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Socioeconomic, Psychosocial and Behavioral Characteristics of Patients Hospitalized With Cardiovascular Disease

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Abstract

Background—Recent studies have drawn attention to nonclinical factors to better understand disparities in the development, treatment and prognosis of patients with cardiovascular disease. However, there has been limited research describing the nonclinical characteristics of patients hospitalized for cardiovascular care.

Methods—Data for this study come from 520 patients admitted to the Duke Heart Center from January 1, 2015 through January 10, 2017. Electronic medical records and a standardized survey administered before discharge were used to ascertain detailed information on patients' demographic (age, sex, race, marital status and living arrangement), socioeconomic (education, employment and health insurance), psychosocial (health literacy, health self-efficacy, social support, stress and depressive symptoms) and behavioral (smoking, drinking and medication adherence) attributes.

Results—Study participants were of a median age of 65 years, predominantly male (61.4%), non-Hispanic white (67.1%), hospitalized for 5.11 days and comparable to all patients admitted during this period. Results from the survey showed significant heterogeneity among patients in their demographic, socioeconomic and behavioral characteristics. We also found that the patients' levels of psychosocial risks and resources were significantly associated with many of these nonclinical characteristics. Patients who were older, women, nonwhite and unmarried had generally lower levels of health literacy, self-efficacy and social support, and higher levels of stress and depressive symptoms than their counterparts.

Conclusions—Patients hospitalized with cardiovascular disease have diverse nonclinical profiles that have important implications for targeting interventions. A better understanding of

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these characteristics will enhance the personalized delivery of care and improve outcomes in vulnerable patient groups.

Key Indexing Terms

Cardiovascular disease; Hospitalization; Psychosocial factors; Socioeconomic status; Nonclinical factors

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of hospitalization in older adults, and high rates of rehospitalization have put enormous strain on the US healthcare system.[1–4] According to the American Heart Association (AHA), cardiovascular-related conditions cost the United States an estimated $316 billion in 2012—with more than $140 billion in hospital-related fees.[1] Considering the enormous human and financial costs of hospitalization for cardiovascular patients, there is now increasing interest in the spectrum of clinical and nonclinical characteristics of patients at potentially high-risk of hospitalization.[5–8] However, our understanding of the characteristics of patients outside of the hospital remains limited, and much of what we know is based on census-level data to approximate patients' background and social environment.[9–15] Consequently, there are surprisingly limited patient-reported data on the demographic, socioeconomic, psychosocial and behavioral characteristics of those admitted for cardiovascular care; much of the literature lacks integration.[8,16–18]

The purpose of this article is to provide a descriptive overview of the nonclinical characteristics of cardiac patients at Duke Heart Center. We build on previous research by documenting a wide array of demographic, socioeconomic, psychosocial and behavioral attributes of patients admitted to a large cardiovascular hospital in the United States. The current objectives are 3-fold: First, we compare the demographic and clinical characteristics of interviewed patients with all patients admitted during the study period. Second, we describe the key nonclinical measures ascertained from patients and report their observed distributions for participants in the study. Finally, we assess demographic, socioeconomic and behavioral differences in several important psychosocial attributes of hospitalized cardiovascular patients. We conclude with a discussion of the implications for future research and future efforts to tailor interventions to improve outcomes in vulnerable patient groups.

METHODS

Ethics Approval and Consent to Participate

The study was approved by the Institutional Review Board at Duke University Medical Center (Protocol ID: Pro00051237). Informed written consent was obtained from all participants included in the study.

Sample and Data Collection

The data for this study were derived from patients admitted for the treatment of cardiovascular-related conditions at Duke Heart Center in the Duke University Medical Center. Study participants were ≥age 18 upon admission and enrolled from January 1, 2015 through January 20, 2017. Patient data were collected from electronic medical records (EMR) and from a standardized survey. Patient EMRs were extracted using the Duke Enterprise Data Unified Content Explorer with support from Duke's Office of Clinical Research. A total of 5,387 patients were admitted during the study period and were eligible to participate in the study. Interviews from randomly selected patients were conducted before discharge using a standardized survey to ascertain detailed information on a range of individual characteristics—including socioeconomic background, psychosocial resources, health behaviors and health status. Details on subject selection, recruitment and survey administration have been documented elsewhere.[19] The final sample for this study included 520 patients for analysis. All subjects provided informed written consent to participate in the study, and the study was approved by the Institutional Review Board at Duke University Medical Center.

