All Branch Mail Out #44 - 2018

Date: September 5, 2018

To: NS/NU Command Branches
NS/NU Zone Commanders
NS/NU Executive Council
NS/NU Past Presidents
NS/NU Command Staff

From: Valerie Mitchell-Veinotte
Executive Director/Command Secretary
NS/NU Command, RCL

Subject: Participants Report – Effectiveness Of Psychiatric Service Dogs For Veterans With PTSD

Message: Comrades: NS/NU Command President Mel Crowe is pleased to provide you with a copy of the participants report on the Effectiveness of Psychiatric Service Dogs for Veterans with Post Traumatic Stress Disorder released by Université Laval and CIRRIS.

President Crowe asks that the report be given widest distribution.

Effectiveness of Psychiatric Service Dogs for Veterans with Posttraumatic Stress Disorder

Participants Report

UNIVERSITÉ LAVAL

CIRRIS
Centre interdisciplinaire de recherche
en réadaptation et intégration sociale

*Results presented in this document origin from the final report of this project to the VAC.
*They are not final and will later be submitted for publication in a scientific journal.

Acknowledgements

We thank everyone who contibuted to the study and especially all study participants for their generosity and support.

Participants

Since 2016, 31 veterans with posttraumatic stress disorder were recruited to participate in our study. Eighteen of them completed the last follow-up after 12 months with their service dog.

Refer to the Glossary at the end of this document if certain terms are less familiar.

Demographic Characteristics

This section presents the participants' main characteristics.

GENDER

Women 16%

Men 84%
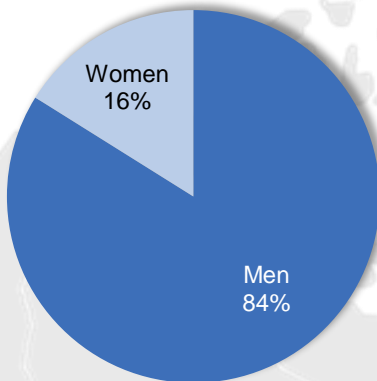
PRINCIPAL OCCUPATION

Study 10%
Work 16%
Volunteerism 8%
Family 24%
Other 42%
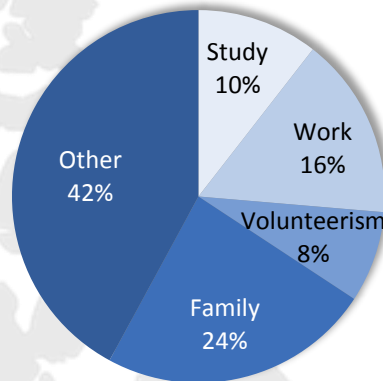
ON AVERAGE, PARTICIPANTS…

Spent **20 years** in the army

Had been retired for **9 years**

Had been diagnosed with posttraumatic stress disorder for **7 years**
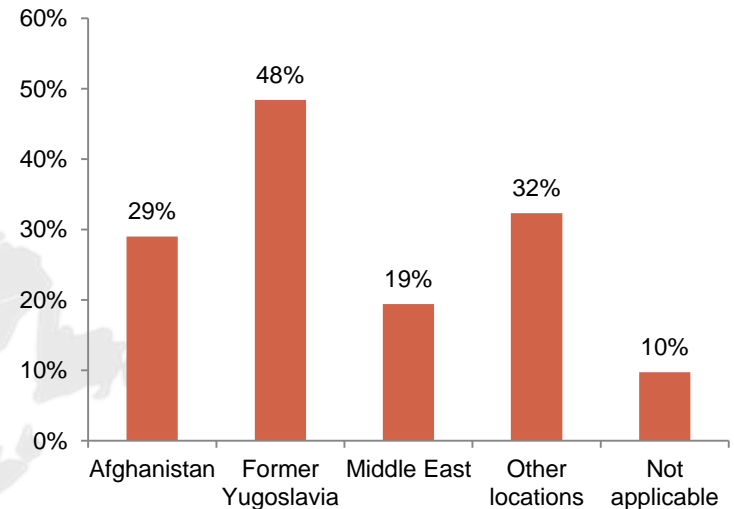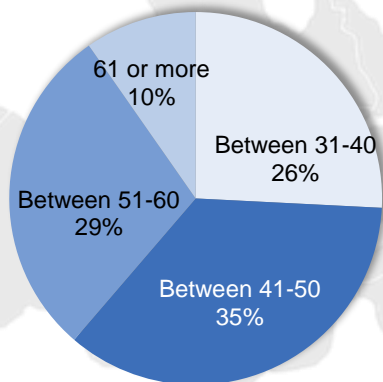
81%
Were married or in a relationship

