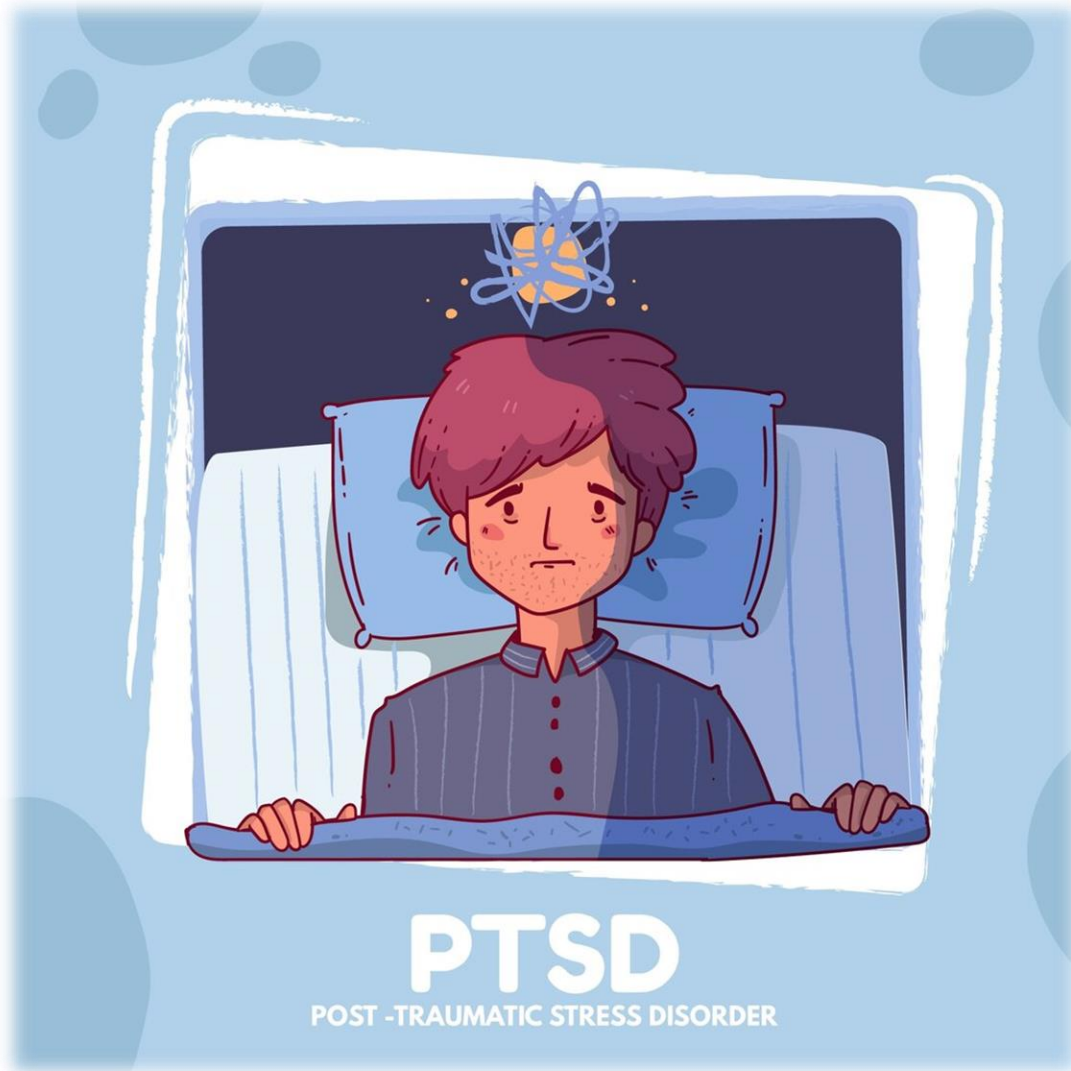




AI generated

The effects of PTSD-assistance dogs' work on their salivary cortisol levels and their handlers' Quality of life

