



Professor Richard Brown

Module:

Psychological Foundations of Mental Health

Week 5:

Psychological Therapies: From Behaviour Modification to Behaviour Therapy

Topic 1

The First Wave – Behavioural Psychotherapy

Part 3 of 3

In this topic...

- US tradition of behavioural psychotherapy
- British tradition of behavioural psychotherapy
- *Application of psychotherapy approaches*

Systematic desensitisation in practice (1)



Oostink et al. (2009): Study of 2000 Dutch adults, age 18-93 years



34.8%



30.8%



27.2%



24.3%

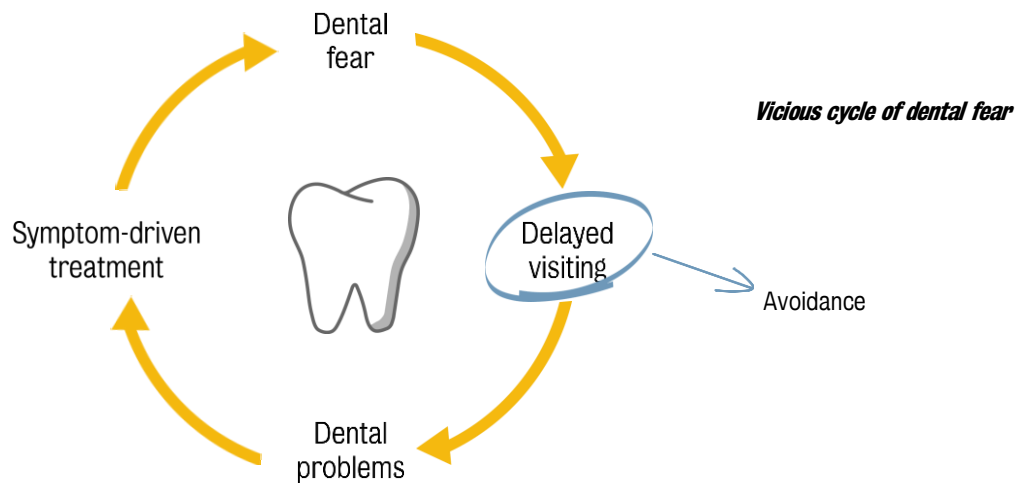
Dental fear 4th most common

A fear becomes a phobia when the fear has a significant impact on the person and their life

3.7% had diagnosable dental phobia

Eur J Oral Sci (2009), Heaton, Leroux, Ruff & Coldwell (2013)

Dental fear - model



Systematic desensitisation in practice (2)

Reduce dental injection fear

Heaton et al. (2013)

Improve the chance of
successful treatmentIntervention was delivered primarily via a computer
Economic advantage *Practical advantage*

- Participants trained to relax
- Work at their own pace
- Could move on when they reported low anxiety

Table 1.

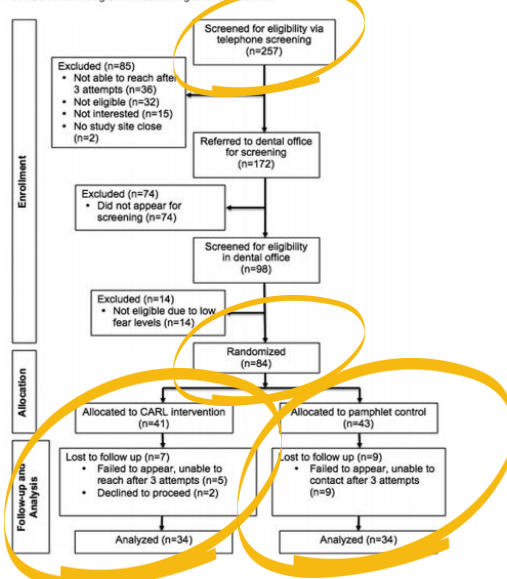
Content of the exposure hierarchy segments

Segment 1	The hygienist explains local anesthetic to the patient, shows the patient the syringe, and explains the reason for the length of the syringe (to see and reach the area of injection).
Segment 2	The hygienist discusses needles, that they come in a sealed, sterile encasing, the length, the flexibility, the need only to inject a little ways.
Segment 3	The hygienist discusses topical anesthetic with the patient. Topical is applied to the patient's tongue to demonstrate its numbing actions. The ability to breath and swallow while numb is demonstrated.
Segment 4	The hygienist applies topical anesthetic to the area in which the injection will be given, and demonstrates to the patient that the area is numb compared with the surrounding tissue.
Segment 5	The hygienist rehearses an actual injection with the patient, but leaves the cap on the needle, so that it is not visible.
Segment 6	The hygienist rehearses an actual injection with the patient without the cap on the needle, but the patient is not actually injected.
Segment 7	The hygienist gives the patient an actual dental injection.