81%
Lived in a house

42%
Already had another dog

AGE GROUPS

61 or more 10%
Between 51-60 29%
Between 31-40 26%
Between 41-50 35%

DEPLOYED LOCATIONS

Location	Percentage
Afghanistan	29%
Former Yugoslavia	48%
Middle East	19%
Other locations	32%
Not applicable	10%

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Posttraumatic Symptoms

Posttraumatic symptoms include cognitive intrusions, avoidance, alterations in mood and cognition, and hyper-arousal. Their importance was measured over 18 months, using the **Posttraumatic Stress Disorder Checklist for military (PCL-M)**.

PCL-M TOTAL SCORES OVER TIME

PCL-M score range: 17 - 85
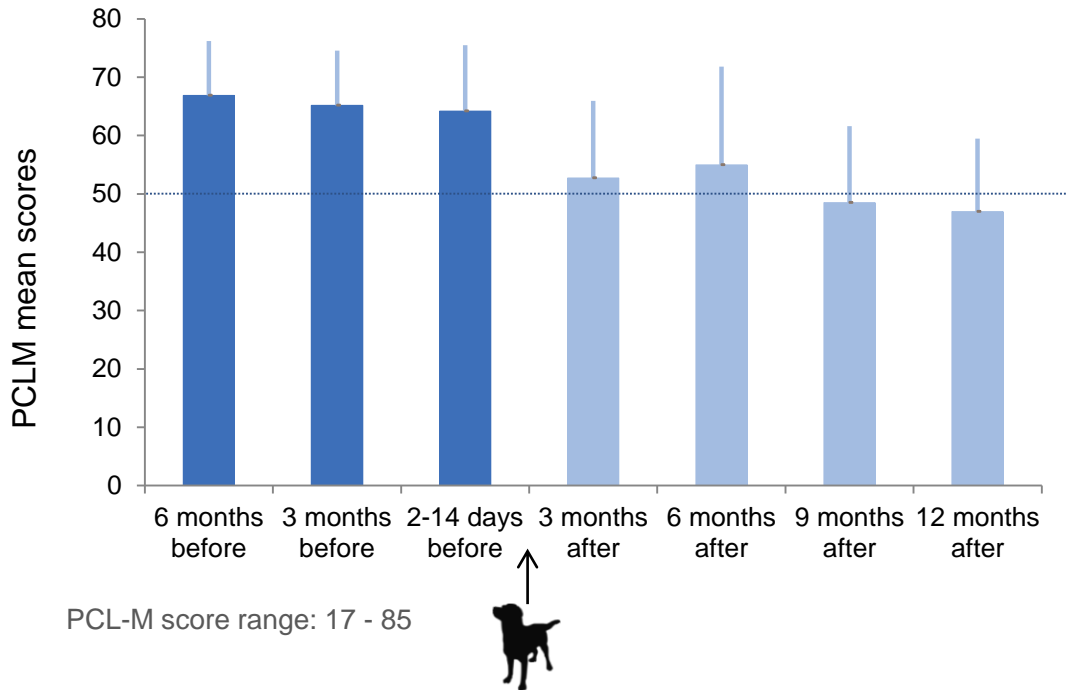
General decrease in posttraumatic symptoms

Scores on the PCL-M were **significantly lower** after the acquirement of the service dog, indicating that symptoms were reduced. After 12 months, average total scores were **around 50**, which is considered to be a low level of symptoms.

Before acquiring their service dog, participants generally answered that they dealt **"quite a bit"** with each of the 17 items. However, at the end of the study, answers were mostly **between "a little bit" and "moderately"** on this 5-point scale.

Items that were most reduced…
- *Feeling distant or cut off from other people*
- *Being super alert or watchful on guard*
- *Feeling jumpy or easily startled*

The only item that was not reduced was *Trouble remembering important parts of a stressful military experience*

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Sleep Quality

Participants' sleep quality was measured over 18 months, before and after the dog delivery, using the **Pittsburgh Sleep Quality Index (PSQI)**. On this questionnaire, lower scores indicate lesser sleep problems.

Scores on the PSQI were **significantly lower** after the acquirement of the service dog, indicating that participants' sleep quality was generally better.

