70%) were women, and 57 (30%) were men. Eighty-two percent of the participants were Caucasian, 15% were African American, 2% were Hispanic, and 1% were Asian. Fifty-eight percent were widowed, 26% were married, 10% were divorced, 2% were never married, and 4% were separated. Participants predominantly were permanently living in South Florida (88%); 54% percent lived alone. Participants represented a wide range of socioeconomic groups based on the Hollingshead Socio-Economic Scale (Hollingshead, 1975).

Procedure

The first author initially contacted the director at each senior center. Directors then arranged a convenient time and place for administration of measures, which mostly were completed during pre-set times for lectures, recreation hours, and immediately following lunch. On the day of the assessment, participants were asked to participate in a study investigating the personality characteristics of older adults. Participants were assured of anonymity, as neither names nor identification were requested on any measure. Informed consent was obtained after procedures were fully explained. In group format, participants were administered the Personality Diagnostic Questionnaire- Revised (PDQ-R; Hyler & Reider, 1987), the Geriatric Depression Scale (GDS; Yesavage et al., 1983), the Hollingshead Socio-Economic Scale (Hollingshead, 1975), and a demographics questionnaire. Most participants ($n = 206$, 97%) completed the questionnaires independently, while several ($n = 6$, 3%) required oral administration due to visual impairment. Participants' questions were answered by the first author or a graduate level research assistant, who was familiar with the inventories.

Measures

Personality Diagnostic Questionnaire-Revised (PDQ-R). The PDQ-R (Hyler & Reider, 1987) is a 152-item, self-completed, forced-choice, true/false questionnaire that is widely used in personality disorder research. It is designed to diagnose each of the 11 formal DSM-III-R axis II disorders, as well the provisional self-defeating and sadistic personality disorders, and it is tied to the diagnostic criteria presented in DSM-III-R. Each criterion is scored as present or absent so that dimensional scores (number of criteria met) and categorical diagnoses can be made. The PDQ-R also generates two validity scales [the "too good" (TG) and "suspect questionnaire" (SQ) scales] as well as an "impairment/distress" (ID) index which are used to detect inappropriate test-taking behavior, random responding, and reduce false positives. A summed "total" score of all pathological items representing an overall level of axis II symptomatology can also be generated. Personality disorder diagnoses are made according to DSM-III-R thresholds as well as an elevated ID index, and the PDQ-R can be scored by a nonprofessional. It has been demonstrated to be an efficient instrument for screening personality disorders according to DSM-III-R (Hyler, Skodol, Kellman, Oldham, & Rosnick, 1990), and has been found to have high sensitivity and moderate specificity for most axis II disorders (Hyler et al., 1990; Hyler, Skodol, Oldham, Kellman, & Doidge, 1992).

Geriatric Depression Scale (GDS). The GDS is a 30-item, self-completed, forced-choice, yes/no questionnaire devised as a simple screening test for depression in the elderly (Yesavage et al., 1983). For each item, the respondent indicates whether or not he or she is experiencing a symptom associated with depression, and the total scores can range from 0 to 30, with higher scores corresponding to higher levels of depression. The GDS has excellent internal consistency (mean coefficient alpha = .94), and good test-retest reliability ($r = .85$) with older adults (Yesavage et al., 1983). Evidence for concurrent validity for the GDS has been provided by Yesavage et al. (1983) who correlated GDS scores with the Zung Self-Rating Depression Scale ($r = .83$) and Hamilton Rating Scale for Depression ($r = .84$). In two other studies, the GDS also has shown high concurrent validity with the Beck Depression Inventory ($r = .73$; Hyer & Blount, 1984; $r = .91$; Olin, Schneider, Eaton, Zemansky, & Pollock, 1992). While Yesavage et al.

(1983) suggest that the cutting score for depression is 11, a recent study with older psychiatric outpatients (Kogan, Kabacoff, Hersen, & Van Hasselt, 1994) demonstrates that a cutoff of 22 has better predictive accuracy than lower cutoffs.