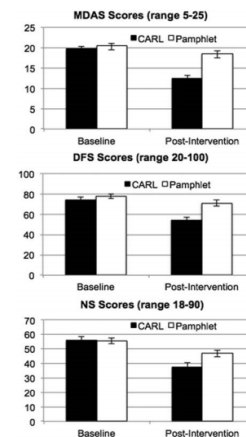
Heaton, Leroux, Ruff & Coldwell (2013), Coldwell et al (1998)

Systematic desensitisation in practice (3)

CONSORT flow diagram for screening and recruitment.

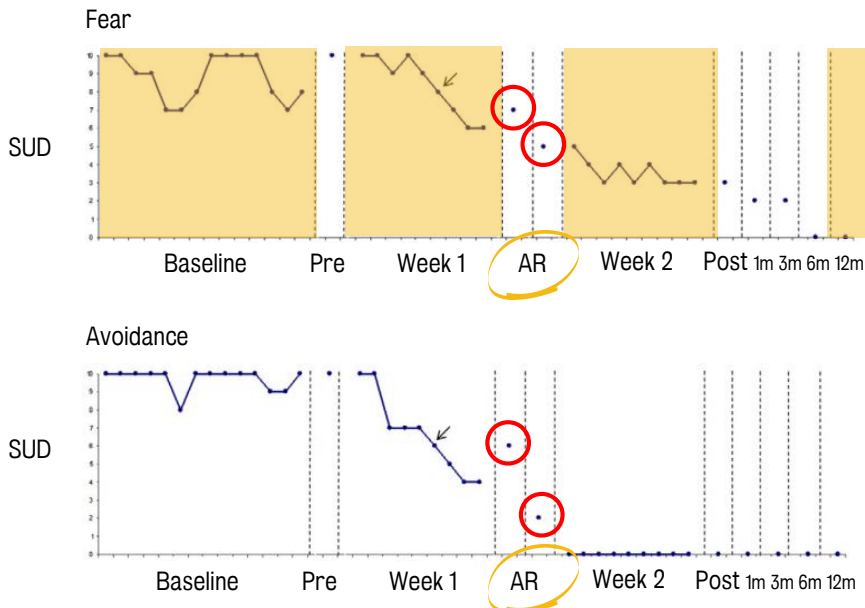


Changes in Modified Dental Anxiety Scale (MDAS; Humphris *et al.*, 1995), Dental Fear Survey (DFS; Kleinknecht *et al.*, 1973), and Needle Survey (NS; Milgrom *et al.*, 1997) scores by condition. T-bars represent standard error of the mean.



Heaton, Leroux, Ruff & Coldwell (2013), Coldwell et al (1998)

Systematic desensitisation in practice (4)



- Single case study
- Cockroach phobia
- Novel use of mobile technology

Different rate of change of different outcomes
(**Response Desynchrony**)

Botella et al (2011)

Topic 1: Behavioural Psychotherapy

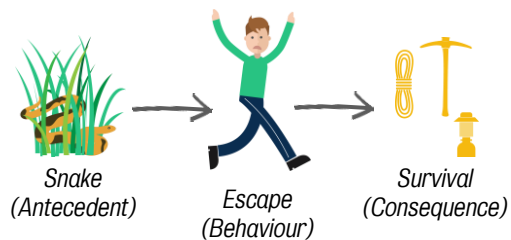
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Escape and avoidance

Avoidance behaviour

Escape

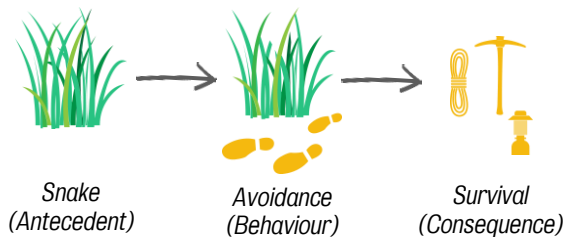
Distance ourselves from unpleasant or aversive event



