

Influence of an animal welfare program on the emotional state profile of military working dogs in a Brazilian Army unit



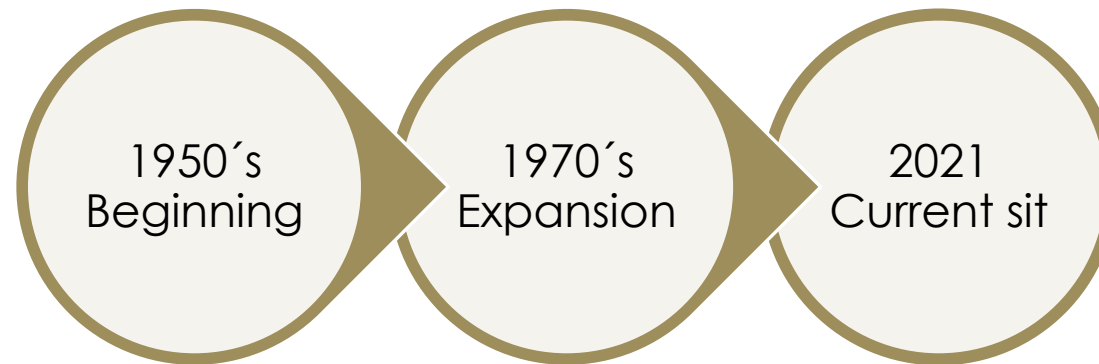
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Army Health School
Brazilian Army



Introduction

- Military Working Dog (MWD) in Brazilian Army
 - Long history:



Introduction



1950's
Parachutist
troops



2010
Reproduction
Program



2021
Today



1970'
Army Police



2010's
Int Sport
Events



Introduction

- Animal Welfare practices still need investigation
- Emotional State Profile
 - Method used for shelter animals
 - Barnard et al. (2014)
 - Proposed for MWD
 - Silva and Santana (2018)
 - Soares (2018)



Objectives

- Examine the influence of an AW program on the emotional state profile (ESP) of MWD kenneled in a Brazilian Army unit





Materials and methods

Unit selected

- Region: Southeast Brazil
- City: Rio de Janeiro
- Army Unit



Animals

- 14 dogs
 - M & F
 - 2-10 years old
 - Rott, GS and BM
 - Protection and drug detection work



Experimental design



	Component	Instrument	Subject	Reference
Opinative evaluation	-	Structured questionnaire	Handlers	-
Animal Welfare evaluation	Clinical Behavior	Clinical Behavior evaluation	Dogs	Overall (2015)
	Work/leisure routine	Records		Silva e Santana (2018) Soares et al. (2018)
	AW indicators	Modified Indicators Protocol		
	Functional performance test	Simplified Standardized Test		Brazilian Army (2019)



AW indicators

- Protocol made for shelter dogs
- Modified
 - Silva and Santana (2018)
 - Soares et al. (2018)



