International Working Dog Conference 2017

Effects of a dog-assisted intervention in soldiers with PTSD

Lieutenant Colonel (VC) Dr. Christiane Ernst
Commandant
Since the beginning of Bundeswehr missions abroad, the number of military personnel suffering from posttraumatic stress disorder (PTSD) had continuously increased.

2014 a total of 1,697 treatments of PTSD cases, to include 204 new cases (+25.6 % compared to 2013)

2015 a total of 1,750 treatments of PTSD cases, to include 235 new cases.

“What helps here is to find the right method of treatment ... and to be open for new approaches at all times ...”

Commander (MC) Dr. Preuß, Bundeswehr Central Hospital Koblenz
Origins of Dog-Assisted Work

- Development of the relationship between humans and animals
- Systematic employment of dogs in a psychotherapeutic setting since the 1960s
- About 100 scientific studies on the effects of interaction between humans and animals
- Increased employment also in therapeutic and social work
"By shortly waggling its tail, a dog is capable of expressing more motions than any individual during long hours of talking"
Louis Armstrong

- Unbiased
- Authentic
- Different communication
  - no need to talk
  - less prone to injuries
  - always open and honest
- High challenging potential with respect to physical contact and affection
- Reassurance
- Integration
- Distraction
- Motivation
**Effects:**

**Emotional-psychological level**
- Communicate a feeling of warmth, affection, joy and confidence
- Feeling of being needed without making any assessment/requirement
- Reduce the feeling of loneliness
- Communicate a feeling of safety
- Promote self-confidence
- Increase self-esteem
- More confidence in oneself and one’s own skills
Effects:

Social level:

• Assumption of responsibility
• Development of empathy
• Promotion of social behavior
• Function as social catalyst
• Openness toward the outside world, enlargement of the social environment
**Effects:**

**Physical-cognitive level:**

- Stress reduction and relaxation
- **Stimulation of the Oxytocin system**
  - Feeling of calmness, confidence, safety, love
- **Proven reduction of "stress hormones"**
  - (cortisol, adrenalin, …)
- Positive effect on blood pressure and heart rate
- Promotion of the ability to concentrate
Selection of Service Dog Teams and Planned Intervention Units
Effects of a dog-assisted intervention during guideline-oriented psychotrauma therapy

Participants

- 30 soldiers with PTSD having psychotherapy treatment at Bundeswehr Central Hospital Koblenz

- Control group (to be surveyed until April 2017) of 30 soldiers with PTSD and no dog-assisted intervention

Selection of patients

Recruitment through information
Diagnosis of deployment-related PTSD
Patients from all three phases of guideline-oriented psychotrauma therapy
Voluntariness

Exclusion criteria

Allergy to the coat of dogs
Fear of dogs
Effects of a dog-assisted intervention during guideline-oriented psychotrauma therapy

Conduct
• Dog-assisted intervention 1x per week (3 hours) over a period of 4 weeks in addition to the regular treatment at Bundeswehr Central Hospital Koblenz

• Each patient was supported by a certified team consisting of a dog handler (soldier, previous PTSD training) and his/her dog;

• a medical specialist was available on the premises at all times for emergencies

• Interaction included activation modules and slow-down module (no fighting or dragging games)
Effects of a dog-assisted intervention during guideline-oriented psychotrauma therapy

Data

4 weeks before, directly at the beginning and at the end of intervention and 3 months later:
- state of health (Hopkins Symptom Checklist)
- loads and relation with therapist

prior to each intervention unit:
- state of health
- consumer behavior
- Perceived Stress Scale

the day after each intervention unit:
- state of health
- trust in dog handler
- STEP (psychotherapeutic factors)
Effects of a dog-assisted intervention during guideline-oriented psychotrauma therapy

Goal

• Creation of a robust data situation on the short- and medium-term effects
• Improvement of the guideline-oriented therapy of traumatized soldiers by dog-assisted intervention with regard to duration, effectivity and sustainability
**Stress Load**

**PSS (Perceived Stress Scale)** – current stress load (to feel unable to solve problems, to have no control), measured on the day before the intervention unit

No significant decrease in the current stress load, but a downward trend

![Graph showing stress load over weeks](image)
Negative mental well-being directly before and on the day after the intervention unit (1-4) (significantly better feeling after intervention unit 1, 3)
Consumer Behavior

Stimulants

- Cigarettes
- Alcohol
- Coffee

Week 1: Cigarettes - 20, Alcohol - 10, Coffee - 5
Week 2: Cigarettes - 20, Alcohol - 10, Coffee - 5
Week 3: Cigarettes - 10, Alcohol - 5, Coffee - 5
Week 4: Cigarettes - 20, Alcohol - 10, Coffee - 5
Good relationship with the dog handler on the day after (1-4), significant improvement (t1-4), and also less problems in regard to contact with the dog.
"My interaction with the dog made me find more peace and quiet. In addition, I regained the confidence not to do everything wrong time and time again. The dog handler is a very even-tempered person. His calmness passed on to me, and he never asked me something I did not want to answer. He got fully involved with me and always stood by my side. I am very grateful to him!"
"The dog accepted me the way I am. There was no need for me to pretend. Personally, I had the feeling not to be under observation and I also was not under pressure to make everything perfect. I was relaxed and in full command of my situation and I was sure that there was nobody evaluating me. And most importantly: I was in no way AFRAID of the person opposite! (for the very first time in a very long time)."
"The dog has had its effects on me in different ways. From physical closeness, which I could no longer accept from other human beings, to communication with the dog, which knew exactly how I was feeling. For the first time, there was a basis of trust again between me and another creature."
"I slept much better after the day of therapy. The dog’s attention made me bring down my need for security. And I could open up for the walk which I enjoyed as much as nothing in a long time."
"I came and was immediately at home. I am feeling well and safe when the dog is close by. It is a comforting feeling to have the dog with me. It gives me back a “joie de vivre”. I have not felt in a very long time. My illness and my problems are being pushed well back. I am feeling safe and protected."
"I am feeling completely relaxed and as if there were no problems or something else. I even laughed more often and simply let myself go. The feeling of being happy was overwhelming; I had not experienced something like that in a very long time. It is simply indescribable."
Captain Ira Schöfmann
Center for Mental Health, Bundeswehr Central Hospital Koblenz, Germany

Lieutenant Colonel (VC) Dr. Christiane Ernst
Bundeswehr School of Dog Handling, Ulmen, Germany

PD Dr. Andrea Beetz
Department für Behavioral Biology, Vienna University, Austria

This study has been carried out as part of a research project (research number 837.364.14 /9603) for the Bundeswehr Medical Service