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Marital Status and Highest-Grade Achieved: Contribution to Alcohol Screening Scores in Male Veterans

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Marital Status and Highest-Grade Achieved: Contribution to Alcohol Screening Scores in Male

Veterans

AN HONORS THESIS

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In Partial Fulfillment of the Requirements for Distinction

in the Department of Nursing

by

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St. Cloud VAHCS

Signature Page

PROJECT TITLE: Marital Status and Highest-Grade Achieved: Contribution to Alcohol Screening Scores in Male Veterans

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Abstract

Project Title: Marital Status and Highest-Grade Achieved: Contribution to Alcohol Screening Scores in Male Veterans

Background: Alcohol is frequently used among active military groups and veterans. There is no research regarding the effects of marital status and highest grade achieved on AUDIT-C screening scores for older male veterans.

Objective: This study aims to determine whether marital status or highest grade achieved significantly impacts AUDIT-C screening scores for older male veterans.

Method: This study used existing medical record data from the VAHS-St. Cloud. IRB approval through the VAHS provided protection of human subjects. Data were analyzed with Chi-square tests.

Results: Marital status did not produce statistically significant impacts on the AUDIT-C screening scores for older male veterans. Small sample size and missing data may have contributed to the lack of statistical significance between highest-grade achieved and AUDIT-C screening scores. Recommendations include regular AUDIT-C screening and the addition of demographic factors relevant to health (e.g. education level) in the health record.

Marital Status and Highest-Grade Achieved: Contribution to Alcohol Screening Scores in Male

Veterans

Introduction

Alcohol consumption occurs in society as a means to celebrate, relax, or self-medicate. A

problem occurs when alcohol is consumed too frequently or in large quantities. Heavy drinking,

a form of excessive alcohol consumption includes greater than 15 drinks per week, on average,

for a male and greater than eight drinks per week, on average, for a female. Binge drinking,

another form of excessive alcohol consumption, is defined as five or more drinks on one

occasion for a male and four or more drinks on one occasion for a female. Each year in the

United States, 88,000 deaths occur from excessive alcohol use (Centers for Disease Control and

Prevention (CDC, 2014). There are various risk factors associated with excessive alcohol

consumption including "reduced inhibitions, slurred speech, motor impairment, confusion,

memory/concentration problems, coma, and death" (National Institute of Alcohol Abuse and

Alcoholism (NIAAA, 2013, para 7). These risk factors associated with excessive alcohol

consumption contribute to its status as the third leading cause of lifestyle-related death in the

United States (CDC, 2014).

Two population groups in U.S. society with high rates of excessive alcohol consumption

are active military personnel and veterans. According to the National Council on Alcoholism and

Drug Dependence (NCADD), alcohol consumption by active military and veterans is a principal

health problem in the United States (2013). In regards to active military personnel, "one in eight

troops returning from Iraq and Afghanistan from 2006 to 2008 were referred for counseling for

alcohol problems" (NCADD, 2013, para. 5). Furthermore, in the National Household Survey on

Drug Abuse, seven percent of male veterans reported heavy drinking and 23 percent reported

binge drinking. As a comparison, two percent of females veterans reported heavy drinking and 14 percent reported binge drinking (NCADD, 2013). While there is significant data collected on young and middle aged veterans, little information exists on veterans 65 and older. This study examines the relationship between marital status and alcohol use among veterans older than 65 years of age and the relationship between highest-grade achieved and alcohol use among veterans older than 65 years of age.

Literature Review

There is limited research about the use of alcohol in older adult veterans and non-existent research regarding the direct relationship between marital status, highest-grade achieved, and alcohol use in veterans. Current research focuses on active duty military personnel because of the war in the Middle East. It is vital researchers focus not only on those who are currently fighting but also older veterans. Older veterans can provide researchers with information about the long-term consequences of war including the detrimental effects that may occur (and/or continue) much later in a veteran's life concerning alcohol abuse.