PSQI TOTAL SCORES OVER TIME

PSQI mean scores

20

15

10

5

0

6 months before   3 months before   2-14 days before   3 months after   6 months after   9 months after   12 months after

PSQI score range: 0 - 21
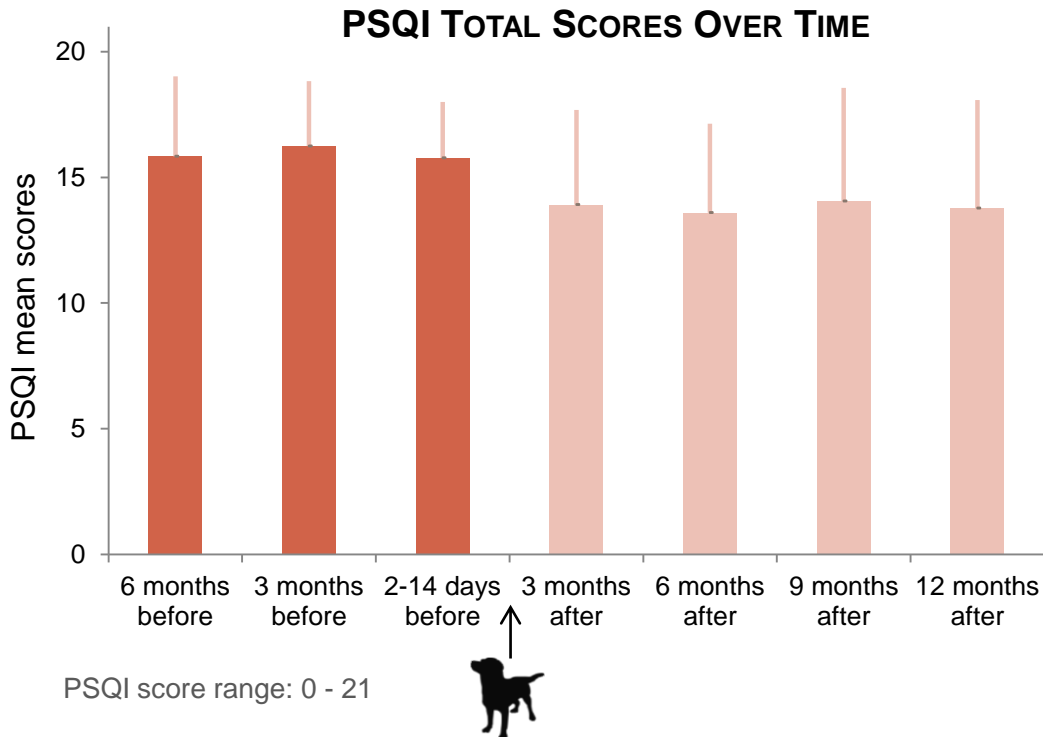
Aspects of sleep that were improved…
- *Subjective Sleep Quality*
- *Sleep Latency*
- *Sleep duration*
- *Less nightmares*

Aspects of sleep that did not change…
- *Sleep efficiency*
- *Use of sleep medication*
- *Daytime dysfunction*
- *Overall sleep disturbances*