K. Gerwisch, K. Weissenbacher,
M. Proyer, R. Palme, L. Huber*



= anxiety disorder after exposure to a critical life event or severe trauma perceived as life threatening

- Re-experience
- Avoidance, numbing
- Hyperarousal

(Glenk & Kothgassner, 2017; Institute of Medicine of the National Academies, 2006)

PTSD-assistance (signal) dogs

Reducing the impact of specific symptoms

- Tactile stimulation, DPT
- Alerting/interrupting
- Blocking
- Waking up

(Assistance Dogs Australia, 2022; Lloyd et al., 2019)

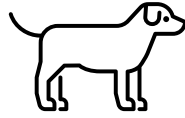


State of research

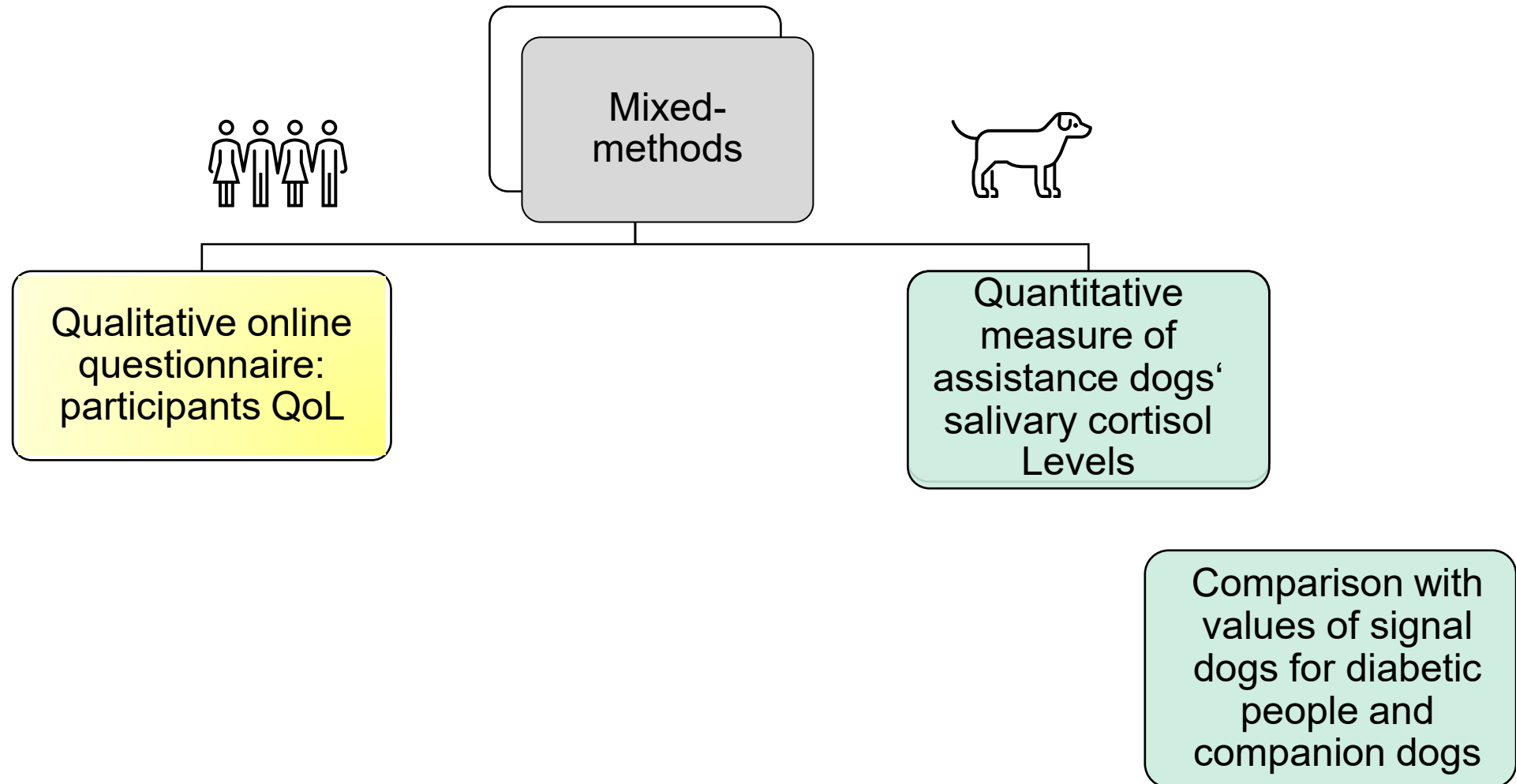


- Studies with war veterans
 - Overall symptoms of PTSD were lower among veterans with assistance dogs (O'Haire & Rodriguez, 2018)
- Studies about impact on QoL of civilians lacking
- No investigations in Europe

State of research



- Studies with search and rescue dogs, companion and shelter dogs (Cobb, Iskandarani, Chinchilli, & Dreschel, 2016; Wojtaś, Karpiński, & Czyżowski, 2020)
- Significantly higher salivary cortisol levels on therapy days in AAT and AAA (Haubenhofer & Kirchengast, 2007)
- No sign. differences in salivary cortisol levels of diabetic-signal dogs, therapy dogs and companion dogs (Bruckner, 2019)



Research questions



- 1) Which impact do assistance dogs have on the QoL of their handlers with PTSD?