Measures

The survey questionnaire was developed to capture 4 patient-level domains, which are as follows: (1) demographic characteristics, (2) socioeconomic background, (3) psychosocial resources and (4) health-related behaviors. The questionnaire items were developed from existing sources that have been previously documented and validated.[20–25] Demographic characteristics included age, sex, race (white versus nonwhite), marital status (married versus not married) and living arrangement (lives alone versus not alone). Socioeconomic background included educational attainment (high school [H.S.] education or less versus more than H.S. education), employment status (currently employed, not employed or retired) and health insurance (no insurance, Medicaid only, Medicare or other source[s]).

Psychosocial attributes included health literacy, health self-efficacy, life stressors, social support and depressive symptoms. The measure for health literacy was based on a single-item screening question that has been validated in previous studies.[26–29] Participants were asked "how confident are you filling out forms by yourself?" and responses ranged from 0 = not at all confident to 3 = very confident. Health self-efficacy (i.e., control over one's health) was measured by the question: "keeping healthy depends on things that I can do myself.[30,31]" Responses were scored on a 5-point Likert scale and ranged from 0 = strongly disagree to 4 = strongly agree. Life stressors were measured by summing responses to the questions (1) "how often do you feel stress at home?," (2) "how often do you feel stress because of financial concerns?," and "how often do you feel stress because of your health?[32]" The scale ranged from 0-9 and had adequate to high internal consistency (Cronbach α = 0.65; McDonald's ω = 0.81).

Social support was measured by summing responses to the questions (1) "is there someone available to you whom you can count on to listen to you when you need to talk?," (2) "is there someone available to you to give you good advice about a problem?," (3) "is there someone available to you who shows you love and affection?," (4) "can you count on anyone to provide you with emotional support (talking over problems or helping make a difficult decision)?," and (5) "do you have as much contact as you would like with someone you feel close to, someone in whom you can trust and confide?[33,34]" The scale ranged from 0-20 and had high internal consistency (Cronbach α = 0.92; McDonald's ω = 0.94). Depressive symptoms were measured using the 8-item version of the Center for Epidemiologic Studies Depression Scale[35,36]—range: 0-24, Cronbach α = 0.79 and McDonald's ω = 0.88.

Health-related behaviors included smoking history (never smoked, past smoker or current smoker), alcohol consumption (never drinks, drinks moderately or drinks heavily) and medication adherence. The measure for medication adherence was based on the question: "in the past year, how often have you not taken a medication that your doctor prescribed because of cost, side-effects or any other reason?" Based on prior research, we dichotomized the responses as *rarely* or *never* to categorize patients who adhere to their medications and the responses *always*, *frequently* and *occasionally* were used to categorize patients who do not adhere.[32] Finally, the length of stay (in days) and several prevalent clinical diagnoses were ascertained from the patients' EMRs. Disease diagnoses included acute myocardial infarction (ICD-9: 410; ICD-10: I21), atrial fibrillation (ICD-9: 427.31; ICD-10: I48), heart failure (ICD-9: 398.91, 428; ICD-10: I50), hypertension (ICD-9: 401; ICD-10: I10) and diabetes (ICD-9: 250; ICD-10: E10, E11).

Preliminary analyses assessed alternative coding strategies for the categorical variables (e.g., different cut-points, categories and reference groups) and continuous variables (e.g., logged, polynomial and grouped-ordinal scales) and were based on distributional and substantive considerations.

Analysis

We began by comparing the demographic and clinical characteristics of interviewed patients with all patients admitted during the study period. Next, univariate distributions of the categorical, ordinal and interval measures from the patient interviews were computed for the participating subjects. Finally, we describe demographic, socioeconomic and behavioral differences in several important psychosocial attributes of the hospitalized cardiovascular patients. Supplementary descriptions are also provided for demographic differences in the patients' socioeconomic background and health behaviors (Supplemental Tables 1 and 2). Tests of differences were calculated using Wilcoxon (Mann-Whitney) and Kruskal-Wallis tests as appropriate. Differences were considered statistically significant at $P < 0.05$. Missing data were minimal across measures (≤3%) and omitted in bivariate comparisons. All analyses were conducted using Stata 14.2.