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Depressive symptoms

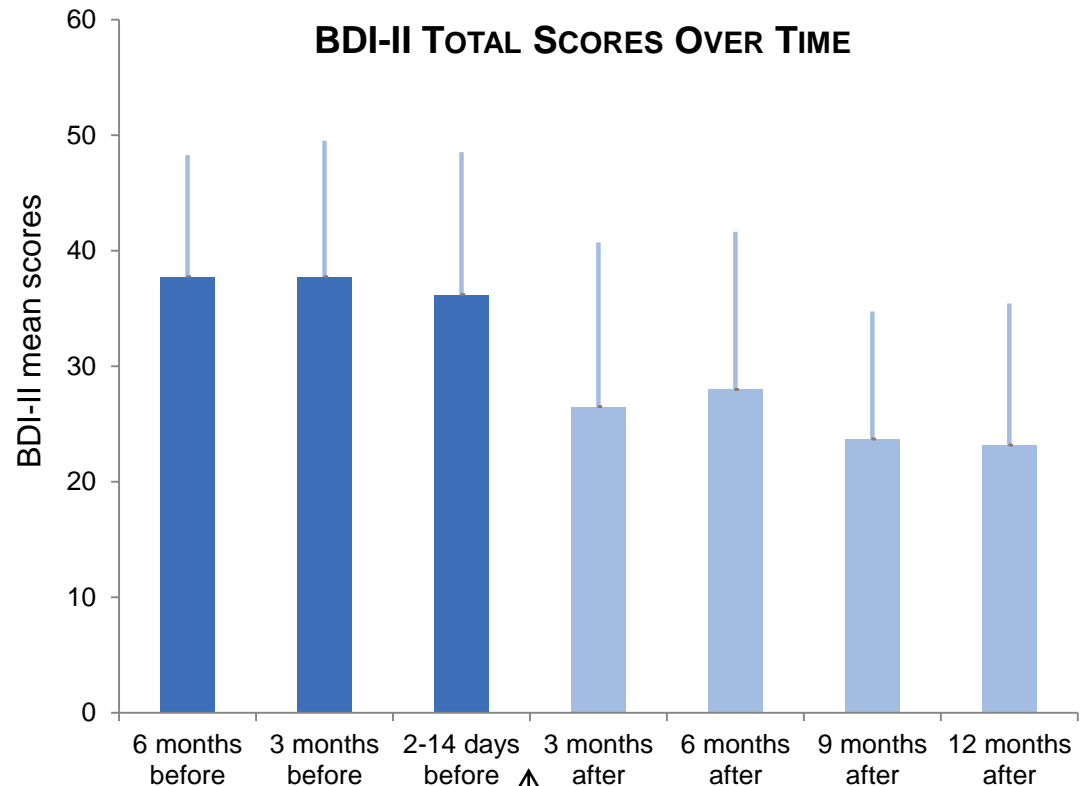Depressive feelings are often associated with posttraumatic stress disorder. They were measured in this study using the **Beck Depression Inventory (BDI-II)**.

General decrease in depressive symptoms

Scores on the BDI-II were **significantly lower** after the acquirement of the service dog, indicating that depressive symptoms were reduced. Depression went from being classified as "severe" (score of 29-63) to "moderate" (20-28).

Before the acquirement of the service dog, participants on average selected **"2"** on a 0 to 3 scale for each of the 21 items. For example, most of them answered **"I am sad all the time"** for the questionnaire's first item. However, at the last follow-up, **"I feel sad much of the time"** was the average answer, which is worth **1 point** on the BDI-II scale.

BDI-II TOTAL SCORES OVER TIME

BDI-II mean scores (y-axis: 0 to 60)

x-axis categories: 6 months before, 3 months before, 2-14 days before, 3 months after, 6 months after, 9 months after, 12 months after
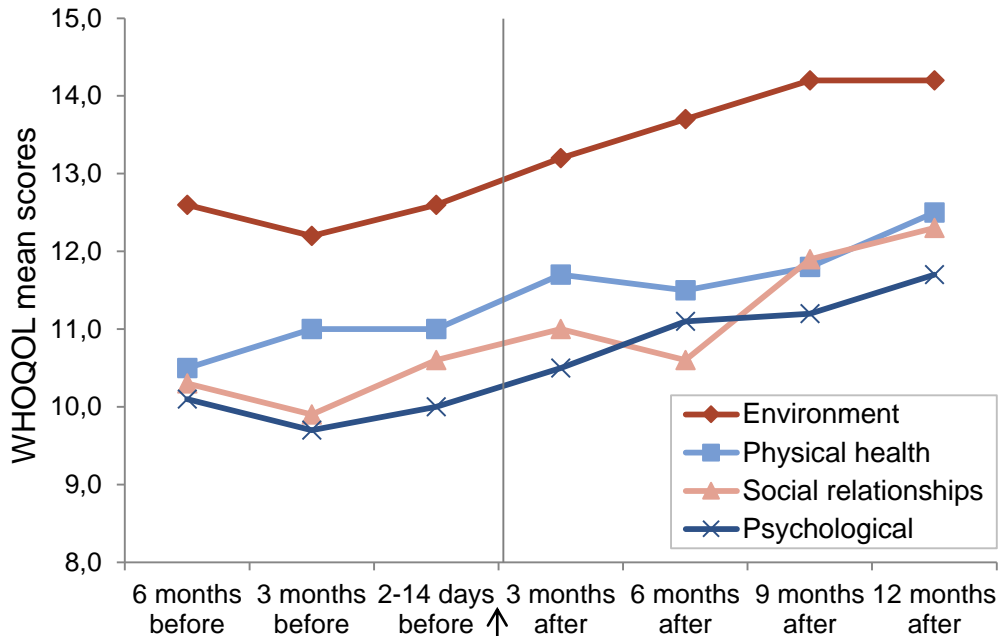
BDI-II score range: 0 - 63

Quality of life

Quality of life is determined by a series of statements about the satisfaction that a person feels regarding different aspects of life. It was measured in this study with the **Brief World Health Organization Quality of Life (WHOQOL-BREF)** questionnaire, which contains four domains.

