The role of human-animal relationship for alpacas' welfare

Alpacas (*Vicugna pacos*) representatives of **South American Camelids** (SACs)

One of four members of SAC species

several thousand alpacas in Poland
from 2021 **alpaca on the list of farm animals in Poland**

used for **fiber production**
and as **therapeutic animals**

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AIM OF THIS WORK: to **review the indicators** from our studies that can be used **to assess a human-alpaca relationship from an animal welfare perspective**

STRESSOR

human contact, husbandry procedures, social changes/isolation, restraint,…

STRESS

→ ***behaviour changes***

→ ***neuroendocrine changes***

coping style: proactive **(SAM) /** ***reactive*** **(HPA)**

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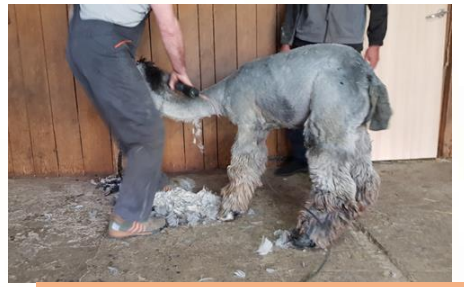
Human impact on a farm animal can be measured by:
direct contact in neutral conditions and an animal's response during routine husbandry procedures

testing **human-animal relationship in alpacas**

human approach at pasture

Flight distance (FD) toward humans was measured



Stress related behaviours and neuroendocrine indicators were assessed

shearing procedure

body condition examination

Stress related behaviours and body language signs were assessed

Budzyńska et al. 2024; Budzyńska et al. 2025 in prep.; Kapustka et al. 2023

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Human impact on a farm animal can be measured by:
direct contact in neutral conditions and an animal's response during routine husbandry procedures

→ *the alpacas that had a **short flight distance (FD) from a familiar person** at pasture, also had a **shorter FD from an unfamiliar one** ($r = 0.543$, $p < 0.001$)*

a shorter FD from humans was NOT connected with a less intensive stress response during shearing

BUT

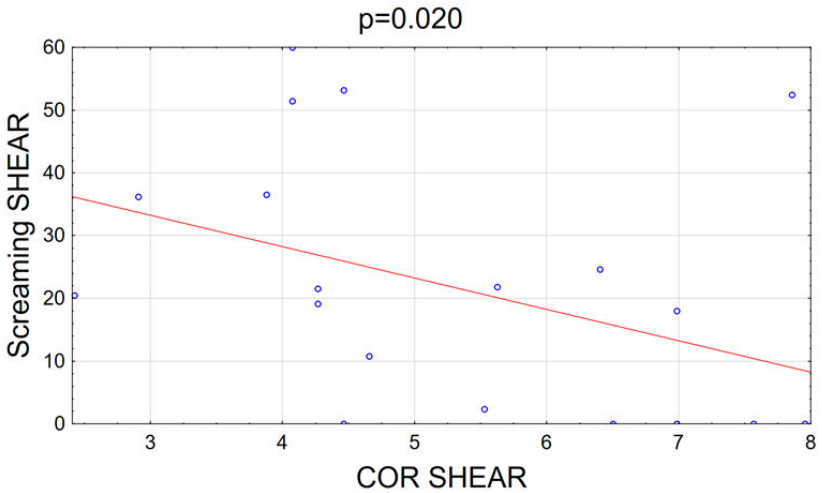
*there were **negative correlations** between:*
***FD from the familiar person at pasture** and the **number of abrupt movements** ($r = -0.401$, $p = 0.019$) and the **number of vocalisations** ($r = -0.403$, $p = 0.018$) **during shearing** (lying method)*

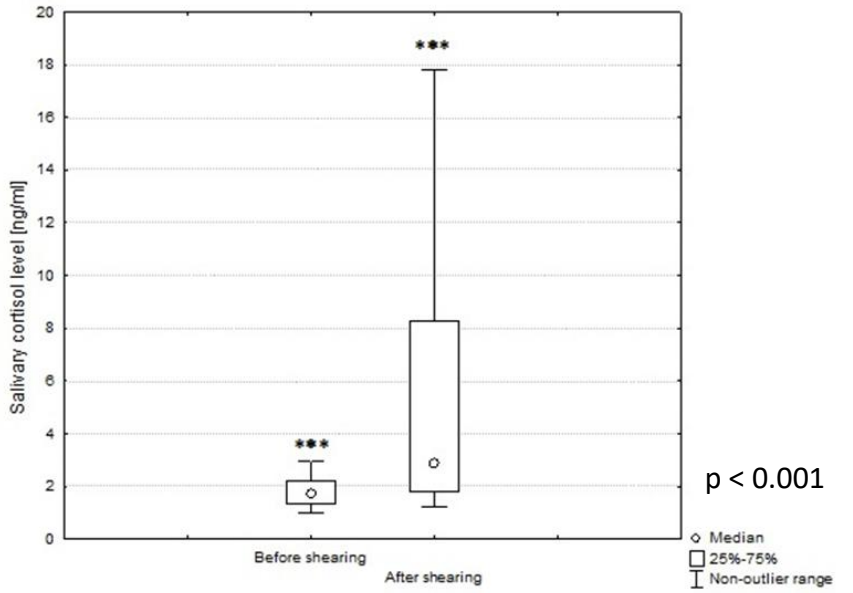
Animals with **shorter flight distance** are more willing to show **aversive reactions** (→**ACTIVE COPERS**). Probably the alpacas with higher fear of people reveal freezing response in stressful situations, and do not show active defense reactions during shearing (→**PASSIVE COPERS**)