It is important to concentrate on older veterans because of the significant effects excessive alcohol consumption has on an elderly body. According to the 2011 *National Survey on Drug Use and Health*, 40.3 percent of adults' ages 65 and older drink alcohol (2012). This can cause a variety of complications because of the changes in body composition in older adults and can be complicated by an increase in medication use. Weathermon and Crabb (1999) found that alcohol interferes with the metabolism of medications because the liver detoxifies most medications and alcohol. In addition, alcohol may alter the effects of medications because of potential interactions in the nervous system. This can lead to harmful effects for older adults, such as an increase in sedation, if they are mixing medications with alcohol (Weathermon and

Crabb, 1999). Therefore, the NIAAA (2013) gives specific guidelines for those 65 years and

older that do not take any medications. They should limit themselves to three drinks on any one

day and less than seven drinks in one week. Those who do take medication must follow the

guidelines presented to them from their physician. It is crucial to study alcohol consumption in

the older population because of the many harmful effects it may cause to their bodies.

   Multiple research studies indicate that active military personnel and veterans ingest

excessive amounts of alcohol. Jacobson et. al. (2008) report that those in the Army Reserve,

National Guard, and younger military personal are at an increased risk of alcohol-related

problems. This links to the stressful events they encounter while they are in combat that stays

with them for the rest of their lives. Stahre, Brewer, Fonseca, and Naimi (2009) reported that

43.2% of active-duty military personnel surveyed had engaged in at least one episode of binge

drinking in the last 30 days. Of those who reported binge drinking in the last month, 25.2% were

older than 35. Age does not discriminate between military personnel who binge drink. Bohnert

et. al., (2012) found that veterans older than 61 were more likely to consume alcohol in the past

30 days than were non-veterans of the same age. They were also more likely to drink heavily.

Veterans between the ages of 61 and 70 were significantly more likely to recount binge drinking

than were non-veterans the same age. This research suggests that past military involvement may

lead to future or continued alcohol use.

   There is an increasing amount of data on alcohol use among veterans but information

related to older adult veterans, marital status, and highest-grade achieved in school was not

located. It is important to investigate this topic to inform current military personnel and health

care providers about their chances of using alcohol in a negative, uncontrolled, or self-

medicating way. This research is also important so physicians and other medical team members

can potentially use marital status and highest-grade achieved as risk factors for alcohol

dependence or possibly as an avenue to enhance treatment success. For instance, couples

counseling can be suggested if the marital relationship is strong or educational methodologies

may be more effective for veterans who have some college education. Identifying potential risk

factors can be the first step in preventing or minimizing alcohol use/misuse.

There are various benefits for those who are married into their elder years. Barbara &

Weinick (1998) state that marriage helps couples engage in more positive behaviors than those

who are widowed. Such behaviors include eating breakfast, participating in daily activity,

wearing seatbelts, and not smoking. Men experience the greatest benefits of marriage in their

elderly years because their wives often press them to concentrate on their health more than they

would if they were widowed or living alone. This research shows that those who are elderly and

married are often more likely to participate in positive behaviors.

The American Association for Marriage and Family Therapy (AAMFT) 2013 states that

couples where one member over consumes alcohol are discontent and miserable. They are more

discontent than couples that receive marital counseling for other problems. AAMFT suggests

that as a person turns to alcohol more and more, it leaves spouses isolated from each other. The

partners begin to create emotional distance from each other and when they do interact, it is

aggressive and can be violent. Overall, AAMFT teaches its clients that alcohol abuse can have an

extremely negative effect on a family (including married couples) and damage the relationship.

Research suggests a strong correlation between alcohol abuse and highest-grade achieved

in school among the general population. According to Crum, Helzer and Anthony (1993) persons

who did not complete high school were greater than six times more likely to abuse alcohol than

their counterparts with a college degree were. This research suggests that alcohol abuse may also

relate to the age of the individuals, mental illnesses, lack of knowledge about the effects of

harmful substances, or other unstated causes. Furthermore, this study suggests the need for more

research to decipher why these individuals turn to alcohol. This research indicates that those with

a lower education level may have a higher chance of abusing alcohol.

Research Questions:

1. What is the relationship between alcohol use and marital status among male veterans

    65 and older?

