

February 10, 2012

Research Brief

BMI Trajectory Groups in veterans of the Iraq and Afghanistan Wars

Publication: *Preventive Medicine* (2011), 53 (3), pp. 149-154

Keywords: Obesity, Overweight, OEF/OIF veterans, Trajectory Modeling

Research Highlights:

- The obesity in America is about 32.3 for men and 35.5 for women; these rates have also been seen in the Veteran population, mostly for those who used VA medical facilities.
- The reports based on the OEF/OIF groups show that this group already has a problem with weight in general, whether it is weight loss/eating problems or being overweight.
- Studies showed that race, education level and gender play a huge part in the likeliness of obesity. The healthy BMI usually applies to white, young, women.

Authors: Patricia H. Rosenberger, Ph.D, Yuming Ning, Ph.D, Cynthia Brandt, MD, MPH, Heather Allore, Ph.D, Sally Haskell, MD

Abstract:

Objective. The study sought to determine BMI trajectories in Iraq/Afghanistan veterans over 6 years and to examine sociodemographic factors associated with BMI trajectory membership.

Methods. Our study sample included 16,656 veterans post-deployment and entering the Veteran Healthcare Administration (VHA) healthcare system. We used national VHA administrative sociodemographic characteristics associated with trajectory membership.

Results. Five trajectory groups determined in the full sample were primarily differentiated by their post-deployment initial BMI: “healthy” (14.1%), “overweight” (36.3%), “borderline obese”(27.9%), “obese” (15.7%), and “severely obese”, (6%.0). Being female, younger, and white were associated with lower initial BMI trajectory group membership (p 's < .05). Greater observed BMI increase was associated with higher initial BMI across groups (0.6, 0.8, 1.5, 1.9, 2.7). Gender specific trajectory models found that male Veterans with higher education and white female Veterans were associated with the lowest initial BMI group (p 's < .05).

Conclusions. Higher post-deployment BMI was associated with greater BMI gain over time for both male and female Veterans. Older age is associated with higher BMI regardless of gender. Education level and racial status are differentially related to BMI trajectory by gender. ”

Implications

For Practice

When taking a look at the obesity in America it is not difficult to believe that it can affect anyone and even lead to more serious illnesses. The percentage of obese men in America is 32.3% and 35.5% for women. These high rates have also been reported for Veterans. Surprisingly, male and female Veterans who have used VA medical facilities are more likely to be obese in comparison to those who do not. Reports based on individuals involved in OEF/OIF show that this group already has an obesity problem. In OEF/OIF female Veterans, combat exposure also may be associated with weight loss and eating disorders. To conduct this study, BMI greater than or equal to 25 was considered overweight while a BMI equal to or greater than 30 was considered obese. The medical conditions associated with being overweight vary from heart problems, sleep apnea, diabetes, etc. It has been predicted that in years to come these illnesses will be the biggest concern for the Veteran Healthcare Administration. This study reports that OEF/OIF non-white females and male veterans with less education are more likely to be overweight or obese. With all this data it has been clear that race, education level and gender plays a huge part in obesity of this group and in general.

For Policy

Compared to the full sample of OEF/OIF Veterans, the study sample included more women, was more educated, and was more racially diverse, which may limit study findings. However, the study did show how certain factors are associated with obesity, which can then lead to related illnesses. The data also shows how Veterans who used VA medical services were more likely to be obese than other Veterans. This withstanding, there should be a fitness policy or fitness education system for the certain groups who have higher BMIs. First, it must be recognized that obesity is more than just a weight problem; it can lead to more serious health problems. Second, Veteran related policies should include weight management education for Veterans dealing with weight problems. If Veterans can learn more about the problems associated with obesity and get targeted help promoting healthy eating and physical activity, it could foster successful weight management.

For Future Research

Though the research is clear in revealing the Veteran risk factors associated with obesity, more research on Veteran obesity and obesity prevention is necessary. First, because of the prevalence of obesity in Veterans and the associated medical costs, the Veterans Healthcare Administration should continue to promote obesity research and treatment.. For example, more surveys about other groups of Veterans not limited to OEF/OIF Veterans should be conducted, as well as research on additional risks associated with obesity. The present study did not include what can be done to reduce the risk of obesity and its associated medical risks. Future research could include Veterans from other wars and identify specific risk factors associated with each group, as well as expand on the risks associated with specific race, educational level, and gender.

Author Information

Patricia H. Rosenberger

VA Connecticut Healthcare System
Department of Psychiatry
Yale University, School of Medicine
patricia.rosenberger@va.gov

Yuming Ning

Department of Internal Medicine,
Yale University School of Medicine
(203) 737-1953
yuming.ning@yale.edu

Cynthia Brandt

Center for Medical Informatics
Yale University School of Medicine
203-737-5762
cynthia.brandt@yale.edu

Heather Allore

Department of Internal Medicine,
Yale University School of Medicine
(203) 737-1892
heather.allore@yale.edu

Sally Haskell

Associate Professor of Medicine
Yale University School of Medicine
(203) 932-5711