RESULTS

Table 1 presents the comparison of hospitalized patients enrolled in the study with all patients admitted during the study period at Duke Heart Center. Based on EMR data, we found that the 2 patient groups had similar demographic and clinical profiles. Patients enrolled in the study had a median age of 65 years (interquartile range = 19) and were predominantly males (61.1%), non–Hispanic white (64.6%) and married (53.1%). The major diagnoses of diseases in patients included acute myocardial infarction (11.4%), atrial fibrillation (30.3%), heart failure (34.0%), hypertension (50.1%) and diabetes (28.1%). The demographic and disease profile of patients were not significantly different between eligible and enrolled subjects. However, patients enrolled in the study had a slightly longer median hospital stay than all patients admitted during the study period (5.1 versus 4.0 days, respectively; $P < 0.001$).

The overall distributions of the patient characteristics ascertained from the survey are presented in Table 2. Results show that large percentages of admitted patients were not married (46.9%), lived alone (27.2%), had an H.S. education or less (38.5%) and were not employed (26.9%). Although most patients were Medicare beneficiaries (64.9%), some had no health insurance (2.0%) or only Medicaid coverage (5.3%). Most patients had a history of smoking, with nearly half who quit smoking (48.8%) and 10.4% who currently smoke. Most patients reported no alcohol consumption (61.4%), and very few reported heavy consumption (1.4%). More than 1-in-5 patients (20.9%) reported not taking their prescribed medication in the past year.

Differences in levels of psychosocial factors varied across patients. In terms of demographic background (Table 3), we found that the levels of health literacy were significantly lower in patients who were older ($P = 0.008$), nonwhite ($P = 0.004$), not married ($P = 0.018$) and lived alone ($P = 0.029$). Married patients reported the highest levels of social support (17.6), and patients who lived alone reported the lowest levels of support (14.9). We also found that levels of stress were significantly higher in patients who were younger ($P < 0.001$), female ($P < 0.001$), nonwhite ($P = 0.017$) and not married ($P = 0.005$). Relatedly, married patients reported the fewest depressive symptoms (6.9), and patients who lived alone reported the most depressive symptoms (8.6). We found no significant differences in the patients' levels of self-efficacy related to their demographic characteristics.

In terms of socioeconomic background (Table 4), we found that the levels of health literacy were significantly lower in patients with H.S. or less education ($P < 0.001$), not currently working ($P < 0.001$) and not insured ($P = 0.001$). Similarly, self-efficacy was lowest in patients with low educational attainment and lack of health insurance. Not being employed was associated with significantly lower levels of social support ($P = 0.009$) and higher levels of stress ($P < 0.001$) and depressive symptoms ($P < 0.001$) than being employed. Patients without health insurance had the lowest levels of health literacy and self-efficacy relative to patients with any source of insurance, and patients with only Medicaid coverage had the highest levels of stress and depression relative to patients with other sources of health insurance.

Table 5 presents differences in the levels of psycho-social attributes according to the patients' health behaviors. We found that patients who currently smoked had the lowest levels of self-efficacy ($P = 0.025$) and the highest levels of stress ($P = 0.032$). Although heavy alcohol consumption was uncommon in patients, it was associated with nearly double the level of depressive symptoms (13.0) relative to moderate alcohol consumption (7.2). Patients who reported nonadherence to their prescribed medications had the lowest levels of health literacy ($P < 0.001$) and among the highest levels of stress ($P < 0.001$) and depressive symptoms ($P = 0.002$) compared with patients who adhere to their medication regimen.

DISCUSSION

In 2015, the AHA released a scientific statement calling for greater attention to the social determinants of CVD.[5] The current study responds to this call by documenting a wide array of socioeconomic, psychosocial and behavioral attributes of patients admitted to a large cardiovascular hospital in the United States. Based on results from a survey of randomly selected patients at Duke Heart Center, we found significant heterogeneity among cardiovascular patients in their levels of psycho-social risks and resources. These findings provide valuable new insights into the broader (nonclinical) characteristics of cardiovascular patients who have wide implications for developing tailored interventions to improve outcomes.