2. What is the relationship between excessive alcohol use and highest-grade achieved

    among male veterans 65 and older?

Methods

Overview of Main (Larger) Study: Study Design and Methods

Since the present study is a segment of a larger one entitled, *Comparison of health and

illness patterns of community-dwelling veterans with those living in institutional settings*

(unpublished), a bit of information about the larger study can aid the readers' understanding.

The study design was a repeated measure, retrospective descriptive study. Arrangements were

made for data collection with the director of research at the St. Cloud VAHS, the Decision

Support System (DSS), the primary investigator (required to be a VA employee), and faculty co-

investigators. Beginning December 31, 2007, 1200 inpatient and outpatient records were

screened for the inclusion criteria (ICD-9 codes for depression, alcohol use/abuse, and falls). The

initial screening extracted 98 inpatient cases and 645 outpatient cases. Eighteen additional

inpatient cases were added in summer 2012. Since the study protocol called for 200 outpatients,

PAWS's 22 random sample generator reduced the outpatient group to 200. Preliminary data were

downloaded to excel files, cleaned, and formatted. Many requested data elements were not

electronically extractable so manual extraction from the Computerized Patient Record Systems

(CPRS-the VA's electronic medical record) for selected data (e.g. education and some screening

scores) produced more complete data. The records were then de-identified creating a preliminary

database for analysis.

A number of protections are required for accessing Personal Health Information (PHI) of

veterans receiving health services from the VAHS. The primary and co-investigators participated

in the extensive research training required by the VAHS. The combined Minneapolis/St. Cloud

Institutional Review Board (IRB) reviewed and exempted the research proposal, as the data were

all retrospective. The primary and co-investigators followed the requirements for human

subjects' protection throughout the research project. The student co-investigators did not have

access to files containing raw data; they did have access to output files following statistical

analysis. The IRB at the College of St. Benedict/St. John's University also exempted the study,

due to the VAHS IRB approval.

All data files were stored in a secured, password-protected electronic folder, with the

assigned security group on a shared research drive at the VAHS-St. Cloud. The director of

research, the primary investigator, and faculty co-investigators could access these files. The drive

is inaccessible from off-site locations. Analyses for this study were conducted using PAWS-22.

Methods included frequencies and Chi-square for categorical variables.

The most widely used alcohol-screening test for older adult male veterans is the Alcohol

Use Disorders Identification Test—Consumption [AUDIT-C]. This screening tool is for

physicians to use to help identify people who may benefit from alcohol cessation classes. It

screens for individuals who are at risk for hazardous drinking. The AUDIT-C is a short, self-

report- three-question survey (Babor, Higgins-Biddle, Saunders, Monteiro, 2001). The AUDIT-C

is reliable and valid. It "demonstrates sensitivities and specificities comparable, and typically

superior, to those of other self-report screening measures" (Reinert, & Allen, 2002, p. 272).

Providers at the VAHA-St. Cloud use the AUDIT-C screening tool to collect veteran alcohol-use

information.

Table 1 displays the variables studied for the larger study, *Comparison of health and*

illness patterns of community-dwelling veterans with those living in institutional settings

(unpublished).

Table 1.

Variables Studied

Inclusion Criteria	Exclusion Criteria	Demographic Variables	Outcome Variable

Screen 1200 Random sample n= 400 Aged ≥ 65
• n= 200 inpatient (VAHS hospital, LTC or assisted living);
• n= 200 outpatient (community-dwelling)
 	
ICD-9 Diagnostic codes
  Depression (296.2, 296.3)
  Alcohol use/abuse (303, 305.1)
  Risk for Falls (V15.88)
  Index Date: 1/1/07
	• Veterans < 65 years old
	• Veterans that do not have the following diagnoses: depression, alcohol use/abuse, fall risk.
	• Veterans ≥90 years of age
		• Gender
		• Race
		• Marital Status
		• SES
		• Education
		• Combat experience (yes/no)
		• Service connected (yes/no)
		