Proposal of a customized animal welfare protocol for military kennels

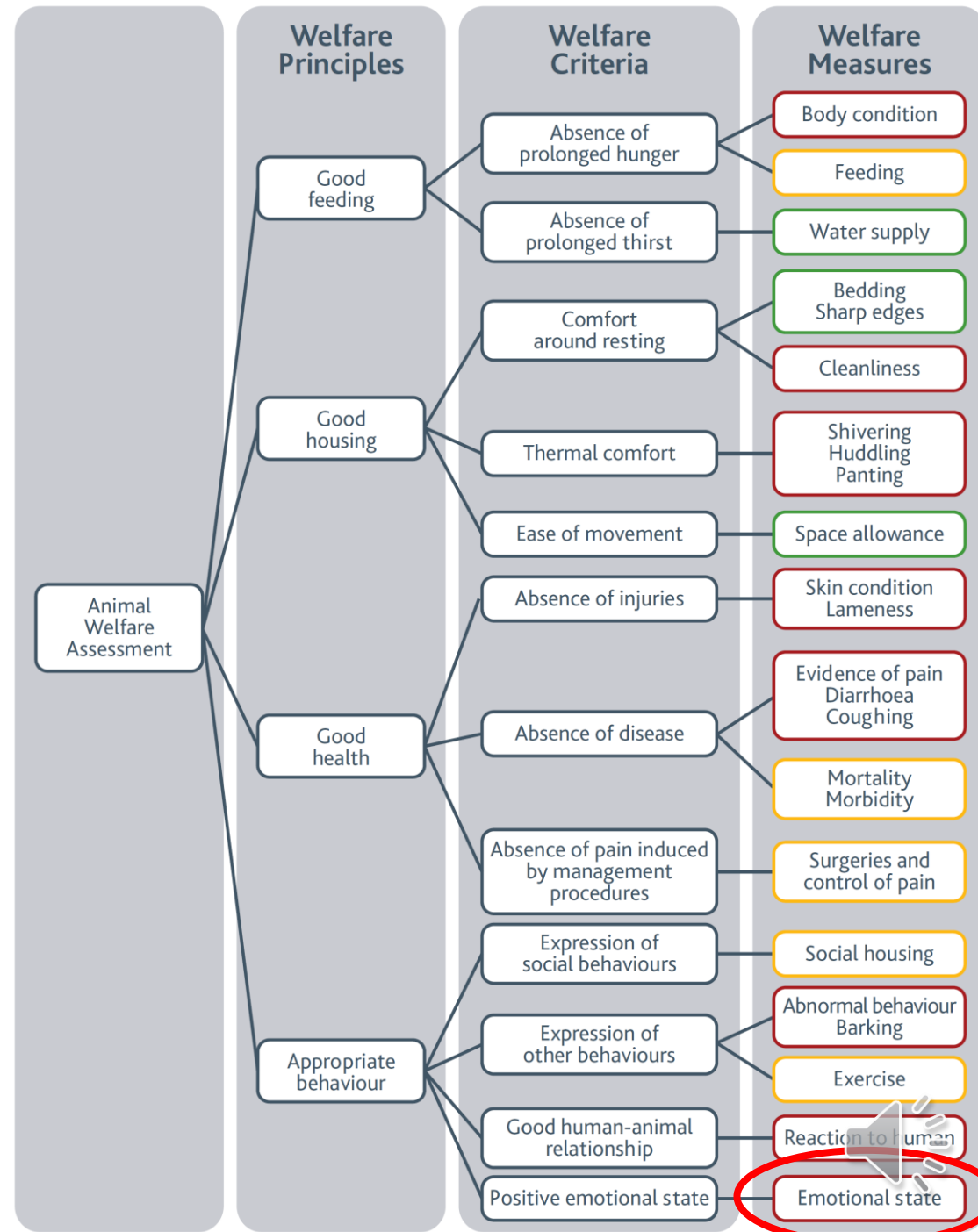
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Indicators

- Emotional State Profile (ESP)
- One of several measurements
- Most direct and instant measurement of welfare



ESP



Adjective	Definition
Playful	cheerful, high spirits, fun, showing play-related behaviour, inviting others to play
Happy	content, pleased, not easy to upset, fits well in its environment
Friendly	sociable toward humans and other dogs, seeks for contact/interaction, shows greeting behaviour
Confident	sure, has good control on its environment, handles stress well, fearless
Nervous	uneasy, apprehensive, highly excitable, shows fast arousal, unsettled
Unsure	insecure, doubtful, hesitant, likely to show conflicting behaviour
Anxious	worried, unable to settle or cope with its environment, signs of distress
Alert	vigilant, inquisitive, attentive to outside stimuli
Boisterous	noisy, bouncy, draws attention, unrestrained, excessive barking
Attention-seeking	attracts the attention of humans, looks for an interaction, calls, most of the time in front of fence (nearer to assessor)
Quiet	silent, unresponsive, vaguely depressed, unwilling to interact with its environment
Relaxed	calm, without worries, easy going, settled in its environment