- 2) Are salivary cortisol levels of PTSD-assistance dogs higher than those of companion dogs and diabetic-signal dogs due to their daily workload?

Hypotheses



- 1) Positive impact on participants' condition
- 2) PTSD-assistance dogs' cortisol levels
 - higher than those of companion dogs
 - similar to those of diabetic-signal dogs

Sample

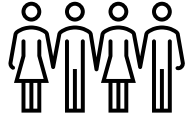


- N= 24 PTSD patients with certified assistance dogs → online questionnaire
- N= 9 certified assistance dogs
 - male + female (neutered)
 - Purebreds/mixed-breeds
 - 1-10 years old

Control groups: companion dogs (N=8), certified diabetic-signal dogs (N=9)

→ existing data (Bruckner, 2019)

Material and methods



Qualitative online questionnaire

- Based on Capabilities Approach (Nussbaum, 2006) & standardized instruments (WHOQOL-BREF, EQ-5D-5L)
- Open questions
- Depicting personal experiences

(Tedeschi & Jenkins, 2019)

Material and methods



Collection of PTSD-assistance dogs' saliva

- Stress → endangered homeostasis (Broom & Johnson, 1993)
- Prolonged high cortisol levels → chronic stress, disease
- Measuring cortisol in saliva
 - Non-invasive

Material and methods

- Saliva taken by handlers (Cortisol-Salivette[®], SARSTEDT AG & Co, Germany)
- Detailed instructions (video, checklist, chart)
- 7 days (morning – noon – evening)
- Samples sent back frozen
- Analysis (Institute of Biochemistry Vetmed)



