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Substance Abuse Treatment Initiation among Older Adults in the GET SMART

Program: Effects of Depression and Cognitive Status

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Running Head: SUBSTANCE ABUSE TREATMENT

Substance Abuse Treatment Initiation among Older Adults in the GET SMART

Program: Effects of Depression and Cognitive Status

Abstract

This study examines how individual patient characteristics predict substance abuse treatment initiation among older adults, in an investigation based on the behavioral health service use model. Analyses tested the impact of demographic factors, substance abuse symptoms, depression and cognitive status on subsequent treatment initiation. The sample included 250 older male veterans screened for substance abuse problems during inpatient medical treatment, who also participated in a clinical evaluation for substance abuse treatment. Measures included demographics and CAGE alcohol screening score. A subset of patients also completed the Michigan Alcohol Screening Test-Geriatric Version (MAST-G), Hamilton Depression Scale (HAM-D), and Folstein Mini Mental State Exam (MMSE). Patients who initiated treatment following evaluation had more years of education, better cognitive status, and more symptoms of substance abuse and depression, compared with patients who did not initiate treatment. In logistic regression analysis, CAGE and MMSE scores independently predicted treatment initiation. Findings contribute to the understanding of how clinical characteristics of older adults affect substance abuse treatment initiation.

Substance Abuse Treatment Initiation among Older Adults in the GET SMART

Program: Effects of Depression and Cognitive Status

Introduction

Older adults who begin alcohol and drug treatment have an encouraging

prognosis. However, facilitating treatment initiation of older adults presents unique

challenges. Few studies have examined the process whereby older adults in need of

services are identified, screened, and begin treatment. In this article, we outline reasons to

increase treatment initiation rates, and we summarize recent findings on treatment

seeking behaviors and treatment initiation among older adults. The study presents data

obtained from clinical records in an older adult substance abuse program, to examine how

demographic factors, alcohol problems, depression and cognitive status may be

associated with treatment initiation. Results are discussed in light of clinical

recommendations to help maximize treatment initiation among older adults.

Need for Treatment

The prevalence of alcohol abuse and dependence among older adults is

approximately 1 to 3% in samples of adults over the age of 60 in community settings, and

considerably higher in clinical samples, up to 20% of males in medical settings (Bucholz,

Sheline & Helzer, 1995; Curtis, 1989). As the population of older adults increases over

the coming decades, an increasing number of individuals will be affected (Gfroerer et al.,

2003). Adverse physical and mental health effects of excessive alcohol use are

substantial, including cognitive impairment, delirium, risk for dementia, medication

interactions, increased risk of falls, social isolation, legal and financial problems, and

depression (Liberto, Oslin & Ruskin, 1992; Oslin, 2000; National Institute on Alcohol Abuse and Alcoholism, 2000).

Studies indicate that older adults benefit from formal substance abuse treatment. Older adults stay in treatment longer, and have outcomes at least as favorable as younger adults in mixed-age programs (Atkinson, Tolson & Turner, 1993; Satre, Mertens, Areán & Weisner, 2003). Older patients may gain additional treatment benefits from elder-specific programs (Blow et al., 2000). Unfortunately, many older adults who could benefit from services appear to encounter treatment initiation and access barriers. One study that surveyed several VA treatment programs found that treatment entry rates among medically ill middle-aged and older adults was only 10 to 15% (Stephan, Swindle & Moos, 1992). These low rates suggest that many older adults are not receiving the treatment that they need.

Factors Influencing Treatment Initiation.

The behavioral model of health service use is a theoretical framework for understanding patient characteristics that influence willingness to initiate substance abuse treatment (Andersen & Newman, 1973). This model proposes three categories of variables predicting treatment-seeking behavior. Predisposing factors include demographics, which are hypothesized to represent familiarity with the healthcare system or inclination to use services. Need factors include problem severity, consequences, and perception of the need for help. Facilitating factors include areas such as social support, resources, contact with treatment staff, and availability of treatment. The present study examines key aspects of this model, with a focus on individual patient characteristics.

Previous studies have not examined patient factors associated with treatment initiation in substance abuse programs specifically designed for older patients. Studies of younger adults have found that single or divorced individuals were more likely to have received treatment than married individuals; previous treatment was also associated with getting into treatment again, depression and more severe consequences (Hingson et al., 1980; Weisner, 1993). Studies of older adults have also found an effect for being single and having more severe alcohol problems (Brennan & Moos, 1991; Gomberg, 1995). Brennan and Moos (1991) also found that depression was associated with higher rates of past alcohol treatment in older adults.

