



Clustering of Healthy and Unhealthy Habits in Patients

Aurora Dominguez & Dr. John Whitham

The University of Texas Health Science Center at San Antonio, San Antonio, TX 78229



ABSTRACT

A cross-sectional study was conducted in order to analyze the clustering of healthy and unhealthy habits in patients. The study was conducted in 7 different Family Medicine residency sites throughout Texas. A positive association was found between alcohol consumption and smoking, physical activity, and consumption of fried and fast foods. Positive associations were also found between smoking and number of hours spent watching television, and physical activity and consumption of fresh fruits and vegetables.

INTRODUCTION

Texas has an increasing number of patients who suffer from chronic diseases such as diabetes, obesity and cardiovascular illnesses. This number can be seen as a reflection of the lifestyle and poor health habits that our society has adopted. Consumption of fruits and vegetables, alcohol consumption, smoking, and physical activity are all variables that have an independent effect on the overall health of an individual. These lifestyle behaviors also correlate with each other. Previous studies have shown that fruit and vegetable consumption frequency was higher among men and women who were not alcohol-dependent, compared with those who were.¹ In addition, current smokers are significantly more likely than those who never smoked to drink heavily, binge drink, to be physically inactive and to consume less than five servings of fruits and vegetables.² The previous variables have been evaluated independently and in pairs, but few researchers have examined all four health behaviors in relationship to each other. Do unhealthy behaviors cluster? The purpose of this study was to evaluate the associations between diet, alcohol consumption, smoking, physical activity, and sedentary behavior in the form of watching television. Findings will determine whether healthy habits and unhealthy habits cluster together in patients.

METHODS

This cross-sectional survey of patients' health behaviors was conducted in seven family medicine residency program clinics across the state of Texas. At each site, medical students surveyed 150 consecutive adult patients who presented for routine outpatient care, for a total of 1078(?) respondents. Surveys addressed four health behaviors (tobacco and alcohol use, physical activity, and diet), stage of behavioral change, health status including BMI and chronic conditions, and demographic characteristics. "Unsafe" drinking was defined as one or more binge drinking episodes per month, or drinking more than 2 alcohol drinks per day.

	Alcohol	Smoking	Physical Activity	Vegetable & Fruits	Fried and Fast Food	T.V. Hours
Alcohol		$\chi^2=53.0$ $p=.000$	$\chi^2=16.33$ $p=.012$	$p=.398$	$F=7.09$ $p=.001$	$p=.712$
Smoking	$\chi^2=53.0$ $p=.000$		$p=.753$	$p=.283$	$p=.486$	$F=5.30$ $p=.005$
Physical Activity	$\chi^2=16.33$ $p=.012$	$p=.753$		$F=8.32$ $p=.000$	$p=.522$	$F=6.41$ $p=.000$
Vegetable & Fruits	$p=.398$	$p=.283$	$F=8.32$ $p=.000$		$r=-.091$ $p=.003$	$p=.060$
Fried and Fast Food	$F=7.09$ $p=.001$	$p=.753$	$p=.522$	$r=-.091$ $p=.003$		$r=.093$ $p=.003$
T.V. Hours	$p=.712$	$F=5.30$ $p=.005$	$F=6.41$ $p=.000$	$p=.060$	$r=.093$ $p=.003$	

RESULTS

The study included 1078 respondents in which 75% were females and 25% were males. Respondents' ethnic background was: 49% Hispanic, 28% White, 19% African-American, 1% Asian, and 3% reported as other. The average BMI for the group was 31. Average age was 43 years with a range of 18 to 94 years.

Alcohol – Of 1078 respondents, 66% were non-drinkers, 10% were "safe" drinkers, and 23% were "unsafe" drinkers. Alcohol consumption had a significant positive correlation with smoking, physical activity and consumption of fried and fast foods. Alcohol consumption was not associated with consumption of fruits and vegetables or with hours watching television. (Table)

Smoking – Of 1043 people who responded to the smoking questions, 64% never smoked, 16% were previous smokers, 20% were current smokers. Smoking had a significant positive correlation with alcohol consumption and number of hours watching television. Smoking was not associated with physical activity, fruits and vegetables consumption, or fried and fast food consumption. (Table)

Physical Activity – Of 1019 people who responded to physical activity questions, 3% were rarely active, 35% were underactive, 18% were underactive-regular, 44% were active. Physical activity had a significant positive correlation with alcohol consumption and fruits and vegetables consumption. Physical activity was negatively correlated with hours of television, where more sedentary individuals watch more hours of television. Physical activity was not associated with smoking or consumption of fried and fast foods. (Table)

Fruits and Vegetables Consumption – Of 1078 respondents, 29% ate 1 or fewer servings of fruits and vegetables per day. Consumption of fruits and vegetables had a significant positive correlation with physical activity and a significant negative correlation with consumption of fried and fast foods. Consumption of fruits and vegetables was not significantly associated with alcohol consumption, smoking, or hours spent watching television. (Table)

Fried and Fast Food Consumption – Of 1078 respondents 30% ate fast or fried foods more than 4 times per week. Consumption of fried and fast foods had a significant positive correlation with alcohol consumption and hours spent watching television. In addition, it had a significant negative correlation with consumption of fruits and vegetables, where individuals that consume more fried and fast food eat fewer fruits and vegetables. There were no significant associations between fried and fast food consumption and smoking or physical activity. (Table)

RESULTS (cont.)

Television Hours – Of 947 respondents who recorded their television-watching time, the average was 3.9 hours per day. Hours spent watching television had a significant positive correlation with smoking and consumption of fried and fast foods. It was also found to have a significant correlation with physical activity, where more sedentary individuals spent more time watching television. Hours spent watching television was not significantly correlated with smoking or consumption of fruits and vegetables. (Table)

CONCLUSIONS

- * The overall findings indicated that healthy and unhealthy habits do tend to cluster each other within respondents.
- * High alcohol consumption was more likely to be present in individuals who smoked and had a less than optimum diet.
- * Smoking was associated with high alcohol consumption and more television hours.
- * Physical activity was more vigorous in individuals who consume more fruits, vegetables and alcohol.
- * The unexpected positive correlations between alcohol and physical activity could be due to gender. Males reported drinking more and being more physically active than females.
- * Television hours increased step wise with smoking status and had a significant correlation with consumption of fried and fast food.

REFERENCES

1. Perez, Claudio E. "Fruit and vegetable consumption." Health Reports, Vol. 13, No.3. 2002: pgs. 23-31.
2. Strine, T, et al. "Health-related quality of life and health risk behaviors among smokers." American Journal of Preventive Medicine. Vol. 28, No.2. 2005: pgs. 185-187

Acknowledgements

*This study was conducted in the Residency Research Network of Texas (RRNeT) with support from the Health Services and Resources Administration, the Medical Hispanic Center of Excellence, the office of the Medical Dean, UTHSCSA, and the South Central Texas Area Health Education Center.