Results

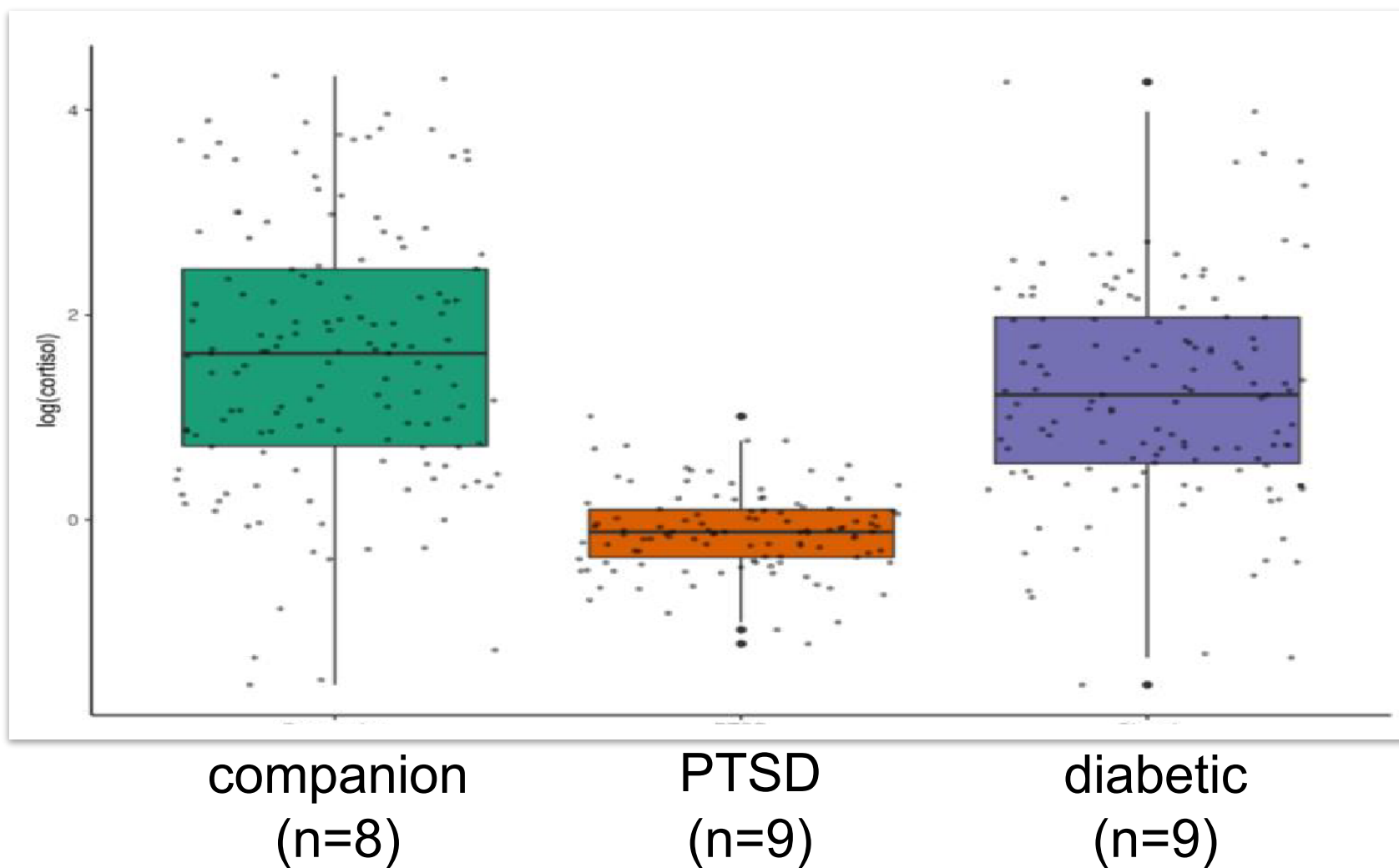
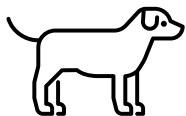