The current investigation is a follow-up of an analysis of treatment seeking behavior. Our initial study examined clinical records of 855 medical inpatients from the "GET SMART" program, a screening and treatment program for male veterans over age 55. Participants ranged in age from 55 to 91, with a mean age of 69 years (sd = 7). We found that with increasing age, both treatment interest at the time of screening and attendance at a pre-treatment evaluation declined (Satre, Knight, Dickson-Fuhrmann & Jarvik, 2003). Expressed interest in treatment and later attendance at a pre-treatment evaluation were associated with being younger and unmarried, and with having a higher CAGE alcohol screening score. History of using drugs in addition to alcohol was associated with treatment interest, but not evaluation attendance. The age effect in this study was striking: Patients that declined treatment had a mean age of 70, versus a mean age of 65 for those who expressed interest in treatment at the time of screening. In seeking to explain this age effect, we examined factors associated with age as well as treatment seeking in structural equation models. We found that fewer alcohol problems as

measured by the CAGE, not using of drugs in addition to alcohol, and being married partially mediated the effects of age on treatment seeking. However, even after these variables were statistically controlled, there was still a negative effect of greater age on treatment seeking.

In the follow-up study presented here, patients were followed to the point of treatment initiation. The analysis compared those who attended at least one session of group treatment to those who did not, to see how the groups were different. Factors analyzed correspond to predisposing, need, and facilitating components of the behavioral model. In addition to demographic measures (predisposing factors) and substance abuse symptoms (treatment need indicators), we examined symptoms of depression and cognitive impairment, which are particularly prevalent in older medical patients. Because greater age was negatively associated with participating in the evaluation, we expected a smaller age effect on treatment initiation (many of the oldest patients having dropped out earlier in the treatment entry process). We hypothesized that symptoms of depression would be higher among older patients that initiated treatment, since distress may motivate treatment initiation (an additional need indicator). On the other hand, we expected that cognitive status (a facilitating factor) would be better among those who initiated treatment.

We also hypothesized relationships between predictors, in a mediational model (See Figure 1). We expected that an age effect on treatment initiation, if found, would be mediated by lower number of alcohol problems and worse cognitive status. We also expected that the effect of number of alcohol problems on treatment initiation would be mediated by higher distress, such that the distress associated with alcohol problems,

rather than number of problems per se, would predict treatment initiation. This follow-up study enabled us to test the role of these potentially important variables, in a more fully elaborated model of treatment seeking behavior among older adults.

Methods

Sample.

The sample included 250 male veterans over age 55 who had previously completed screening measures during inpatient medical treatment. Patients had scored 1 or higher on the CAGE, and had also attended pre-treatment evaluation. This sample represents a segment of the population with multiple social problems, consisting of low-income, urban older adults, including a large percentage of individuals with multiple substance abuse problems, high psychiatric comorbidity, and homelessness. For example, 28% of the initial screening sample reported a history of using drugs in addition to alcohol (Satre, Knight et al., 2003).

Measures.

The current analysis examines demographic measures (age, education, ethnicity, and marital status), as well as the CAGE, administered at the time of screening. The CAGE (Ewing, 1984) questionnaire is a widely used, 4-item screening instrument that identifies lifetime alcohol problems, and has been validated for use with many different populations, including older adults (Buchsbaum et al., 1992; Hinkin et al., 2001).

Further measures were administered to a subset of the sample that completed a pre-treatment evaluation: The Michigan Alcohol Screening Test-Geriatric Version (MAST-G, Blow et. al., 1992) is a 24-item instrument designed to detect alcohol abuse among older adults. It is a self-report measure of symptoms, asking respondents to

answer true or false to each symptom listed. The MAST-G has a sensitivity of 94% and specificity of 78% in detecting alcohol dependence in older adults, based on analysis of the instrument in a sample of 305 older adults with widely varying levels of drinking, and has also shown adequate reliability (Blow et al., 1992).