ESP

- Visual Analogue Scale
- Individual
- 30 sec video

e.g. Playful



Statistics

- Shapiro-Wilk → normality
- Student's t test for repeated measures
- ESP
 - Non-normal
 - Repeated measures ANOVA
 - Bonferroni's t test





Animal Welfare Program

Animal Welfare Program



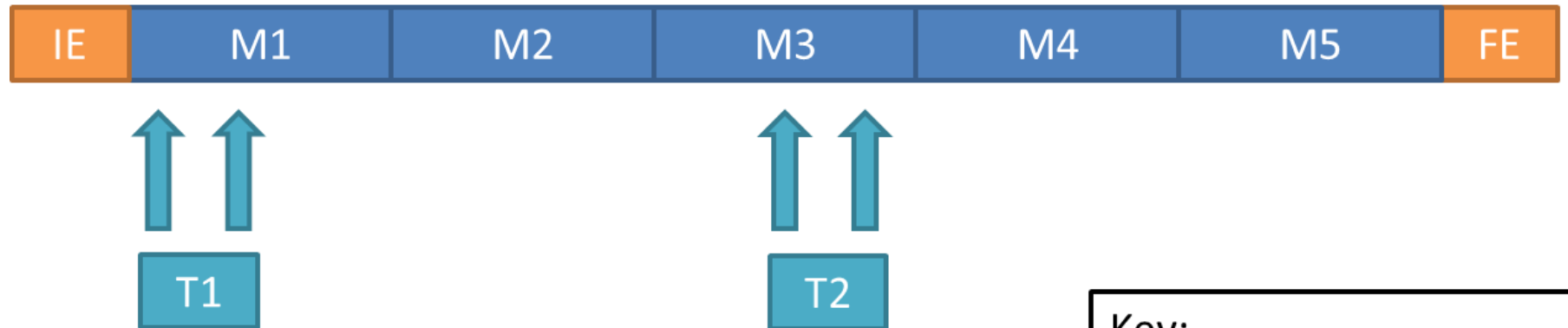
- Based on the initial evaluation
- 5 months duration
- 2 training modules
- Individual evaluation
- Environmental enrichment material



AW Program



Animal Welfare Program



Key:

IE – Initial evaluation
AF – Final evaluation
M – Months
T – Training module



Individual evaluation

- Handler/Dog characteristics
- Behavior advising
- Training advising



Training modules



Module	Matter	Hours
1	Project presentation	2
	Dog behavior applied to military training	4
	Learning in dogs	4
	Military working dogs welfare	4
2	Protection and guard training	6
	Detection training	6
	Training planning	4



Environmental enrichment







Results

Results

- Clinical Behavior
- Working/leisure routine
- AW indicators
 - Kennel
 - Boxes
 - Emotional State Profile





Results



- Clinical behavior
 - Initial evaluation:
 - No severe/treatable problems
 - High arousal with strangers



