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TECHNICAL REPORT

# Health and Economic Outcomes in the Alumni of the Wounded Warrior Project

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Sponsored by the Wounded Warrior Project



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## Summary

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Since 2002, the not-for-profit Wounded Warrior Project (WWP) has sought to offer support for and raise public awareness of those injured during service on or after September 11, 2001. To this end, WWP gives members, or “alumni,” access to programs that nurture mind and body, as well as facilitate economic well-being.

Central to WWP’s success are its assessment efforts. In 2009, RAND researchers helped WWP design a web-based survey that would help the organization evaluate how well it is meeting its three primary strategic goals:

- Ensure that wounded warriors are well-adjusted in mind and spirit.
- Ensure that wounded warriors are well-adjusted in body.
- Ensure that wounded warriors are economically empowered.

The survey, designed by RAND researchers, was administered in 2010 and 2011 by the statistical research firm Westat. The firm also prepared initial interpretive reports for WWP.

In October 2011, WWP asked RAND to revisit the survey results to provide more-detailed analysis. Specifically, WWP was interested in the way individuals from different sub-groups, as defined by marital status, gender, pay grade, and employment status, were meeting the strategic goals. WWP also wished to gain a wider view of its organizational performance by understanding how alumni outcomes compared with the outcomes of other veteran and nonveteran U.S. populations.

### **Who Are the Wounded Warrior Project Alumni Represented by the Survey Data?**

Both the 2010 and 2011 web-based surveys were offered to all alumni in the WWP database. Westat fielded the 2010 survey between February 5 and March 22, 2010, and the 2011 survey took place between March 29 and May 17, 2011. The alumni database contained 3,464 members at the time of the 2010 survey. Of those, 1,121 completed the survey (a 32.4-percent response rate). In 2011, the database had expanded to include 5,870 alumni, of whom 5,867 were eligible to participate in the survey. Westat collected 2,312 responses for that year (a 39.4-percent response rate).

Because not all alumni responded to the survey, it is unclear whether the respondents are ultimately representative of all WWP alumni. The data reveal some changes over time but are generally similar and offer information particular to those who participated in the survey, including the following:

- *Relationship status:* According to the 2010 and 2011 survey data, 60 to 65 percent of the respondents were married, 15 to 20 percent were never married, and roughly 14 percent were divorced. The few remaining were widowed, separated, or unknown. The vast majority (approximately 90 percent) of all respondents were male.
- *Education:* The data suggest that approximately 15 percent of the respondents had a high school diploma, slightly more than 40 percent had some college experience, and 20 percent had a bachelor's degree or advanced degree.
- *Employment status:* The data suggest that 40 percent of all WWP alumnus respondents were employed full time and that just over half were either unemployed or not in the labor force. Further calculations suggest that there was an unemployment rate of 21.6 percent among the 2011 respondents.
- *Health insurance coverage:* A small percentage of WWP alumni lacked health insurance coverage, whereas 50 percent or more had insurance through the U.S. Department of Veterans Affairs (VA) or some other government program, such as TRICARE. In addition, 15 to 20 percent of all respondents had private insurance or Medicare.
- *Military experience:* The majority of respondents were veterans at the time they were surveyed. Two-thirds of all respondents are or were in the Army, and another 20 percent served in the Marine Corps. Approximately 90 percent of all respondents were enlisted, and only roughly 10 percent were officers. Nearly all respondents deployed at least once, with a relatively even split between those who deployed once, twice, or three or more times.
- *Injury:* The vast majority of survey participants experienced their injuries between 2003 and 2007. Approximately 30 percent of all WWP respondents reported a VA disability rating of 10–70 percent, whereas 40 to 50 percent reported the highest ratings, of 80–90 percent disability.

## **How Are Various Subgroups of Alumni Reaching Wounded Warrior Project Goals?**

In this summary, as in the full report, we present initial WWP goals and findings related to the 2010 and 2011 survey population. We then summarize how different groups in the population may or may not be meeting the goals.