WHOQOL-BREF Domain Scores Over Time

WHOQOL score range: 4 - 20

General increase in quality of life

Total scores on the WHOQOL-BREF were **significantly higher** after the acquirement of the service dog, indicating a greater satisfaction in life.

Environment domain: Scores of the environment domain mainly started to increase after 3 months with the service dog. Participants' *feeling of safety* was especially improved in this domain.

Physical health domain: There was an observable increase in the physical health domain after only 3 months with the service dog. Participants for example reported that their levels of *energy* and *activity of daily living* were higher.

Social relationships domain: The global increase was unclear for the social relationships domain. Scores were significantly higher only after 9 months with the service dog. Nevertheless, when observing individual items, *satisfaction about personal relationships* and *social support* were a lot better. Only the item regarding respondents' *satisfaction about sexual activities* did not change over time.

Psychological domain: After 9 months with the service dog, the psychological domain scores started to increase significantly. Participants especially reported more *positive feelings* and a better *self-esteem*.

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Mobility

Participants' mobility level, meaning the extent to which they went outside of their bedroom, was measured over time using the **Life Space Assessment (LSA)**.

LSA Total Scores Over Time
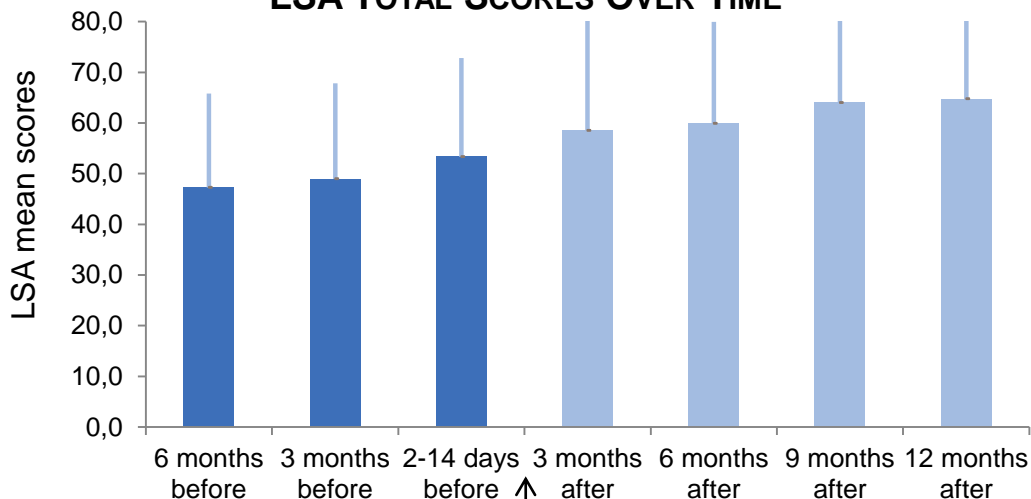
LSA score range: 0 - 120

General increase in mobility

Total scores on the LSA were **significantly higher** after the acquirement of the service dog, indicating that participants went outside more often. Mobility level started to increase from the moment participants engaged in the process of acquiring a dog.

LSA Area Scores Over Time
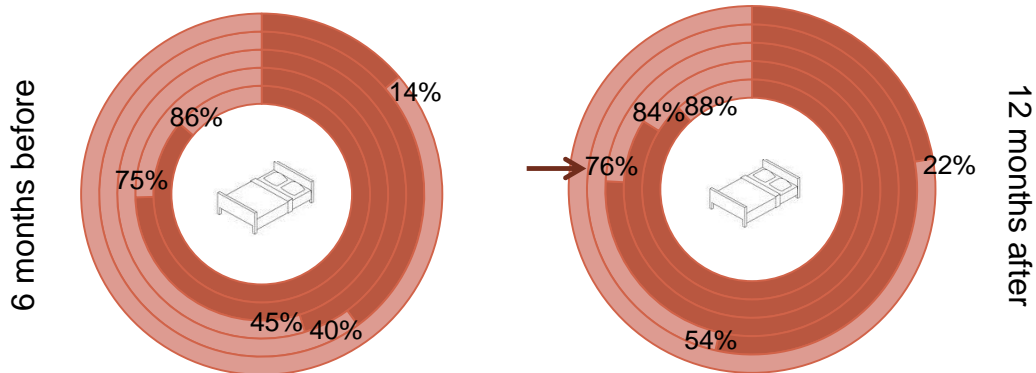
Increase in the third area