- Improving health
- Stability
- Responsibility
- Social contact

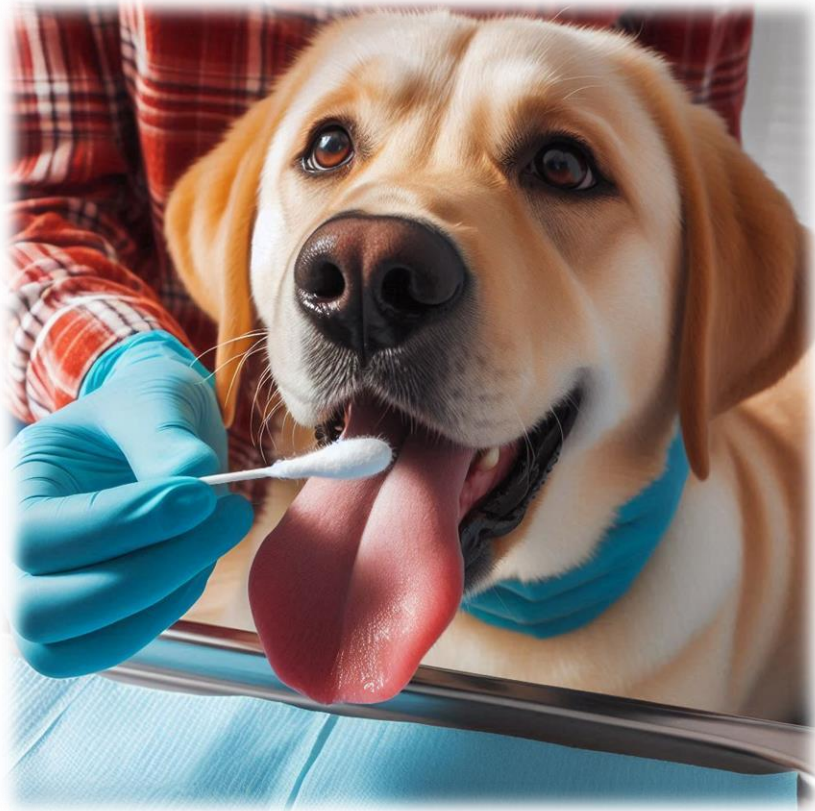
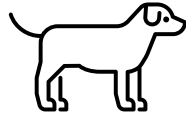


- Unwanted attention
- Access issues
- Trigger situations

Results



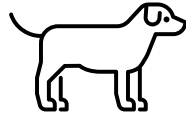
Discussion



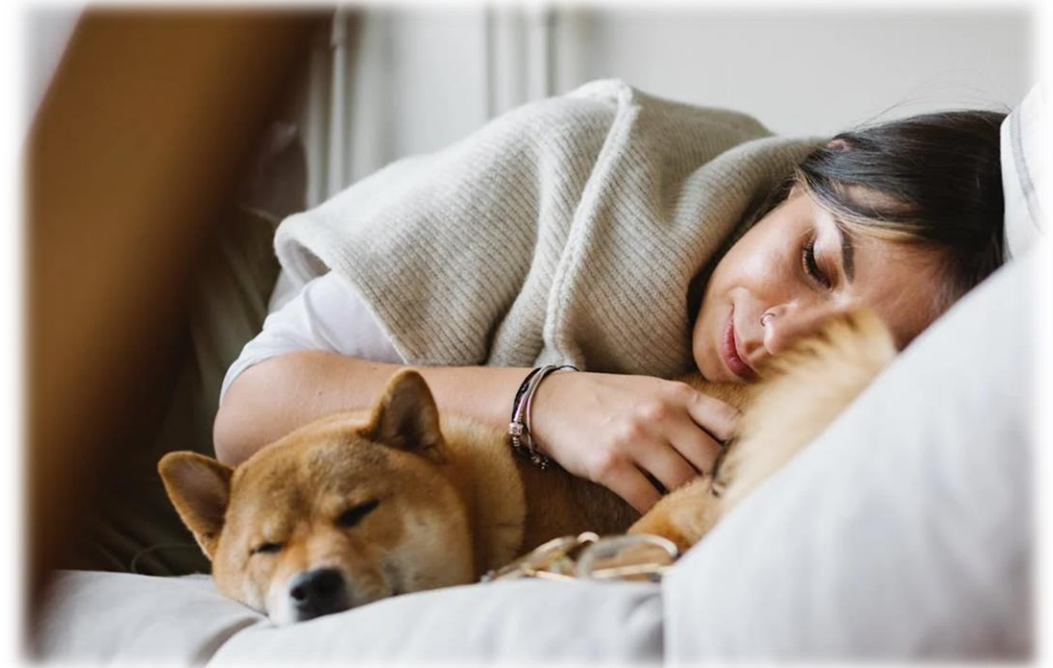
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- Significant effect of dogtype on cortisol levels
(≠ Bruckner, 2019)
- Saliva sampling, instructions, data analysis
(= Bruckner, 2019)
 - Seasonal variation of cortisol concentration
(Persson et al., 2008)
 - Circadian rhythm of cortisol (Persson et al., 2008)