RESULTS

Descriptive Data

Valid and completed PDQ-R and GDS scales were available from 189 participants. Results from the PDQ-R indicated that 37% of respondents did not meet full criteria for any PD, whereas 63% percent of respondents received at least one PD diagnosis; 42% fulfilled criteria for two or more PD diagnoses. The mean number of personality disorder diagnoses per participant was 2.1 ($SD = 2.1$, range = 0-11) (see Table 1). Results are also reported separately for males and females in Table 1. Prevalence rates for all disorders are as follows ($N = 189$): paranoid (40%), histrionic (31%), narcissistic (22%), borderline (22%), avoidant (16%), schizotypal (15%), obsessive-compulsive (14%), schizoid (12%), dependent (12%), self-defeating (11%), passive-aggressive (11%), antisocial (2%), and sadistic (0%) (see Table 2). Results are also reported separately for males and females in Table 2. Chi-square analyses were conducted to examine gender based differences in the prevalence of each personality disorder. Results indicated that females were more likely to be diagnosed with avoidant personality disorder, $X^2(1, N = 189) = 4.79, p < .05$, and schizoid personality disorder, $X^2(1, N = 189) = 3.64, p < .06$, although this last finding only approached statistical significance. No other significant gender differences were found.

Participants obtained a mean GDS score of 7.8 ($SD = 6.0$, range = 0-28). Total GDS scores were subdivided into three levels of severity. According to the classification indicated by Yesavage et al. (1983), a score of 0 to 10 is considered normal, a score of 11 to 20 indicates mild depression, and a score of 21 to 30 reflects severe depression. As expected, the large majority of the sample scored in the "normal" range ($n = 132, 70%$), whereas a significant minority scored in the mild range ($n = 51, 27%$), and few persons scored in the severe range ($n = 6, 3%$). The GDS scale had excellent internal consistency, with Cronbach's alpha equal to .86.

Relationship Between Personality Disorder and Depression

To begin to examine the relationship between personality disorders and depression, total GDS scores were compared between participants with at least one personality disorder ($n = 120$) and those without a personality disorder ($n = 69$). Older adults with at least one personality disorder scored significantly higher ($M = 9.9, SD = 6.1$) on the GDS than did those without a personality disorder ($M = 4.3, SD = 3.9$), $t(187) = 47.12, p < .0001$. Next, correlational analysis produced a significant positive relation between GDS and "total" PDQ-R scores ($r = .62, p < .01$). A standard multiple regression was performed between total depression (total GDS) score as the dependent variable and each of the thirteen personality disorders as independent variables. Table 3 displays the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (*Beta*), R square, and adjusted R square. As can be seen from Table 3, the ten predictor variables accounted for a total of 57% of the variance in depression scores. However, inspection of standardized regression weights shows that four of the predictors were statistically significant. Strongest predictors (in order of strength) were borderline, paranoid,

TABLE 1. Number of Personality Disorder Diagnoses Assigned by the PDQ-R Among Senior Center Participants (N = 189)

Number	Total Sample (N = 189)		Men (n = 57)		Women (n = 132)	
	N	%	N	%	N	%
0	69	36.5	24	42.1	45	34.1
1	40	21.2	13	22.8	27	20.5
2	19	10.1	5	8.8	14	10.6
3	18	9.5	5	8.8	13	9.8
4	9	4.8	2	3.5	7	5.3
5	10	5.3	5	8.8	5	3.8
6	11	5.8	1	1.8	10	7.6
7	3	1.6	0	0.0	3	2.3
8	6	3.2	2	3.5	4	3.0
9	3	1.6	0	0.0	3	2.3
10	0	0.0	0	0.0	0	0.0
11	1	0.5	0	0.0	1	0.8
	Mean = 2.07		Mean = 1.63		Mean = 2.26	

TABLE 2. Prevalence Rates for 13 Personality Disorders Among Senior Center Participants (N = 189)

Disorder	Total Sample (N = 189)		Men (n = 57)		Women (n = 132)	
	N	%	N	%	N	%
Paranoid	76	40.2	21	36.8	55	41.7
Histrionic	60	31.7	17	29.8	43	32.6
Narcissistic	42	22.2	9	15.8	33	25.0
Borderline	41	21.7	9	15.8	32	24.2
Avoidant	30	15.9	4	7.0	26	19.7
Schizotypal	28	14.8	5	8.8	23	17.4
Obsessive-compulsive	26	13.8	6	10.5	20	15.2
Schizoid	23	12.2	3	5.3	20	15.2
Dependent	22	11.6	4	7.0	18	13.6
Self-defeating	20	10.6	7	12.3	13	9.8
Passive-aggressive	20	10.6	7	12.3	13	9.8
Antisocial	03	1.6	1	1.8	2	1.5
Sadistic	00	0.0	0	0.0	0	0.0

passive-aggressive, and histrionic PD. Borderline, paranoid, and passive-aggressive scores were positively correlated with depression scores while histrionic PD was negatively correlated with depression.