The Hamilton Rating Scale for Depression (HAM-D, Hamilton, 1960) is a clinical rating scale assessing severity of depression, consisting of 21 items that are each rated in terms of severity. Somatic symptoms, mood, suicidality and apparent insight items are included, severity of which is rated by an interviewer, based on the presence of specific symptoms. The HAM-D has had good inter-rater reliability when used with older adults ($\underline{r}$ = .92) (Beck et al., 1999). The HAM-D has reliability of .73 (Cronbach's alpha, Riskind, Beck, Brown, & Steer, 1987).

The Mini Mental State Exam (MMSE, Folstein et al., 1975) is a widely used dementia screening instrument. This 30-point scale includes brief measures of orientation, attention and concentration, memory, language and executive control. The MMSE was used as a predictor of treatment entry for those participants who were not so impaired that they were eliminated from the study (MMSE score less than 18). Reliability for the MMSE has been estimated at .89 (Folstein et al., 1975). Treatment initiation, the dependent variable in this study, was considered to have occurred if patient records indicated that the patient showed up for at least one session of group psychotherapy.

Procedures.

The GET SMART program (Geriatric Evaluation Team: Substance Misuse/Abuse Recognition and Treatment) is a targeted screening program designed specifically for older medical inpatients in the Greater Los Angeles VA Health Care System (Satre,

Knight et al., 2003; Schonfeld et al., 2000). VA physicians were asked to refer all older inpatients under their care, suspected of having current problems either with substance abuse or misuse of their medications (including non-psychotropic medications), for screening by GET SMART. All patients in the GET SMART program were initially screened during inpatient medical treatment between 1991 and 1999. All patients were offered group psychotherapy with other older adults following discharge. Patients were asked to visit clinical staff one or more times to complete pre-treatment evaluation measures prior to beginning treatment, following their discharge from the hospital. In the analyses presented here, we used a minimum CAGE score of 1 for inclusion, to indicate a possible substance abuse problem (Buchsbaum et al., 1992). Of the patients who scored 1 or higher on the CAGE during screening, 250 participated in pre-treatment evaluation (Satre, Knight et al., 2003). All individuals who completed this further screening process were offered treatment in either an unstructured support group or a cognitive behavioral treatment group (group assignment was not random, but was based on space availability in the groups and clinical judgment of the treatment staff). A consistent, clinically appropriate effort was made by staff to encourage all patients to initiate treatment. About 50% began treatment (n = 124), while the remainder dropped out or lost contact with hospital staff, and did not enter treatment at that time (n = 126).

Clinical staff who conducted pre-treatment evaluations consisted of a geriatric psychiatrist, a registered nurse with a Ph.D. in psychology, and a clinical psychology intern, each of whom received extensive training in the assessment measures used. However, patient records of measures completed during evaluation vary in completeness. This was partially due to variations in staffing levels and clinical practice during the eight

years of the GET SMART program. In addition, the sample examined in this study was a

particularly difficult one to track, due to inconsistent presence at the VA hospital, along

with multiple social problems. This resulted in relatively small sample size for the

individual clinical measures. Measures at screening are complete for CAGE and

demographics (n = 250). Instruments administered to a subset of the sample include the

MAST- G (n = 160), The Folstein MMSE (n = 92), and the HAM-D (n = 81). To

determine whether these sub-samples were representative of the program's patients in

general, differences between those who completed all the measures (n = 70) and those

who completed only some of them (n = 180) were explored. Results found no significant

differences in age, marital status, race or CAGE score between those who completed the

all evaluation measures and those who did not. Therefore, the sub-sample that completed

the measures during evaluation was considered representative of the evaluation sample as

a whole, for the purpose of these analyses.

<u>Analyses</u>

        In addition to demographic and alcohol problem measures, we report descriptive

statistics for depression and mental status in the sample. Mean scores of those who

initiated treatment and those who did not initiate treatment were compared on age,

education, CAGE, MAST-G, and HAM-D, using t-tests. Group differences in ethnicity

and marital status were tested using chi-square. Independent effects of these variables on

treatment initiation were then tested using logistic regression analysis. We examined

relationships between these predictor variables, with path analysis using multiple

regression and logistic regression (Figure 1). Approval for analysis of patient data was

obtained from the Human Subjects Committee of the VA Greater Los Angeles Health

Care System.

<div align="center">Results</div>

Screening variables. The sample included 250 patients. Mean age of the sample

was 66.0 (6.0) years. Mean years of education was 11.9 (3.1), with 4% missing data.