		Covariates
		• ICD-9 codes (co-morbidities)
		• Active medications
		• Annual primary care visit screening scores for depression, alcohol, Fall risk (from clinical reminder/notes)
		• Living arrangement (alone, with spouse, with adult child, with other family member, with non-family member)
		Gathered –every Dec. 31 in 2007, 2008, 2009, 2010
			• Extent of adherence to established care protocol(s)
			• Change in severity of illness (based on screening assessment scores or codes in clinical notes)
			• Change in active medications
			• Change in ICD-9 codes
			• Change in living situation
			• Change in inpatient/outpatient status
			• Hospitalization date(s) and reason for
			• Death (date) and reason for
			
			Gathered –every 12 months through 12/31/10

Sample

The larger study had a total sample of 316 veterans (Table 1). However, since this study

was limited to those who had ICD-9 Diagnostic Codes of Alcohol use/abuse the sample size was

72, all of which were male. The variables of interest for this study are veterans with alcohol

use/abuse diagnostic codes, marital status, and highest-grade achieved. These data covered the

years 2007, 2008, 2009, and 2010; data for some participants crossed all four years; all crossed at

least two years.

Results

Statistical analyses first established the comparability between the original classifications

of inpatient versus outpatient groups in the Main study above. Table 2 presents the results of the

hypothesis testing that there were no differences between inpatient and outpatient groups for

each of the four years. The null hypothesis is retained in each of the four years so the inpatient

group and outpatient groups were combined for all subsequent analyses.

Table 2.

Hypothesis Test Summary

	Null Hypothesis	Test	Significance	Decision
1	The distribution of 2007 AUDIT-C screen is the same across categories of Group.	Independent-samples Whitney U Test	0.764	Retain the null hypothesis.
2	The distribution of 2008 AUDIT-C screen is the same across categories of Group.	Independent-samples Whitney U Test	0.919	Retain the null hypothesis.
3	The distribution of 2009 AUDIT-C screen is the same across categories of Group.	Independent-samples Whitney U Test	0.459	Retain the null hypothesis.
4	The distribution of 2010 AUDIT-C screen is the same across categories of Group.	Independent-samples Whitney U Test	0.318	Retain the null hypothesis.
	Asymptotic significances are displayed. The significance level is .05.			

Research question 1: What is the relationship between alcohol use and marital status

among male veterans 65 and older?

Four analyses, one for each year of the study, answer Research question 1. Tables 3, 4, 5,

and 6 present Chi-Square analyses for the relationship between marital status and alcohol

screening scores from 2007 to 2010. The codes for marital status were "Divorced" "Married",

"Never married" "Single", and "Widowed". Table 3 displays data from the 32 veterans in 2007.

Table 3.

Chi-Square Tests Marital Status by 2007 AUDIT-C

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.916^a	28	.204
Likelihood Ratio	30.987	28	.318
N of Valid Cases	32		
a. 38 cells (95.0%) have expected count less than 5. The minimum expected count is .03.			

Table 4 depicts Chi-Square results for the 47 veterans in 2008.

Table 4.

Chi-Square Tests for Marital Status and 2008 AUDIT-C Scores

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.285^a	36	.817
Likelihood Ratio	26.095	36	.888
N of Valid Cases	47		
a. 48 cells (96.0%) have expected count less than 5. The minimum expected count is .02.			

Chi-Square results for the 42 veterans in 2009 are below in Table 5.

Table 5.

Chi-Square Tests Marital Status and 2009 AUDIT-C Screening Scores

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.717[a]	30	.157
Likelihood Ratio	31.554	30	.389
N of Valid Cases	42		
a. 42 cells (95.5%) have expected count less than 5. The minimum expected count is .07.			

The Chi-Square results for the 40 veterans in 2010 are in Table 6.

Table 6.

Chi-Square Tests Marital Status and 2010 AUDIT-C Screening

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.798[a]	36	.202
Likelihood Ratio	33.609	36	.583
N of Valid Cases	40		
a. 48 cells (96.0%) have expected count less than 5. The minimum expected count is .03.			