A large body of literature has provided direct or indirect evidence of various nonclinical characteristics of patients with CVD. However, this research has remained largely fragmented and unintegrated. For example, the age, sex, ethnic and racial characteristics of cardiovascular patients have been widely reported in clinical research.[1,37–39] Numerous studies have also demonstrated that married adults have significantly lower rates of CVD and generally live longer with the disease than those who are not married.[40–42] In terms of socioeconomic background, studies have shown that adults with higher levels of socioeconomic status (i.e., more education and income) have lower rates of cardiovascular illness and better health outcomes than adults with lower levels of socioeconomic status.[11,43,44] Studies of psychosocial factors have been more limited; however, research has shown that adults who are depressed or lack social support are more likely to have CVD and experience adverse outcomes than adults with more favorable psychosocial attributes.[45–48] There also has been evidence to suggest that cardiovascular patients with depression or low levels of support or both have poorer overall disease management.[49,50] Similarly, behavioral factors—such as smoking (cessation) and medication adherence—have been widely documented among cardiovascular patients and are strong correlates of overall cardiovascular health and disease management.[51–53]

We build on existing evidence by concurrently documenting a wide range of nonclinical characteristics of cardiovascular patients. In our study, we found that nearly 40% of patients hospitalized with CVD had limited educational attainment (H.S. or less), more than a quarter were currently unemployed, and approximately 7% had either no health insurance or only Medicaid coverage. We further found that the socioeconomic background of patients was strongly correlated with their psychosocial characteristics. For example, patients with H.S. or less education had significantly lower levels of health literacy and self-efficacy toward their health. This suggests that screening for educational level may be useful to identify patients who may benefit from interventions (e.g., coaching) that improve health knowledge and facilitate one's agency toward the self-management of disease. We also found that patients who were not employed had significantly higher levels of stress and depressive symptoms than patients who were currently employed or retired. These psychosocial risks were similar (and even more pronounced) in patients with no health insurance or only

Medicaid coverage. Healthcare providers with greater awareness of patients who lack employment (or adequate health insurance) may further screen and treat excess stress and depression in these patients, which in turn, may benefit their overall management of CVD.

Our study showed that nearly half of the patients were not married, and nearly one-third of patients lived alone. We also found that these patients (who were more socially isolated) had significantly fewer psychosocial resources and more psychosocial distress than those with more social ties. For example, unmarried patients had significantly lower levels of social support and health literacy than patients who were married. Patients without a spouse also reported more life stressors and more depressive symptoms than their married counterparts. The patterns were similar for those who lived alone. These findings suggest that patients who live in more socially isolated households may benefit from resources targeted to improve their social support, depressive mood and health literacy. Interventions such as group therapy or motivational interviewing may be effective approaches to address these intersecting issues to enhance treatments efforts.[5,54–58]

We found that more than 1-in-5 patients reported not taking their prescribed medication (always, frequently or occasionally) in the past year. Supplementary Table 2 showed that rates of nonadherence were particularly high among patients under age 65 (26%), women (27%), non-whites (33%) and those who were not married or lived alone (25% and 24%, respectively). Results also showed that the patients who reported nonadherence were significantly more likely to have higher levels of stress, more depressive symptoms and less health literacy than patients who took their prescribed medication regularly. These findings suggest that efforts to improve medication adherence should involve recognition of the patients' demographic background; as well as screening patients for their levels of stress, depression, or health literacy, or all of these that may be contributing to demographic differences in the (non)use of medications. In doing so, clinicians will have a more comprehensive understanding of the most appropriate intervention(s) for patients who may be susceptible to not taking their medications.

There are several limitations of the study that should be acknowledged. First, we recognize that the findings are limited to patients admitted for cardiac care at Duke Heart Center, and we recognize that patient characteristics may differ across geographic location and type of facility (community hospital, tertiary-care center, etc.). Therefore, the generalizability of these results will require further research. Second, the survey does not include an exhaustive list of nonclinical attributes and cannot fully characterize the patients' background, resources, or risks, or all of these. Rather, the survey captures a broad range of previously identified factors as an important step toward quantifying major components of patients' nonclinical attributes—for example, their education, living arrangement, health literacy and social support. This information is vital to developing "real world" profiles of patients with CVD who may be most vulnerable during periods of transitional care. Additional research is needed to build on the findings presented here and to further identify and refine such factors.