Results indicate that participants went **in their neighbourhood** (area 3) more often with their service dog. Over 18 months, the mean score for this area went from **45%** to **76%** of the maximum. This means that, initially, participants were on average going **1-3 times a week** in their neighbourhood, but this rate increased to **4-6 times** after 12 months with the dog.

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Psychosocial Impact

The psychosocial approach focusses on the combined influence that psychological factors and social environment have on one's ability to funct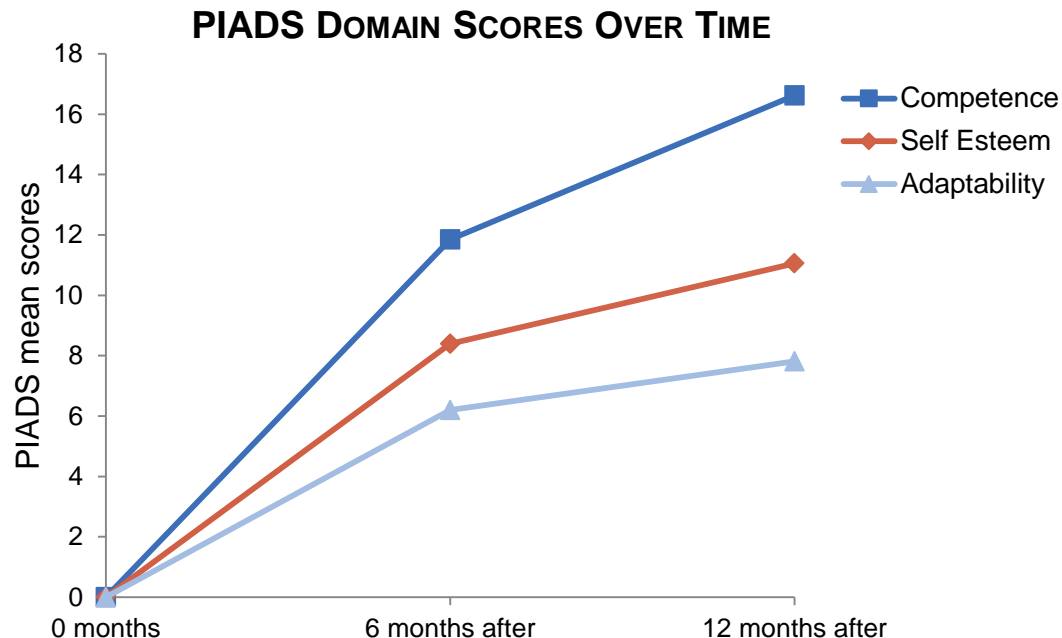ion. The psychosocial impact of service dogs was measured twice during the course of this study, using the **Psychosocial Impact of Assistive Device Scale (PIADS).**

General positive psychosocial impacts

The PIADS scores were **positive for each domain**, indicating that the service dog had a beneficial psychosocial impact on many aspects of life. Competence, self esteem and adaptability were generally improved by the acquirement of the dog. **Scores were even higher at the last follow-up**, which suggests that the effects of service dogs are certainly maintained and sometimes enhanced with time.

After 6 months with their dog, participants on average selected **"+1"** for every item, on a "-3" to "+3" scale. After 12 months, this mean went up to almost **"+2"** for each item.