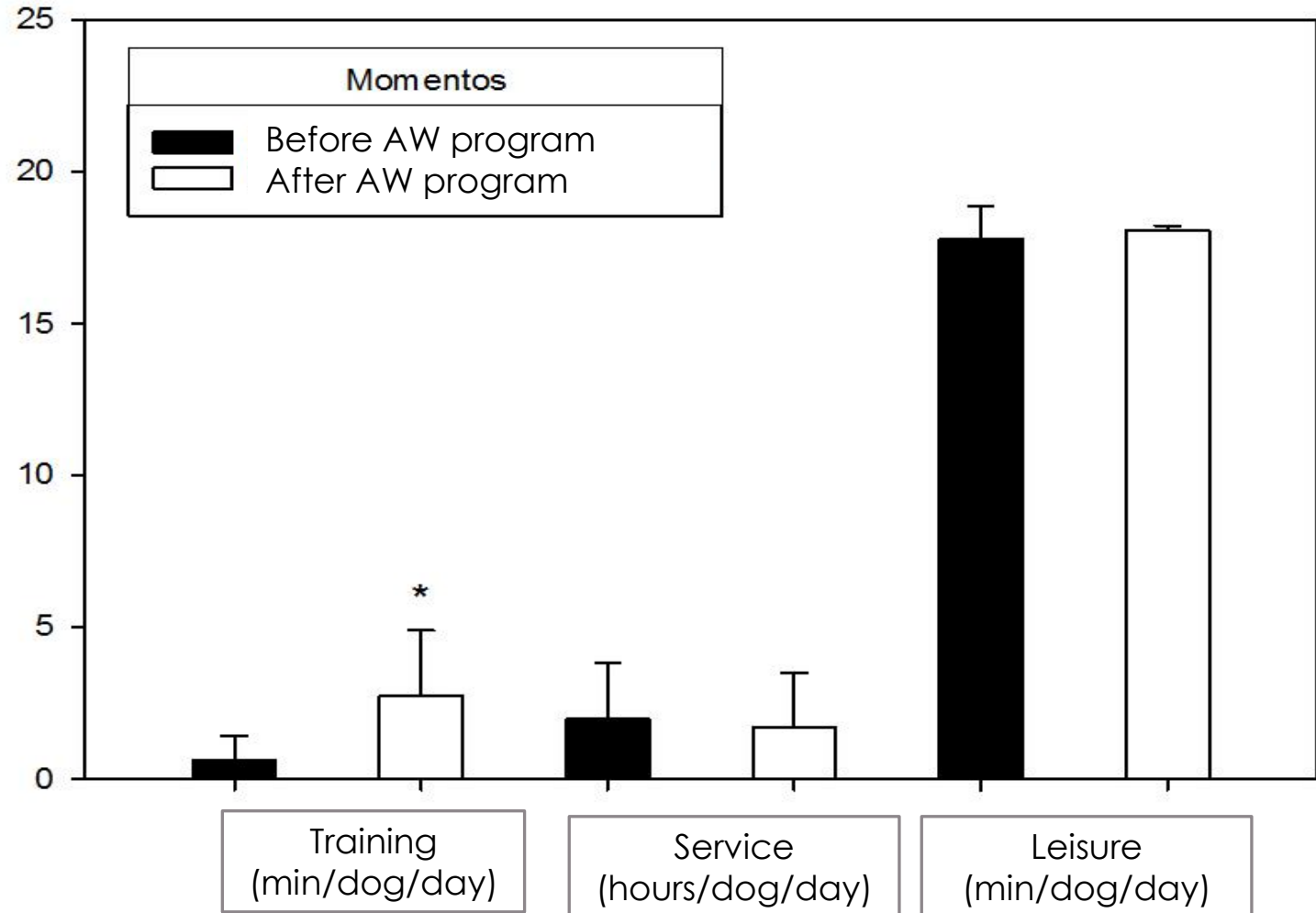
Results



- After 2 months:
 - Supplementary evaluation
 - Acral dermatitis
 - Treated
 - Better handler communication
 - Lowering training requirements



Work/Leisure routine



AW indicators



- Kennel
 - Individual boxes
 - Exercise: 2x/week
 - No deaths/euthanasia → 2 years
 - Regular program vaccination/de-worming
 - Commercial dry food
- Boxes
 - 10,5 m²
 - No beds
 - No sharp edges



AW indicators



Parameter	Barking		Repetitive behavior		Compulsive behavior		Pain evidence		Diarrhea	
	Before	After	Before	After	Before	After	Before	After	Before	After
Animals	50% (7/14)	46% (6/13)	21% (3/14)	23% (3/13)	7% (1/14)	8% (1/13)	0% (0/14)	0% (0/13)	0% (0/14)	0% (0/13)