### **Strategic Objective 1: Ensure That Wounded Warriors Are Well-Adjusted in Mind and Spirit Alumnus Respondents Needing Help Are Seeking It, but Access Can Be Limited**

*Goal: Increase the percentage of alumni who visit a health care professional to get help with such issues as stress, emotional, alcohol, drug, or family problems (increase access to care).*

WWP's goal of 58 percent was met in 2011 among survey respondents. The results suggest that, in 2010, married and never-married respondents were less likely to visit a professional than were divorced or separated respondents. In both 2010 and 2011, women were more likely to have visited a professional than men were. Results did not differ by pay grade in 2010, but, in 2011, enlisted respondents were more likely to seek professional help than officers were. Other studies suggest that females and enlisted individuals are more likely than others to suffer from posttraumatic stress disorder (PTSD) and would thus be more likely to seek care (Schell and Marshall, 2008). The findings here fall in line with these studies.

In 2011, unemployed respondents or those not participating in the labor force were more likely than part- or full-time workers to have seen a professional in the past three months. This may suggest that those who are not working are suffering from emotional challenges and are in need of health care.

The survey revealed that approximately 40 percent of respondents had difficulty getting mental health care. Reasons for this difficulty vary. Institutional barriers, cultural beliefs, and treatment preferences were the most frequently cited reasons.

### ***Alumnus Respondents Are Seeking Other Operation Enduring Freedom and Operation Iraqi Freedom Veterans as a Resource***

*Goal: Increase the percentage of alumni who report talking with another veteran of Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) as a resource and tool to help cope with feelings of stress or emotional or mental health concerns.*

WWP has a stated goal of 54.5 percent of alumni connecting with other OEF and OIF veterans as a resource. This was achieved in both survey years among those who participated in the survey: Respondents to the 2010 survey connected at a rate of 58.1 percent, and respondents to the 2011 survey connected at 55.4 percent.

In the 2010 survey, more divorced respondents (66.9 percent) reported having talked to another OEF or OIF veteran about emotional and health concerns than married (60.1 percent), separated (46.9 percent), and never-married (47.5 percent) alumnus respondents. However, these numbers leveled off in the 2011 survey. The number of divorced alumni connecting with other veterans fell to 56.1 percent in that year, followed by separated (56.0 percent), married (55.3 percent), and never-married (54.9 percent) alumnus respondents.

In both the 2010 and 2011 surveys, men were more likely than women to report having talked with another OEF or OIF veteran about mental health concerns. In 2010, this difference was large; men reported connecting at a rate of 59.0 percent, while women reported connecting at only 44.4 percent. There were no significant differences across pay grades in either year.

The data from the survey also suggested that wounded warriors who report *not* talking to other OEF or OIF veterans make use of other resources. The most commonly sought resource is the VA medical center.

### ***Emotional Problems Still Force Many Respondents to Miss Work and Other Activities***

*Goal: Decrease the percentage of alumni who report the extent to which emotional problems have interfered in the past four weeks with work or regular activities.*

WWP's goal of 56.0 percent in 2011 was almost met in both 2010 (58.2 percent) and 2011 (59.3 percent) among those who completed the surveys. Notably, in both survey groups, respondents who were employed, and especially those working full time, were less likely to report cutting back on work and other activities.

### ***Married Alumnus Respondents Report Fewer Upsetting Memories***

*Goal: Decrease the percentage of alumni who report they had a military experience that was so frightening, horrible, or upsetting that, in the past month, they have not been able to escape from memories or effects of it.*

The percentages pertaining to individual respondents thinking about an event when they did not want to were higher than WWP's 76.0-percent goal. In 2010, 76.6 percent of WWP alumnus respondents reported doing so, growing to 77.8 percent in 2011.

In the 2010 survey, respondents who were divorced were more likely than those who were married or had never been married to indicate that they think about the traumatic event more than they would like. In the 2011 survey, respondents who were never married were less likely than others to indicate being unable to escape the memory of a traumatic event. There were no gender differences in the percentage of respondents who think about a bad experience more often than they would like.