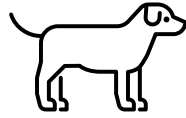
Discussion



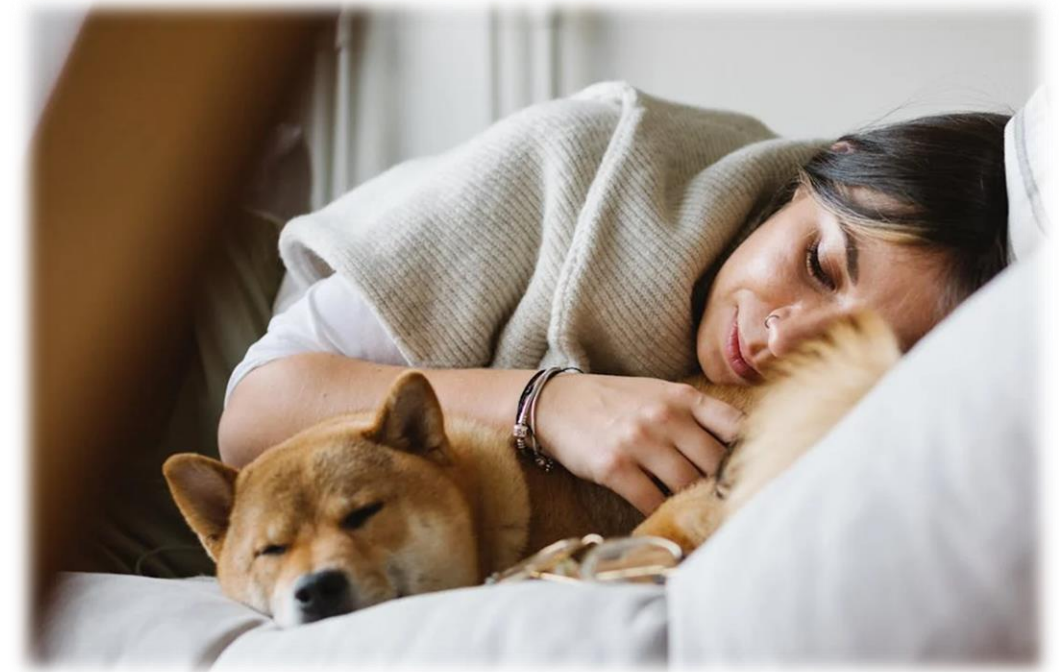
- Significant effect of attachment on stress (Schöberl et al., 2012)
 - Constant company and body contact of PTSD-assistance dogs → closer bond
 - Assistance dogs as social partners → quality of bond affects dogs' salivary cortisol levels (Schöberl et al., 2012)



Discussion



- Increased oxytocin levels through body contact (Nagasawa et al., 2015)
 - Mental and physiological relaxation in humans (Beetz et al., 2016)
 - Close relationship → larger effect (Beetz & Bales, 2016)
 - Human as social buffer (Buttner, 2016)



PTSD-assistance dogs improve their handlers' QoL, but new (social) challenges in everyday life might arise

In this study PTSD-assistance dogs' salivary cortisol levels were lower than those of the control groups

Very close attachment bond between human and dog

→ human as social buffer

→ dog as social support



AI generated

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Thank you!



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