All of the tables have positive correlations, however, none of the Chi-Square Tests in

Tables 3, 4, 5, or 6 demonstrated statistical significance. Therefore, there is no relationship

between marital status and AUDIT-C alcohol screening scores.

Research Question 2: What is the relationship between excessive alcohol use and highest-grade achieved among male veterans 65 and older?

Four analyses, one for each year of the study, answer Research question 2. Tables 7, 8, 9,

and 10 present Chi-Square analyses about the relationship between highest-grade achieved in

school and annual alcohol screening scores from 2007 to 2010. The veterans freely chose the

grade they had last completed. The Chi-Square results for the six veterans that had both highest-

grade achieved and AUDIT- C screening scores in 2007 are in Table 7.

Table 7.

Chi-Square Tests Highest-Grade Achieved by 2007 AUDIT-C

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.600[a]	2	.741
Likelihood Ratio	.908	2	.635
Linear-by-Linear Association	.034	1	.853
N of Valid Cases	6		
a. 6 cells (100.0%) have expected count less than 5. The minimum expected count is .17.			

Table 8 displays data from the 15 veterans that had both highest-grade achieved and

AUDIT- C screening scores in 2008.

Table 8.

Chi-Square Tests Highest Grade-Achieved by 2008 AUDIT-C

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.755[a]	36	.091
Likelihood Ratio	28.482	36	.810
Linear-by-Linear Association	1.575	1	.210
N of Valid Cases	15		
a. 49 cells (100.0%) have expected count less than 5. The minimum expected count is .07.			

Table 9 displays data from 12 veterans that had both highest-grade achieved and AUDIT-

C screening scores in 2009.

Table 9.			
Chi-Square Tests Highest Grade-Achieved by 2009 AUDIT-C			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28.000[a]	25	.308
Likelihood Ratio	17.682	25	.856
Linear-by-Linear Association	.504	1	.478
N of Valid Cases	12		
a. 36 cells (100.0%) have expected count less than 5. The minimum expected count is .08.			

Table 10 displays data from 14 veterans that had both highest-grade achieved and

AUDIT- C screening scores in 2010.

Table 10.			
Chi-Square Tests Highest-Grade Achieved by 2010 AUDIT-C			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.071[a]	25	.106
Likelihood Ratio	24.953	25	.465
Linear-by-Linear Association	1.202	1	.273
N of Valid Cases	14		
a. 36 cells (100.0%) have expected count less than 5. The minimum expected count is .07.			

Similar, to the previous set of tables, tables 7, 8, 9, and 10 show positive correlations but

no statistical significance. Therefore, there is no relationship between highest-grade achieved and

AUDIT-C alcohol screening scores.

Limitations

There are many limitations to this study. The greatest limitation is that there were not

enough veterans screened for alcohol use and demographic variables. For example in the Chi-

Square Tests of highest-grade Achieved by AUDIT-C, there was an average of 11.75 valid

screens per year. This could be due to a multitude of different reasons including absence of

screening by the VAHS- St. Cloud or unwillingness by veterans to respond. The lack of available

data decreased the reliability of this study.

Another limitation of this study is the difficulty of collecting and extracting data from the

clinical records at the VAHS- St. Cloud. Aside from collecting data electronically, there was a

significant amount of hand capturing of data for this study. This could increase the chance of

making data entry mistakes and incomplete or missing data, leading to inaccurate study results.

Conclusions and Recommendations

There are no statistically significant results from the Chi-Square Tests between marital

status and AUDIT-C screening. Therefore, there are no recommendations for clinical practice

related to Research Question 1.

There are also no statistically significant results from the Chi-Square Tests between

highest-grade achieved and AUDIT-C screening. It is important to note that multiple results were

close to being statistically significant, especially given the small numbers in each analysis. For

example, Table 8 has a Pearson Chi-Square significance of .091. Given the small sample size of

15 veterans in 2008, this data may be statistically significant if more data were available. There

are no recommendations for current clinical practice from Research Question 2, however,

because that data was not statistically significant.

A practice recommendation is to increase alcohol screening for veterans at the VAHS-St.