PIADS DOMAIN SCORES OVER TIME

(Line chart: PIADS mean scores (y-axis, 0 to 18) over time at 0 months, 6 months after, and 12 months after)

- Competence: 0 at 0 months, ~11.9 at 6 months, ~16.6 at 12 months
- Self Esteem: 0 at 0 months, ~8.4 at 6 months, ~11.1 at 12 months
- Adaptability: 0 at 0 months, ~6.2 at 6 months, ~7.8 at 12 months

Items that had the highest mean scores after 12 months…

1. *Feeling safe rather than feeling vulnerable or insecure*
2. *Happiness*
3. *Independence*
4. *Quality of life*
5. *Capability*

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Caregivers

Nineteen partners of veterans with posttraumatic stress disorder also accepted to participate in this study. We collected their perceptions about the impact of the service dogs in their lives, using the **Caregiver Burden Scale.**

Caregivers' observations about their partners

Caregivers' observations **confirmed and specified the outcomes** regarding the effectiveness of service dogs for veterans with posttraumatic stress disorder. Caregivers especially reported an increase in the proportion of veterans that could ***go out and run errands alone and without assistance***. This proportion went from 33-53% before the acquirement of the service dog to 100% after 6 months with their dog. It was also observed that **less participants *spent more than half of the day in bed or in a chair***. The percentage passed from 47-50% to 14-25%.

Caregivers' burden

No significant change was observed over time in the questionnaire scores regarding caregivers' burden. This suggests that the service dog did not make it significantly easier for the veterans' partners. However, this could be explained by the fact that the burden was already reported as low for some items before the acquirement of the service dog. Also, as shared by one caregiver, further effects may be measured with a longer follow-up:

"Our moving forward in the healing process has slowly just begun."

"His quality of life has changed drastically and so has ours. Is it a magic wand? No. Is it a cure? No. However our dog is a tool, one of the best tools he has ever been given to cope with his injuries."

Glossary

Alterations in mood and cognition: Important changes in a person's feelings and ways of thinking. These can occur in several ways, but often present as a neutral or negative mood and a feeling of detachment from other people.

Avoidance: Ways of acting or thinking that demonstrate a desire to avoid unpleasant memories. These can include cases where a person attempts to stop thinking about a traumatic event or to stop doing things that are associated with a traumatic event.

Beck Depression Inventory (BDI-II): A 21-item questionnaire that evaluates the importance of depressive feelings. Each item is rated on a scale of 0 to 3, with higher scores indicating more severe depressive symptoms.

Brief World Health Organization Quality of Life (WHOQOL-BREF): A questionnaire to assess a person's satisfaction regarding different aspects of life. It contains 26 questions, yielding altogether four domain scores. Each item is rated on a 5-point scale in which '1' indicates low, negative perceptions and '5' indicates high, positive perceptions.

Cognitive intrusions: Recurring memories of a traumatic event, which occur frequently and cause great distress to the person. It can be repetitive memories, distressing dreams or physiological responses triggered when the person finds him/herself in a situation that reminds him/her of the trauma.

Caregiver Burden Scale: A questionnaire that assesses perceived burden among people caring for others with disabilities. Two of its subscales were selected for the purpose of this study: The Concern for the Care recipient's Well-Being (CCWB) and the Impact on the Caregiver's Social Life (ICSL). Each subscale respectively contains 6 and 17 items.

Hyper-arousal: Alterations in the activation and reactivity of a person. These include symptoms such as anger, difficulty concentrating, memory loss, hyper-vigilance, sleep disturbances and exaggerated startle response.

Glossary

Life Space Assessment (LSA): A questionnaire that collects information about mobility habits in five areas: within the home, around the home, in the neighborhood, in town, and outside of town. Respondents are asked if, over the last four weeks, they attained each of the five levels, at what weekly frequency, and whether assistive devices were used or human assistance was needed. From a total of 20 items, five scores are generated.

Pittsburgh Sleep Quality Index (PSQI): A questionnaire of 21 items that assesses sleep quality and disturbances over one month, generating seven components. Individual items are scored on a 3-point scale.

Posttraumatic Stress Disorder Checklist for military (PCL-M): A self-report checklist of posttraumatic stress disorder symptoms containing 17 items. Respondents indicate the extent to which they have been bothered by a particular symptom over the past month, by rating each item from 1 ("not at all") to 5 ("extremely").

Psychosocial Impact of Assistive Device Scale (PIADS): A self-report measure of the impacts of a rehabilitative device (i.e. the service dog) on competence, adaptability, and self-esteem of users. It contains 26 items, each rated on a 7-point scale ranging from -3 ("maximum negative impact") to +3 ("maximum positive impact").

Sleep disturbances: General factors that can disrupt a person's sleep. These include: have to use the bathroom, cough, too cold, too hot, bad dreams, have pain, cannot breathe comfortably, and wake up in middle of the night or early morning.

Sleep efficiency: The number of hours slept divided by the number of hours spent in bed.

Sleep latency: Time spent in bed before a person falls asleep.