***Alumnus Respondents' Reported Ability to Adapt Is Falling Short of the Wounded Warrior Project's Goal***

*Goal: Increase the percentage of alumni who report they are able to adapt when change occurs or to bounce back after illness, injury, or hardships (resilience).*

WWP's reporting of this outcome measures only the percentage of respondents who reported adapting often or nearly all of the time when changes occur. Survey results suggest that alumnus respondents are not meeting WWP's goal of 57 percent: The results were 55.9 percent and 53.8 percent for 2010 and 2011, respectively.

The data suggest differences in adaptability between those respondents who were never married and those respondents who were married or divorced. In the 2011 survey, those who were never married proved more resilient (68.0 percent) according to our analysis, followed by those who were married (59.7 percent), divorced (53.2 percent), and separated (41.8 percent). Men reported being more likely to adapt than women did, at 60.5 percent and 49.1 percent, respectively. Survey results suggest that junior officers are the most likely to report some level of resiliency, and resiliency rates were generally higher among respondents who were employed full or part time than among those who were unemployed or not in the labor force.

***Strategic Objective 2: Ensure That Wounded Warriors Are Well-Adjusted in Body Survey Respondents Are Achieving the Wounded Warrior Project's Goal of Not Missing Work and Other Activities Because of Physical Health Problems***

*Goal: Decrease the percentage of alumni who report that physical health problems have interfered with work or regular activities in the past four weeks.*

WWP's target for this goal was to have only 64.0 percent of alumni suggest that they were facing disruptions due to health challenges. This target was met by survey respondents in both 2010 (65.8 percent) and 2011 (64.5 percent). Those respondents who had never been married at the time they were surveyed were less likely than other marital groups to have difficulty performing work or other daily activities as a result of their physical health. Senior enlisted respondents were more likely to experience problems due to their physical health than were junior officers or junior enlisted. Part- and full-time-employed respondents were less likely than respondents not in the labor force or who were unemployed to have experienced problems with work or other activities due to their physical health.

***Obesity Among Alumnus Respondents Is Proportionate to That of the U.S. Population***

*Goal: Decrease the percentage of alumni who report they are overweight or obese based on body mass index (BMI).*

Each WWP respondent reported his or her height and weight in the surveys. This information was used to calculate the BMI of each member. An individual with a BMI in the range of 25–30 is considered overweight, and one with a BMI in excess of 30 is considered obese. Survey results show that, in both years, approximately 40 percent of all respondents were

obese; the 2011 percentage of 40.5 and the 2011 percentage of 41.6 were both higher than WWP's goal of 39.0 percent. For context, it should be noted that 35.7 percent of all U.S. adults age 20 and over are considered obese (Ogden et al., 2012).

Respondents who were married at the time they were surveyed or who had been married before they were surveyed appeared to be more likely to be overweight or obese than those who had never been married. Men were significantly more likely to be overweight or obese than women, by 20 percentage points. Across rank groups, junior enlisted members were generally less likely than more-senior enlisted to be overweight or obese.

**Strategic Objective 3: Ensure That Wounded Warriors Are Economically Empowered**  
***The Wounded Warrior Project Goal for Increasing Attainment of Higher Education Was Met Among Survey Respondents***

*Goal: Increase the percentage of alumni who complete an associate's degree, bachelor's degree, or higher.*

Survey respondents were asked to report the highest degree or level of school they had completed. WWP's goal of 34.0 percent of alumni completing a degree was met among 2011 survey respondents at 36.0 percent, up from 32.7 percent among 2010 respondents.

The survey results suggested that female respondents were significantly more likely than males to earn an associate's, bachelor's, master's, or doctoral degree. This is consistent with the general civilian population. Differences in education level across marital status groups were largely not significant. Because of entrance requirements, it is not surprising that the vast majority of officer respondents reported having completed an associate's degree or higher and at a significantly greater rate than enlisted respondents. Senior enlisted were more likely to have completed one of these degrees than their more junior counterparts, with the difference being 5 to 10 percentage points.