Human impact on a farm animal can be measured by: **an animal's response during routine husbandry procedures**

Stress related behaviours (**screaming, abrupt movements, spitting**) were observed during **alpacas' shearing**

The most frequent stress response was **screaming** during shearing alpacas,
by both the **lying** and **standing** methods





*the SHEARING (**standing method**):*
Screaming negatively correlated with blood cortisol (r=-0.515)
*→ possibility of displaying an **ACTIVE COPERS strategy***
(lower HPA activity – active fight/flight response) during shearing
LOWER CORTISOL - MORE STRESS RELATED BEHAVIOUR

Budzyńska et al. 2024; Kapustka et al. 2023

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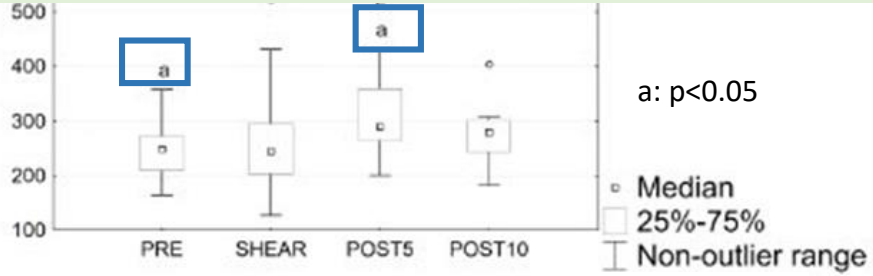
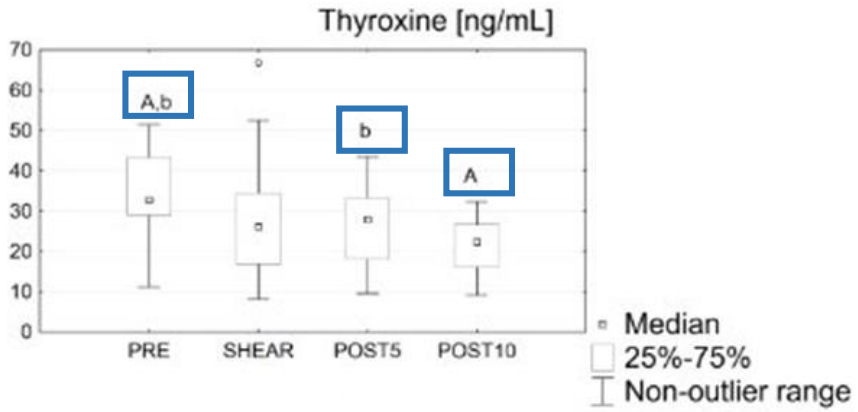
Human impact on a farm animal can be measured by: **an animal's response during routine husbandry procedures**

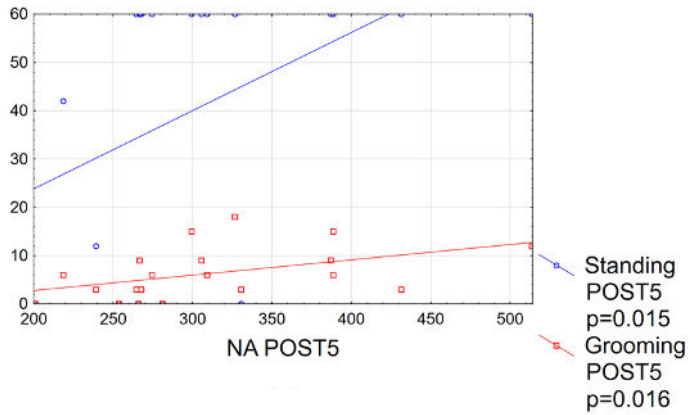


Noradrenaline [pg/mL]

A few days after SHEARING (standing method):
increased noradrenaline & **decreased thyroxine**,
compared with before SHEARING
And no changes in cortisol, dopamine and serotonin levels



A: p<0.001, b: p<0.05



On the 5th day **after shearing**, **noradrenaline** was positively associated with **standing** (r=0.537) and **grooming** (r=0.531)