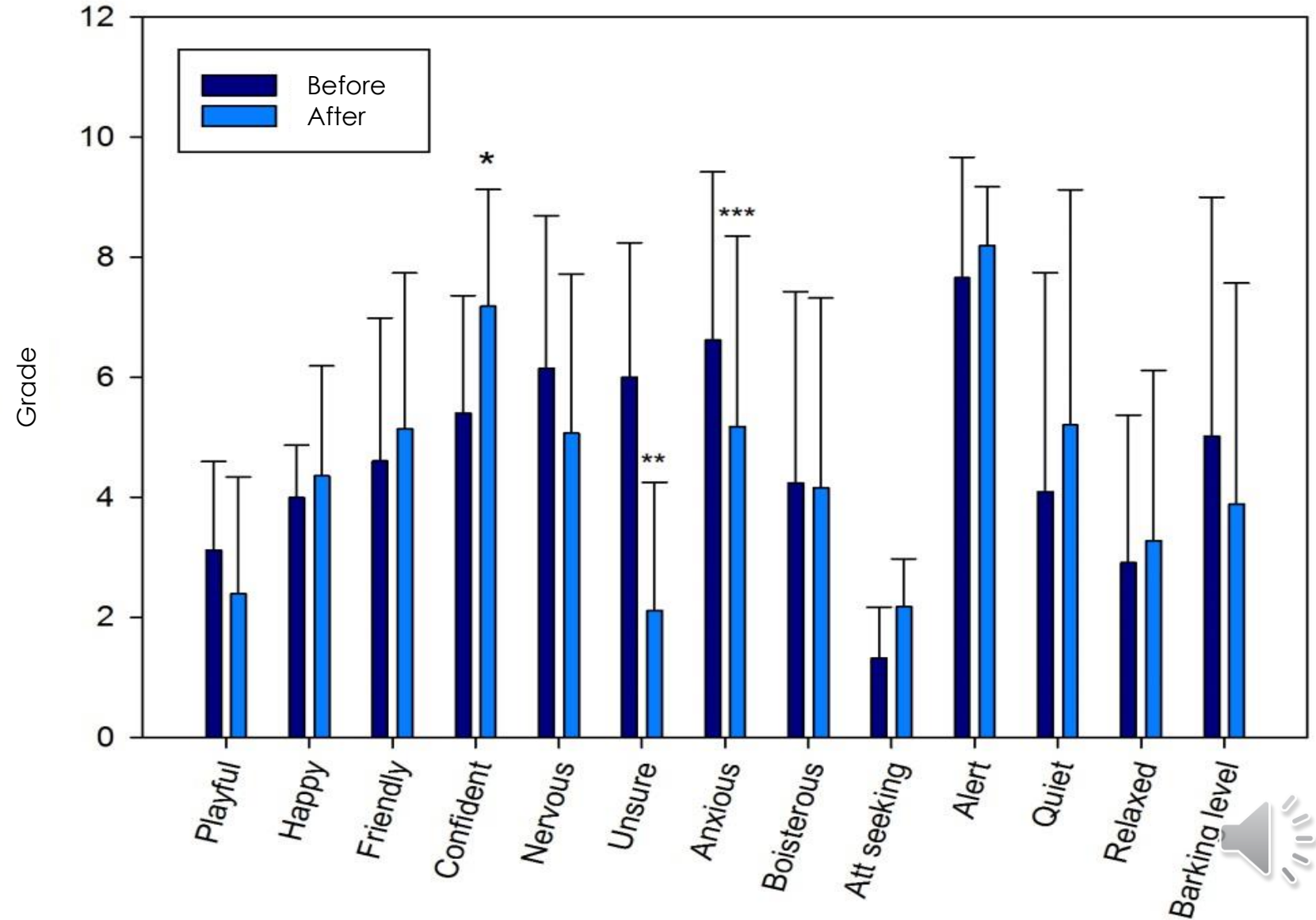


Emotional State Profile





Emotional State Profile



* $p = 0,028$
** $p < 0,001$
*** $p = 0,075$.





Discussion

Discussion

- Two attributes were influenced
- ESP → numerical value has always tended alongside the improvement of the AW
- Despite a relatively long time, the AW program was not able to influence most of the attributes (at least significantly).



Discussion

- An increase in the number of training hours and a special training for local leaders were suggested



Conclusion

- The proposed program was able to influence the ESP of the animals and positively influence the AW, however, improvements on the program are necessary.



Acknowledgments

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Thank you very much

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