Finally, we recognize that not all socioeconomic, psychosocial and behavioral factors are modifiable or amenable to medical intervention. We also recognize that increased efforts to screen for nonclinical factors may require additional resources to support clinicians and their patients who screen positive. For example, recent AHA guidelines recommend screening for depression in patients with CVD and to ensure that there are adequate resources to refer patients for appropriate treatment and follow-up care when needed.[59,60] However, the results of this analysis demonstrate the importance of identifying nonclinical patient characteristics —and how they constellate—to provide actionable knowledge that can be used to devise effective approaches to treatment and care.[5–7,61]

The purpose of the current article was to present a descriptive overview of the nonclinical characteristics of patients hospitalized with CVD. The results from this study will lay the groundwork for future studies that have the potential to assist in clinical decision-making, improve transitions of care and improve the lives of those with CVD. We also encourage studies to assess how these factors may be directly associated with differences in patient outcomes—such as length of hospital stay, in-hospital mortality and 30-day readmission. For clinicians, a greater understanding of their patient's background risks and resources will allow them to better identify and tailor treatment strategies to maximize their effectiveness in vulnerable populations. For patients, a greater understanding of their nonclinical risks will facilitate conversations with their providers to discuss realistic treatment strategies and personalize their care for optimal outcomes.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.amjms.2017.07.011.

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TABLE 1

Comparison of enrolled patients with all patients admitted during the study period at Duke Heart Center.

	All patients (*n* = 5,387)	**Enrolled patients (*n* = 520)**	***P* Value**
Demographic characteristics			
Age, median (IQR)	66 (21)	65 (19)	0.098
Male	4,032 (58.60)	318 (61.15)	0.255
White	4,296 (62.85)	336 (64.62)	0.422
Married	3,722 (54.10)	276 (53.08)	0.652
Clinical characteristics			
Cardiovascular diagnoses			
Acute MI	992 (14.42)	58 (11.39)	0.059
Atrial fibrillation	1,949 (28.33)	154 (30.26)	0.353
Heart failure	2,059 (29.93)	173 (33.99)	0.054
Comorbid diagnoses			
Hypertension	3,489 (50.71)	255 (50.10)	0.789
Diabetes	2,049 (29.78)	143 (28.09)	0.421
Length of stay, median (IQR)	4.02 (4.34)	5.11 (6.88)	<0.001

Note: Values reported as number (percentages) unless noted otherwise. Distributions were ascertained from patients' EMRs and include all encounters (*n* = 6,880) from the 5,387 total patients admitted during this period. IQR, interquartile range; MI, myocardial infarction.

TABLE 2

Characteristics of study participants admitted at Duke Heart Center (*n* = 520).

		Missing
Demographic characteristics		
Age, median (IQR)	66 (19)	
Male	318 (61.15)	
White	336 (64.62)	
Married	276 (53.08)	
Lives alone	139 (27.15)	8 (1.54)
Socioeconomic characteristics		
H.S. or less education	198 (38.45)	5 (0.96)
Employment status		6 (1.15)
Currently employed	104 (20.23)	
Not employed	138 (26.85)	
Retired	272 (52.92)	
Health insurance		7 (1.35)
No insurance	10 (1.95)	
Medicaid only	27 (5.26)	
Medicare	333 (64.91)	
Other source(s)	143 (27.88)	
Psychosocial characteristics, mean (SD)		
Health literacy (0-3)	2.26 (0.72)	3 (0.58)
Health self-efficacy (0-4)	3.23 (0.74)	3 (0.58)
Social support (0-20)	16.55 (4.00)	9 (1.73)
Life stressors (0-12)	3.07 (2.07)	13 (2.50)
CES-D symptoms (0-24)	7.60 (4.51)	16 (3.08)
Health-related behaviors		
Smoking history		10 (1.92)
Never smoked	208 (40.78)	
Past smoker	249 (48.82)	
Current smoker	53 (10.39)	
Alcohol consumption		5 (0.96)
Never drinks	316 (61.36)	
Moderate consumption	192 (37.28)	
Heavy consumption	7 (1.36)	
Nonadherence to medication	105 (20.92)	18 (3.46)

Note: Values reported as number (percentages) unless noted otherwise. ADL, activities of daily living; CES-D, Center for Epidemiological Studies Depression scale; IQR, interquartile range; SD, standard deviation.