***The Wounded Warrior Project Goal for Increasing Alumni's Attainment of Business, Technical, and Vocational Training Was Met Among Survey Respondents***

*Goal: Increase the percentage of alumni who complete business, technical, or vocational school.*

WWP's goal of 3.7 percent of alumni achieving a certificate or diploma from a business, technical, or vocational school was not met by those who completed the surveys in 2010, at a rate of 3.4 percent, but it was met in 2011, with 4.3 percent. When we revised the statistical method to include only respondents who completed a business, technical, or vocational degree or a lower degree (less than 12th grade, regular high school diploma, or GED®), we found that 15 to 20 percent of all enlisted respondents had earned a business, technical, or vocational degree. Although there are noticeable differences in magnitude across some comparison groups, none of the results in this part of the analysis proved to be statistically significant or consistent across years.

***Respondent Rates of Employment Are Reaching Wounded Warrior Project Goals***

*Goal: Increase the percentage of alumni employed full time or part time or self-employed.*

Survey results suggest that approximately 42 percent of respondents were employed full time and that 5 to 6 percent, each, are employed part time or are self-employed (with the remainder unemployed or not in the labor force).

Further calculations suggest that married respondents were more likely than others to be employed full time but less likely than never-married individuals to be employed part time.

Differences between men and women in the level or type of employment were nonexistent. Enlisted respondents were significantly less likely to be employed full time than were officers. Senior enlisted and junior officers were more likely to be working full time than were their junior and senior counterparts, respectively. Differences across groups in the percentage of individuals who were self-employed are generally not significant.

### ***Survey Respondents Are Achieving the Wounded Warrior Project's Home-Ownership Goals***

*Goal: Increase the percentage of alumni who own a home (with or without a mortgage).*

In the 2011 survey, the 56.0-percent rate of home ownership among survey respondents met WWP's goal of 55 percent. Survey results suggested that married respondents were significantly more likely to own a home than were members of any other group. Those who had never been married were much less likely to own a home than married or divorced alumni. In the 2011 survey, men were more likely than women to own a home. Further, in the 2011 survey, officers and senior enlisted alumni were more likely to own homes than were junior enlisted and officers. Also in the 2011 survey, full-time workers were most likely to own a home, followed by unemployed alumni and those not in the labor market, and finally, part-time workers.

## **Recommendations**

Overall, the majority of WWP's goals were met in 2010 and 2011 among individuals who completed the surveys. However, there are some ways in which WWP can improve its outcomes, which we offer here:

- *Use the different scales to generate a better measure of alumnus challenges.* Results in the report suggest that WWP alumni have experienced higher rates of screening positive for PTSD and depression than those in other studies (involving different populations, usually veterans more generally). These higher rates may be due in part to the fact that WWP alumni, by definition, have experienced a service-connected disability. We recommend that WWP consider adding to its strategic objectives the Eight-Item Patient Health Questionnaire (PHQ-8) depression scale. Further, some of the questions in WWP's survey were derived from other instruments for the purposes of comparison to other populations and studies (e.g., deployment combat exposure, alcohol use, smoking prevalence, sleep adequacy). Future revisions to the strategic objectives may include goals for the results of those questions.
- *Create programs that can benefit specific alumnus population subgroups.* Taken together, the data suggest that individuals who have never been married, who are male, who are employed, and who are in higher ranks enjoy better mental health outcomes. On the other hand, women and junior ranks (where rank is likely connected to age) report more favorably on their physical health. Finally, married respondents and officers are more likely to have higher levels of education, be employed, and own a home.

These patterns suggest that different subgroups of wounded warriors may be in need of more or different kinds of support from WWP. The organization's decisionmakers can use the information from this report to determine the degree to which strategic objectives are met

for each subgroup and to set new goals and the means by which the organization—and its alumni—may reach those goals.