Years of education was negatively correlated with age, r = -.28, p < .001. The saple was

51% white, 40% black, 7 % Hispanic, and 2% other ethnicity. Patients were 22%

married, 14% widowed, 6% separated, 45% divorced, and 10% never married, with 3%

missing data. CAGE score at time of screening ranged from 1 to 4, with a mean of 2.8

(1.1).

MAST-G. Scores on the MAST-G (n = 160) ranged from 0 to 24, with a mean

score of 10.86 (6.77). A score of 5 or higher on the MAST-G is considered indicative of a

likely alcohol problem. MAST-G score was significantly correlated with CAGE score, r

= .43, p < .001.

Depression. HAM-D (n = 81) scores ranged from 0 to 35, with a mean score of

9.61 (7.74). A score of 10 is considered indicative of at least mild depression among

older adults (Scogin, 1994). Depression was not associated with demographic measures,

but was associated with MAST-G, r = .38, p = .007.

Folstein MMSE. The Folstein MMSE was used as a dementia screening device (n

= 92). Two individuals, who scored 11 and 16, were eliminated from the analyses. With

those deletions, MMSE scores ranged from 18 to 30, among the 90 patients included,

with a mean score of 25.39 (3.15). This score is at the 14th percentile, for adults aged 65

to 79 with more than 9 years of education (Tombaugh et al., 1996). These results suggest

that the average individual being evaluated suffered from a mild degree of cognitive impairment. Greater age was associated with a lower score on the MMSE, r = -.34, p = .001. Years of education was associated with higher scores on the MMSE, r = .33, p = .002, a finding consistent with previous studies, (Magaziner, Bassett, & Hebel, 1987).

Association between MMSE score and CAGE score was not significant. However, higher scores on the MMSE were significantly associated with higher scores on the MAST-G, r = .37, p = .005. There was no significant relationship of MMSE scores to measures of depression.

Treatment initiation. Of the 250 individuals included in the analysis, 124 began treatment, while 126 did not. See Table 1 for results of comparison between these two groups. There was no significant difference in age between the two groups. Chi-square found no significant difference between African Americans and Whites in treatment initiation, and no difference by marital status. Education was higher among treatment initiators, with a mean of 12.41 (3.01) years, compared to 11.39 (3.04) years for non-initiators, t = 2.61, p = .010.

Those who initiated treatment scored higher on the CAGE, with a mean score of 3.06 (.93), compared to those who did not, 2.54 (1.18), t = 3.91, p < .001. Treatment initiators also scored significantly higher on the MAST-G, with a mean score of 12.23 (6.25), versus 9.01 (7.02) for non-initiators, t = 2.99, p = .003 (See Table 1).

Scores of those who initiated treatment were higher on the HAM-D, with a mean of 11.79 (7.52) for those who initiated, compared to 7.54 (7.42) for those who did not initiate, t = 2.56, p = .012 (see Table 1). These mean scores indicated that the average

person who initiated treatment met the cutoff for clinically significant depression, while

the average person who did not initiate did not meet cutoff (a score of 10, Scogin, 1994).

Those who initiated treatment scored higher on the Folstein MMSE, with a mean

score of 26.97 (2.87), compared to those who did not, who scored 24.11 (2.85), $\underline{t} = 4.45$,

$\underline{p} < .001$. The mean score of those who initiated lies at the 29th percentile, in the low

average range, while the score of those who did not initiate lies at the 9th percentile, in the

mildly impaired range (Tombaugh et al., 1996).

<u>Logistic regression analysis.</u>

In the logistic regression analysis, we examined variables that were significantly

different between treatment initiators and non-initiators, as well as the key demographic

variables of age and marital status. See Table 2 for correlation coefficients of variables

included in the model. Variables included in the model were age, education, marital

status, CAGE, MMSE and HAM-D (n = 70). Results of the logistic regression analysis

indicated that CAGE score and MMSE were the most important factors in predicting

treatment initiation (Table 3). Even in the small sample used in this analysis, the model

predicted treatment initiation reasonably well, $R^2 = .37$, X^2 (6, $\underline{N} = 70) = 32.14$, $\underline{p} < .001$.