DISCUSSION

Results from the present study suggest that personality dysfunction in the elderly general community may be more common than previously was believed. Notably, our rates were higher than most previously reported values for older individuals who are not psychiatric patients. Three possible explanations are offered to account for our findings. First, it is

TABLE 3. Standard Multiple Regression of Personality Disorder Symptoms on Depression in Older Adults

Disorder	B	Beta	T	Significance
Paranoid	.75	.21	3.02	.0029
Histrionic	-.50	-.17	-2.37	.0189
Narcissistic	-.39	-.12	-1.56	NS
Borderline	1.85	.54	7.22	.0000
Avoidant	.01	.00	0.04	NS
Schizotypal	.34	.11	1.34	NS
Obsessive-compulsive	.29	.08	1.27	NS
Schizoid	-.36	-.07	-1.39	NS
Dependent	.33	.10	1.53	NS
Self-defeating	-.17	-.05	-0.62	NS
Passive-aggressive	.68	.19	2.61	.0099
Antisocial	-.39	-.06	-1.16	NS
Sadistic	.75	.07	1.29	NS

Intercept = -.24
R² = .57
Adjusted R² = .54

B = unstandardized regression coefficients; Beta = standardized regression coefficients.

possible that our data accurately reflect the personality dysfunction in the sample studied. Several investigators have suggested that personality disorders are often underrecognized and underdiagnosed in the elderly (Segal et al., 1996; Casey & Schrodt, 1989; Rose et al., 1993; Rosowsky & Gurian, 1991), and our study provides some empirical support to those claims. Thus, rates of personality disorders in the elderly generally may be higher than previously believed. Moreover, our data were collected from senior center participants, some of whom are likely to be more frail and debilitated than elders who do not require such supportive social services. While most senior center participants are high-functioning persons, some might be there because they are isolated and in need of social support. It is possible that a lifetime history of personality disorder in some of these individuals has resulted in deficient or conflictual support networks, thus necessitating the need to attend a senior center. As such, personality disorder rates in our sample would be significantly elevated. A second hypothesis is that the high rates are due to measurement error, in particular overpathologizing of the PDQ-R. Indeed, many self-report personality disorder inventories have been criticized due to their high false positive rates compared to structured interviews (Hyler et al., 1990; Hyler et al., 1992; Trull & Larson, 1994). On the other hand, dimensional scores between self-report devices and structured interviews typically are highly correlated (Trull & Larson, 1994).

A third possible explanation for our high rates is that criteria for some personality disorders may be inadequate when applied to the elderly, a concern voiced by other researchers as well (Fogel & Westlake, 1990; Kroessler, 1990; Rosowsky & Gurian, 1991, 1992). Indeed, DSM-IV criteria for some personality disorders have limited applicability to aged clients due to their unique physical, cognitive, and social circumstances. In fact, some symptoms of apparent personality dysfunction in older persons

may actually be due to age-related social and biological factors, rather than a disordered personality. For example, social withdrawal (characteristic of schizoid and avoidant personalities) may increase due to physical limitations and transportation problems experienced by some elders. The PDQ-R item tapping schizoid personality ("Sex just doesn't interest me") could reflect biological declines, not personality. Concerns of exploitation and abuse by others (characteristic of paranoid personality) may not reflect true personality dysfunction, but may instead reflect realistic worries about crimes and scams directed at some vulnerable elderly with increased rates of cognitive and physical impairments. The PDQ-R item for paranoid personality ("I am often on guard against being taken advantage of") could actually reflect adaptive behavior for some elders. Endorsement of similar age-inappropriate items in the pathological direction could result in inaccurately elevated personality dysfunction scores. To summarize, more than likely, all three explanations (accurate reflection of personality dysfunction in the sample studied, overpathologizing of the PDQ-R, and inadequacy of some diagnostic criteria for elderly) contribute to the high rates in the present report. All three issues deserve future research attention.

When gender-based differences in the rates of categorical personality disorder diagnoses were examined, we found that females had higher rates than males for 9 of the 13 disorders. However, only one difference was statistically significant (females more likely to be avoidant) and one approached significance (females more likely to be schizoid). These findings could reflect true gender differences in the manifestations of personality disorders in the elderly, a possible gender bias of the PDQ-R or of the actual DSM personality disorder diagnostic criteria, or a lack of construct validity for the PDQ-R scales. Indeed, a recent study of sex and gender bias in three self-report personality disorder inventories (including the PDQ-R) indicated that some of the PDQ-R items for the histrionic, dependent, narcissistic, and antisocial scales were potentially sex biased (Lindsay & Widiger, 1995). At least in our limited sample, we did not find differential sex rates for these four disorders, nor did we find support for the claim in DSM-IV that borderline, histrionic, and dependent personality disorders are diagnosed more frequently in women than men.

