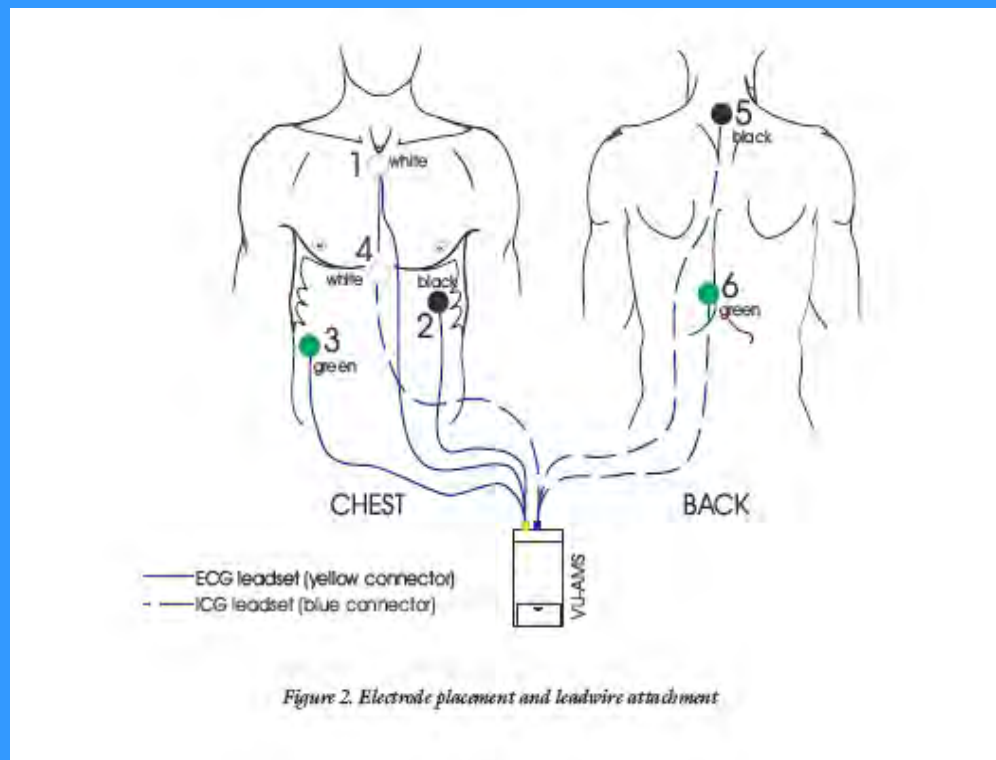


FOF and Psychophysiology





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Bert Busscher

- Experimental psychologist
- VALK co-trainer information on aviation
- Captain B747 KLM



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vrije Universiteit amsterdam 1535



- Introduction
- Why physiology
- Constraints
- What do we measure
- When do we measure
- Design
- Number of subjects
- Results till now
- Discussion



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Why physiology?

- Concordance self-report with physiology
- Diagnostic tool
- Therapeutic value (bio-feedback)
- Evaluation of therapy (Randomised controlled trial)



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Constraints

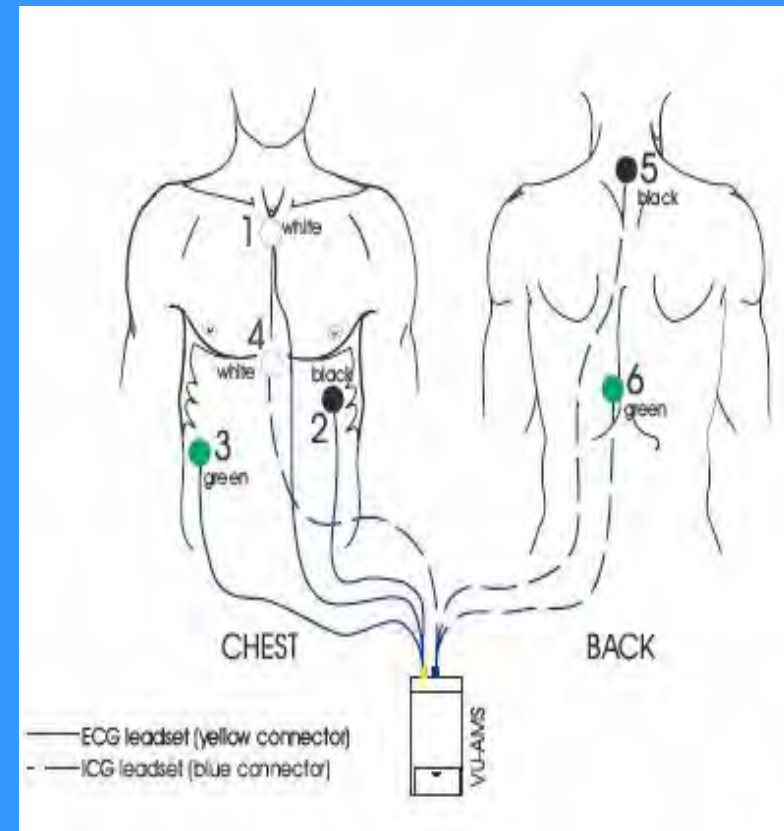
No students

No volunteers

Highly anxious people who seek
treatment for fear of flying

Electro- and impedance cardiogram

- Heart Period (HP)
- Heart Period Variability (RMSSD)
- Pre-Ejection Period (PEP)
- Respiration Rate (RR)
- Respiratory Sinus Arrhythmia (RSA)



When do we measure

- Intake (video)
- Start of two day group therapy (video)
- All exposure moments (in vitro and in vivo)
- Three months follow-up (video)

Number of subjects

Controls no fear	n = 39
Fearful subjects	n = 130
–Completed course	n = 70
–Completed follow-up	n = 25



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Intake: Results till now

- Fearful people report more distress on the neutral ($p < .05$) and stressful ($p < .01$) video, but not in the recovery condition.
- However, HR, RMSSD nor PEP does differentiate between fearful subjects and controls groups.
- Furthermore, HR is significantly higher in the recovery condition in both groups ($p < .05$).



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Follow-up fearful subjects ($n = 25$)

- No significant differences between reactions to video's at intake and follow-up.
- Trend towards lower HR and higher RMSSD in follow-up.

Exposure in vivo

- During return flight significantly ($p < .01$) lower HR than during outbound flight (at multiple measurement moments).
- But no differences regarding RMSSD.



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Thank you for your attention



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