<u>Path analysis.</u> Path analysis results are illustrated in Figure 1 (n = 70). Significant

pathways were found between age and CAGE score, and CAGE score and treatment

initiation, and MMSE score and treatment initiation. Greater number of years of

education was associated with higher MMSE score. Some of the other paths, such as the

one between age and MMSE score, and the one between CAGE and HAM-D score,

would most likely have been significant with a larger sample size (see Table 2). This

model highlights the importance of better cognitive status as a facilitating factor in

predicting treatment entry among older adults. Contrary to expectation, depression had no direct effect on treatment initiation, independent of its association with CAGE score.

Discussion

This study of clinical records of participants in the GET SMART program identified longitudinal predictors of alcohol and drug treatment initiation in a sample of older male medical patients. In contrast to prior studies, which have examined correlates of past treatment seeking, this study longitudinally examined factors associated with treatment initiation, in a clinical program specifically designed for older adults. Results have the potential to improve understanding of factors that motivate older adults to seek treatment, as well as barriers that may impede access to care.

Age effects on treatment initiation. In contrast to our previous results, which found age differences in treatment interest and treatment seeking, the current analysis found that treatment initiators were not significantly younger than other patients. This suggests that the negative effect of greater age on the process of treatment seeking occurred earlier, and that by the time of the pre-treatment evaluation, those older patients who were going to drop out had already done so.

Alcohol problem severity. Both higher CAGE score at time of screening, and higher MAST-G score at time of evaluation were associated with later treatment initiation. Results are consistent with the behavioral health service use model, as well as our previous findings that indicators of treatment need are strongly associated with treatment seeking behaviors in substance abuse samples (Andersen & Newman, 1973; Satre, Knight et al., 2003).

Depression. The finding that those who entered treatment scored higher on a measure of depression than those who did not enter treatment was consistent with results obtained by Brennan and Moos (1991), who found that problem drinkers who sought past treatment had higher depression scores. The current study found that depression level predicts future treatment initiation. However, since the effect of depression on treatment initiation was largely explained by CAGE score, it appeared that being depressed, on its own, did not substantially motivate treatment initiation.

Because of the association of alcohol problems and depression, and higher rates of depression among those in treatment, concurrent intervention to address both mood disorders and substance abuse are desirable. For example, depression has been identified as a precipitating factor in episodes of problem drinking among older males in treatment (Schonfeld & Dupree, 1991). Studies of younger adults have identified more severe craving for alcohol associated with greater depression among individuals in treatment (Velasquez, Carbonari, & DiClemente, 1999). This suggests that effective treatment for depression has the potential to help prevent relapse.

Cognitive status. Adequate cognitive functioning was proposed as a facilitating factor in treatment initiation for older adults, so it was hypothesized that those who entered treatment would score higher on the Folstein MMSE than those who did not. In addition to this mean group difference, we found that better cognitive status predicted treatment initiation independent of the effects of age, alcohol problem severity and education. This finding highlights an important concern in substance abuse treatment planning for older adults: how to make alcohol treatment accessible and effective in a population whose ability to participate in traditional forms of talk therapy may be

compromised by memory loss and other decrements in cognitive functioning. Because patients were in the low-average range on the MMSE for their age group, results suggest that modifications to treatment procedures may also be needed in order to accommodate older adults with reduced cognitive ability.

It is not known whether impaired older adults can benefit from group or individual psychotherapy for alcohol problem treatment. However, controlled studies have found that individuals diagnosed with Alzheimer's Disease may successfully be treated for depression (Teri, 1994; Teri et al., 1997). Results of these studies, which employed cognitive behavioral techniques, support the use of specifically tailored forms of psychotherapy for impaired individuals. Modifications to treatment for those with cognitive impairment include a slower pace of therapy, greater repetition of material covered in therapy, heavier weighting of behavioral as opposed to cognitive techniques, and involvement of family members in treatment (Knight & Satre, 1999; Teri & Gallagher-Thompson, 1991). The presence of cognitive impairment in the sample indicates that these modifications to therapy should be considered in order to maximize treatment effectiveness.

Additional clinical considerations in older adult treatment initiation. Several age-associated variables not examined in the current study are potentially important. Physical health problems may help motivate older adults to get into treatment, but may also impede access (Fortney et al., 1995). Developing ways to improve access to treatment for those older adults include making home visits, frequent phone calls, or providing transportation to accommodate older people who have physical health problems.