TABLE 3

Psychosocial characteristics by demographic background of study participants admitted at Duke Heart Center.[a]

	Health literacy (0-3)	Health self-efficacy (0-4)	Social support (0-20)	Life stressors (0-12)	CES-D symptoms (0-24)
Age (years)					
<65	2.36	3.26	16.59	3.66	8.20
≥65	2.18	3.20	16.51	2.56	7.09
n	517	517	511	507	504
P value	0.008	0.227	0.478	<0.001	0.010
Sex					
Male	2.29	3.21	16.32	2.82	7.28
Female	2.22	3.26	16.90	3.46	8.09
n	517	517	511	507	504
P value	0.201	0.476	0.659	<0.001	0.069
Race					
White	2.33	3.25	16.66	2.89	7.39
Nonwhite	2.14	3.18	16.34	3.45	8.02
n	517	517	511	507	504
P value	0.004	0.506	0.274	0.017	0.157
Marital status					
Married	2.34	3.27	17.57	2.81	6.88
Not married	2.18	3.18	15.40	3.37	8.42
n	517	517	511	507	504
P value	0.018	0.081	<0.001	0.005	<0.001
Living arrangement					
Lives alone	2.16	3.14	14.87	3.15	8.61
Does not live alone	2.31	3.26	17.20	3.04	7.20
n	511	510	505	501	498
P value	0.029	0.167	<0.001	0.564	<0.001

Note: *P* values calculated using Wilcoxon (Mann-Whitney) tests. CES-D, Center for Epidemiological Studies Depression scale.

[a] Ranges for the psychosocial measures are provided in parentheses.

TABLE 4

Psychosocial characteristics by socioeconomic background of study participants admitted at Duke Heart Center[a].

	Health literacy (0-3)	Health Self-efficacy (0-4)	Social support (0-20)	Life stressors (0-12)	CES-D symptoms (0-24)
Educational attainment					
H.S. or less education	1.97	3.14	16.52	3.06	7.75
More than H.S. education	2.45	3.28	16.56	3.08	7.52
n	514	513	508	504	501
P value	<0.001	0.002	0.761	0.841	0.558
Employment status					
Currently employed	2.54	3.38	17.50	2.94	6.78
Not employed	2.20	3.19	16.46	4.23	9.18
Retired	2.18	3.18	16.23	2.55	7.13
n	512	511	506	501	499
P value	<0.001	0.090	0.009	<0.001	<0.001
Health insurance					
No insurance	1.90	2.90	17.56	3.50	10.30
Medicaid only	2.33	3.33	14.85	4.50	10.73
Medicare	2.19	3.19	16.47	2.86	7.44
Other source(s)	2.44	3.33	17.07	3.19	7.18
n	510	510	504	500	497
P value	0.001	0.042	0.227	0.009	0.002

Note: *P* values calculated using Wilcoxon (Mann-Whitney) and Kruskal-Wallis tests as appropriate. CES-D, Center for Epidemiological Studies Depression scale.

[a] Ranges for the psychosocial measures are provided in parentheses.

TABLE 5

Psychosocial characteristics by behavioral characteristics of study participants admitted at Duke Heart Center[a].

	Health literacy (0-3)	**Health Self-efficacy (0-4)**	**Social support (0-20)**	**Life stressors (0-12)**	**CES-D symptoms (0-24)**
Smoking history					
Never smoked	2.22	3.30	16.76	3.13	7.49
Past smoker	2.30	3.19	16.57	2.89	7.58
Current smoker	2.23	3.08	15.57	3.69	8.57
n	509	508	504	499	496
P value	0.325	0.025	0.054	0.032	0.196
Alcohol consumption					
Never drinks	2.24	3.22	16.70	3.13	7.72
Moderate consumption	2.31	3.23	16.30	2.94	7.22
Heavy consumption	2.14	3.29	16.17	4.14	13.00
n	514	513	508	504	501
P value	0.280	0.979	0.452	0.227	0.006
Adherence to medication					
Adheres to medication	2.34	3.23	16.65	2.92	7.27
Does not adhere	2.00	3.22	16.25	3.77	8.83
n	501	500	496	491	489
P value	<0.001	0.705	0.474	<0.001	0.002

Note: *P* values calculated using Wilcoxon (Mann-Whitney) and Kruskal-Wallis tests as appropriate. CES-D, Center for Epidemiological Studies Depression scale.

[a] Ranges for the psychosocial measures are provided in parentheses.