Cloud. Each patient should receive the AUDIT-C screening annually and furnish current

demographic questions asked at each visit as some things can change such as a marital status. It

is important to screen every veteran patient to increase researchers' ability to find trends that

health care professionals can use to maximize care for veterans. This is important because the

literature suggests alcohol use/abuse is a problem in this population. If marital status or highest-

degree achieved positively influenced the scores of an AUDIT-C, health care providers could

give at-risk patients additional resources to ensure they do not turn to excessive alcohol use as a

means of coping. Health care providers could also engage the male veteran's spouse (veteran

permitting) in the discussion about potential alcohol abuse issues if marital status becomes

significant in a larger sample.

     Another recommendation from this research is to change the electronic medical record so

that data is more easily extractable. The complexity of the electronic medical record limits the

researcher's ability to capture all the necessary data. The hand capturing of data in this study was

tedious and prone to error. This study recommends a new electronic medical record for the

VAHS-St. Cloud to increase the ability to use data from the patients' records effectively to

gather pertinent research data and improve care.

Reference List

American Association for Marriage and Family Therapy (AAMFT). (2013). Substance abuse and

intimate relationships.

http://www.aamft.org/imis15/Content/Consumer_Updates/Substance_Abuse_and_Intimat

e_Relationships.aspx

Babor, Thomas F., Higgins-Biddle, John C., Saunders, John B., Monteiro, Maristela G. (2001).

AUDIT: the alcohol use disorders identification test- guideline for use in primary care.

World Health Organization- Department of Mental Health and Substance Dependence,

2nd ed. http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf

Barbara, S. S., & Weinick, R. M. (1998). Health-related behaviors and the benefits of marriage

for elderly persons. *The Gerontologist, 38*(5), 618-27. Retrieved from

http://search.proquest.com/docview/210940879?accountid=14070

Bohnert, A., Ilgen, M., Bossarte, R., Britton, P., Chermack, S., & Blow, F. (2012). Veteran status

and alcohol use in men in the United States. *Military Medicine*, *177*(2), 198-203.

Centers for Disease Control and Prevention. (2014). Fact sheets – alcohol use and health.

http://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm

Crum, R. M., Helzer, J. E., & Anthony, J. C. (1993). Level of education and alcohol abuse and

dependence in adulthood: A further Inquiry. *American Journal Of Public Health*, *83*(6),

830-837.

Jacobson, I., Ryan, M., Hooper, T., Smith, T., Amoroso, P., Boyko, E., & ... Bell, N. (2008).

Alcohol use and alcohol-related problems before and after military combat deployment.

JAMA: Journal Of The American Medical Association, *300*(6), 663-675.

National Council on Alcoholism and Drug Dependence, Inc. [NCADD], (2013). Veterans and

      alcohol. http://www.ncadd.org/index.php/learn-about-alcohol/seniors-vets-and-

      women/198-veterans-and-alcohol

National Institute of Alcohol Abuse and Alcoholism [NIAAA]. (2013). Overview of alcohol

      consumption. http://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption

Reinert, D., & Allen, J. (2002). The Alcohol Use Disorder Identification Test (AUDIT): a review

      of recent research. *Alcoholism: Clinical & Experimental Research*, *26*(2), 272-279.

Stahre, M. A., Brewer, R. D., Fonseca, V. P., & Naimi, T. S. (2009). Binge drinking among U.S.

      active-duty military Personnel. *American Journal Of Preventive Medicine*, *36*(3), 208-

      217. doi:10.1016/j.amepre.2008.10.017

Substance Abuse and Mental Health Services Administration (2012). *Results from the 2011*

      national survey on drug use and health: Summary of national findings. NSDUH Series

      H-44, HHS Publication No. (SMA) 12-4713. Rockville, MD: Substance Abuse and

      Mental Health Services Administration.

Weathermon, R., & Crabb, D. W. (1999). Alcohol and medication interactions. *Alcohol Research*

      and Health, 23(1), 40-54. Retrieved from

      http://search.proquest.com/docview/222388514?accountid=14070