Stigma and misunderstandings about the nature of treatment are additional potential treatment barriers. Older adults may be more likely to view alcohol problems as a moral failing and cause for embarrassment. Stigma may be even greater among older women than among older men (Blow, 2000). Older adults in general are more likely to view mental health services as stigmatizing, and to have misconceptions about psychotherapy (Knight, Nordhus & Satre, 2003). Therefore, encouraging older adults to ask questions about treatment is important to incorporate into the screening and referral process.

Limitations. The analyses utilized clinical records of older male medical inpatients of low socioeconomic status, who were also veterans. This population is in particularly great need of substance abuse treatment, and has received limited study. However, results should be generalized to other older adult populations with caution. Incomplete clinical records of many patients used in this analysis, especially those records from pre-treatment evaluation, indicate the need for replication of the results. While those patients who completed all evaluation measures were considered representative of the sample as a whole, a more uniform clinical record base, using either complete records or random sampling, is desirable. Extent of patient interaction with providers, which was not measured in the current study, may also have influenced treatment initiation. Therefore, the present analyses should be considered preliminary, providing a foundation for future investigations.

Conclusion. This study examined predictors of substance abuse treatment initiation in a sample of older male medical patients, based on the behavioral health service use model. Patients who initiated treatment following evaluation had more years

of education, better cognitive status, more alcohol problems, and higher depression

scores, compared with patients who did not initiate treatment. Greater number of alcohol

problems and better cognitive functioning independently predicted treatment initiation. In

addition to replication of these findings, future investigations would do well to examine

other variables potentially impeding treatment access for older adults. These include the

role of physical health and accessibility, stigma, treatment history, drug use, and provider

factors in screening and treatment referral. Incorporation of these variables into

explanatory models will improve understanding of substance abuse treatment seeking

behavior among older adults.

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Table 1.

Demographics, Substance Abuse and Depression Symptoms, and Cognitive Status

Associated with Treatment Initiation in the GET SMART Program.

	Treatment Initiated	Treatment Not Initiated
Mean Age (n = 250)	65.79 (5.76)	66.13 (6.29)
Years Education** (n = 250)	12.41 (3.01)	10.39 (3.04)
Percent Married (n = 250)	23.4%	21.4%
CAGE Score*** (n = 250)	3.06 (.93)	2.54 (1.18)
MAST-G Score** (n = 160)	12.23 (6.25)	9.01 (7.02)
HAM-D Score* (n = 81)	11.57 (8.21)	6.91 (6.64)
MMSE Score*** (n = 90)	26.97 (2.87)	24.11 (2.85)

Notes: MMSE = Folstein Mini Mental State Exam. HAM-D = Hamilton Rating Scale for Depression. MAST-G = Michigan Alcohol Screening Test: Geriatric Version. *p < .05. **p < .01. ***p < .001.

Table 2.

Correlation of Age, Education, Alcohol Problems, Depression, and Mental Status

	Age	Education	CAGE	HAM-D	MMSE
Age					
Correlation	1.0				
Significance	.				
n	250				
Education					
Correlation	-.28***	1.00			
Significance	.000	.			
n	241	241			
CAGE					
Correlation	-.10	.03	1.0		
Significance	.127	.675	.		
n	250	241	250		
HAM-D					
Correlation	-.11	.08	.20	1.0	
Significance	.309	.507	.071	.	
n	81	77	81	81	
MMSE					
Correlation	-.34**	.33**	.14	.12	1.0
Significance	.001	.002	.186	.304	.
n	90	86	90	76	90

Notes: MMSE = Folstein Mini Mental State Exam. HAM-D = Hamilton Rating
Scale for Depression. **$p < .01$. ***$p < .001$.

Table 3.

Summary of Logistic Regression Analysis for Variables Predicting

Treatment Initiation (N = 70)

Variable	Odds ratio	95% CI
Age in years	0.96	(0.85, 1.08)
Married versus unmarried	0.60	(0.14, 2.62)
Education in years	1.21	(0.97, 1.50)
CAGE score***	2.49	(1.30, 4.80)
MMSE score**	1.33	(1.07, 1.65)
HAM-D score	1.06	(0.97, 1.14)

Notes: MMSE = Folstein Mini Mental State Exam. HAM-D = Hamilton Rating Scale for Depression. R^2 = .37, X^2 (6, N = 70) = 32.14, p < .001.
**p < .01. ***p < .001.

Figure 1. Path analysis for predictors of treatment initiation, showing standardized regression coefficients (N = 70).