Results of this study also provide evidence that depression is significantly related to personality disorders in the elderly. This finding is consistent with the reported link between personality disorder diagnosis and psychopathology in younger adults (see recent review by Ruegg & Frances, 1995). We found a moderately strong positive relationship between levels of depression and overall personality pathology ($r = .62$). Similarly, elders with a personality disorder were significantly more depressed than those without such a disorder. Our results are similar to the findings by Molinari, Ames, and Essa (1994) that depression (as measured by the GDS) was related to both clinical personality disorder diagnoses made by a psychiatrist ($r = .20$) and a structured interview ($r = .14$) in a sample of 100 males on a Veterans Affairs geropsychiatric inpatient unit. While depression and personality dysfunction appear closely related in our sample, the cause and effect relationship among these constructs is unclear. Does clinical depression disrupt normal personality functions? Or is depression a consequence of the disturbed thinking patterns, behaviors, and relationships experienced by a personality-disordered elder? Future research should address these challenging issues.

When relationships between specific personality disorders and depression were examined, we found that higher levels of borderline, paranoid, and passive-aggressive

personality styles were related to higher levels of depression, while higher levels of histrionic symptoms were related to lower levels of depression. Persons with borderline personality are known to have extreme difficulties with affective regulation, and this may predispose sufferers to depression, while paranoid elders may isolate themselves for fear of being harmed, and thus may be susceptible to depressive symptoms. It is possible that the enthusiasm, exuberance, flirtatiousness, and flattery associated with a histrionic personality style may help to reduce isolation in some elderly persons and therefore be associated with lower levels of depression.

Several limitations of the current study that affect generality of findings should be noted. First and foremost, levels of depression and personality dysfunction were measured exclusively by self-report, which is inherently biased (especially for ratings of personality dysfunction that are often unrecognized by the sufferer). Unfortunately, lack of a "gold standard" to confirm psychiatric diagnosis continues to vex diagnosticians. Standardized interviews can help but were not used in this study; therefore, it is possible that the high rate of personality disorders is partly an artifact of the self-report nature of the data. Further, all participants were members of various senior centers, and at least some of these individuals may experience more personality and interpersonal dysfunction than older adults who do not use this type of social service. Another limitation is that participants were not formally screened for cognitive impairment, although we did closely observe the participants and utilize a PDQ-R validity scale designed to detect unusual or inappropriate responding. Cognitive screening should be done in future studies. Lastly, participants do not entirely represent the elderly community in the United States, as most of the participants (88%) lived permanently in South Florida and 70% were female.

Despite limitations of the present study, the need for increased awareness and accurate assessment of personality dysfunction and concurrent depressive symptoms in the elderly is underscored. Future research is warranted to clarify other correlates and consequences of personality dysfunction in the aged. For example, an understanding of personality factors underlying anxiety, substance abuse, and eating disorders among older adults would be valuable to geropsychologists. Future investigators might employ more reliable and valid structured interviews for personality disorders and depression to assess concurrent validity of the self-report measures in a senior center sample. Studies that investigate the operating characteristics and utility of the new DSM-IV version of the PDQ-R, the Personality Diagnostic Questionnaire-4 (PDQ-4; Hyler, 1994), and other updated personality disorder assessment tools in elderly populations are also needed. Other popular self-report measures include Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1994), and the Coolidge Axis II Inventory (CATI; Coolidge, 1993; Coolidge & Merwin, 1992), while structured interviews include the Structured Clinical Interview for DSM-IV Axis II (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), Structured Interview for DSM-IV Personality (SIDP-IV; Pfohl, Blum, & Zimmerman, 1995), and the International Personality Disorder Examination (IPDE; World Health Organization, 1995). In conclusion, broad-based intervention strategies to improve social functioning and decrease depression in personality-disordered elders also appear necessary. An understanding of personality factors in individual cases can be utilized by diverse service providers to tailor individualized treatment approaches that will likely be more successful than generic interventions for the elderly. As data on the relationship between personality disorders and depression in the elderly continue to amass, we hope that improved assessments and treatment can be developed.

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