HIGHER NORADRENALINE - MORE RESTLESS BEHAVIOUR

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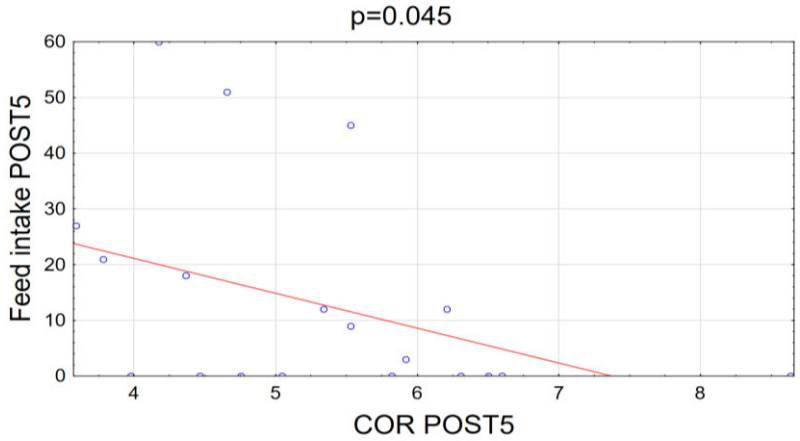
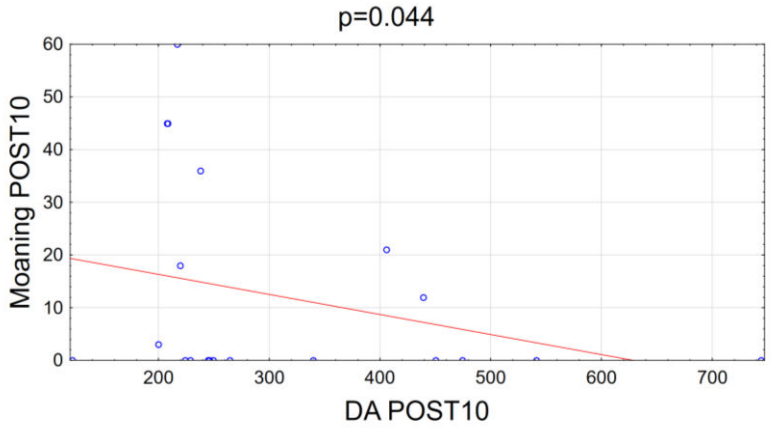
Human impact on a farm animal can be measured by: **an animal's response during routine husbandry procedures**

On the 5th day **after shearing (standing method)**, **cortisol** negatively associated with **feed intake** (r=-0.453)

LOWER CORTISOL – MORE FEEDING





On the 10th day **after shearing**:
LOWER DOPAMINE - MORE MOANING
r=-0.454

Budzyńska et al. 2024

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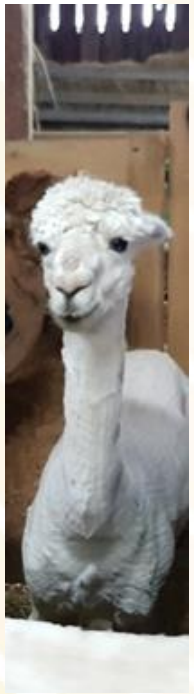
Human impact on a farm animal can be measured by: **an animal's response during routine husbandry procedures**

While testing behaviour response to handling **during body condition examination**, the alpacas **did not show many stress related behaviours** (vocalisation, kicking, spitting)



Curiosity ? **Anxiety** ?

OR **Warning before spitting** ?

Some difficulties during **introducing the animal to the examination box** and **body language signs of anxiety** were noticed

Budzyńska et al. 2025 in prep.

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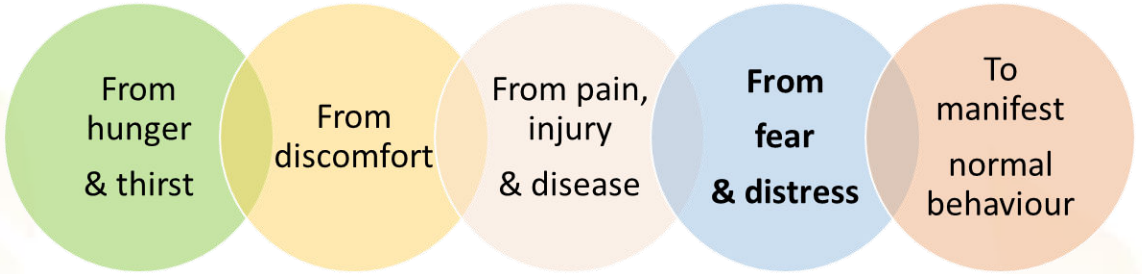

- **Human-animal interaction plays** an important role in alpacas farming and **optimising their welfare**
- A **negative human-animal relationship** can **impair animal welfare** through **fear** and **stress** as underlying mechanisms
- **Practical applications** to achieve a **positive HAR** and a positive perception of humans by animals could be better **recognised** and **utilised** and thereby **benefit animal welfare**

Knowledge about alpacas' behaviour and body language

Positive attitude of caretaker
Good husbandry practices

Using positive training techniques, e.g. desensitisation, positive reinforcement

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THANK YOU FOR YOUR ATTENTION

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