Avoidance behaviour

Avoid

Response to a situation associated with danger



- Active avoidance – distancing from situation (antecedent) when encountered
- Passive avoidance – avoiding the situation in the first place
- Avoiding a likely event = **adaptive**
- Avoiding an unlikely event = **maladaptive**

Week 5 Psychological therapies: From behaviour modification to cognitive therapy

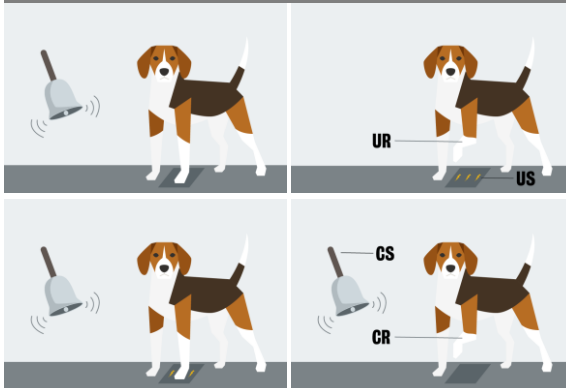
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Behavioural theories of avoidance learning

How do we **learn** to **avoid danger**?
Stimulus-stimulus learning?
Processes based on reinforcement?

Pavlovian conditioning explanation of avoidance learning



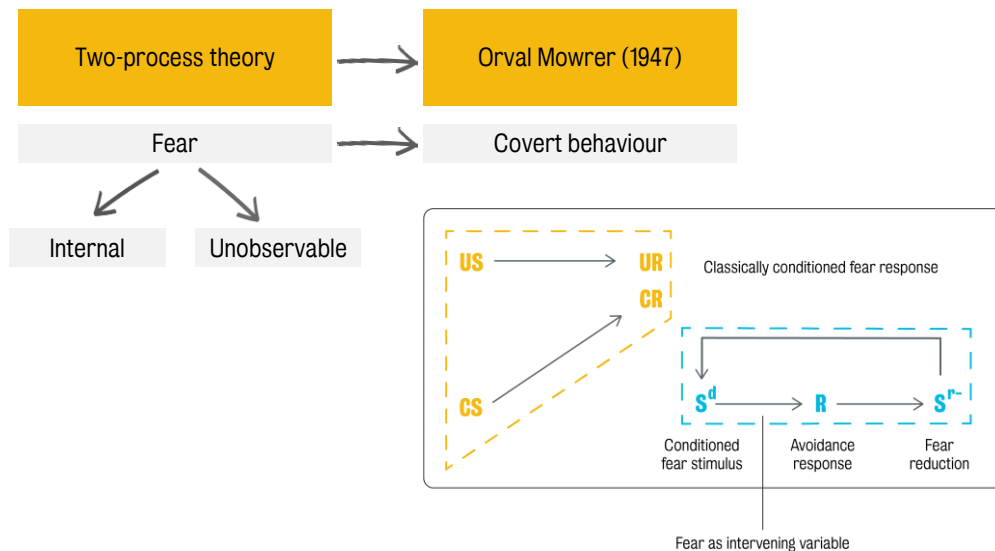
Operant conditioning explanation of avoidance learning



What is the reinforcer?

Watson and early behaviourists	Must be observable
Omission of a pending avoidance event	Avoidance learning

Mowrer's Two-Factor Theory of Avoidance Learning



Problems with the 2-process model of avoidance

CRITICISMS – Both processes are not always necessary for the development and maintenance of avoidance behaviour

Avoidance continues after deconditioning or extinction (CS no longer aversive)

Success of systematic desensitisation does not require elimination of fear at each exposure

Animals can learn to avoid in the absence of an aversive conditioned stimulus

Human avoidance learning does not depend on early fear conditioning

Observational

Instructional

Social learning

Krypotos, Effting, Kindt & Beckers (2015)

Week 5 Psychological therapies: From behaviour modification to cognitive therapy

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Cognitive accounts of avoidance learning



Robert Rescorla



Allan Wagner

CS → US (less learning)
CS →[?] US (more learning)

- Uncertainty or **prediction error** is necessary for learning.
- The element of **surprise** helps us **learn** to avoid **danger**.
- Uncertainty is aversive and humans and animals behave to reduce uncertainty.
- Waiting and **not knowing** is **worse** than the **eventual outcome**.

Cognitive explanations of avoidance behaviour

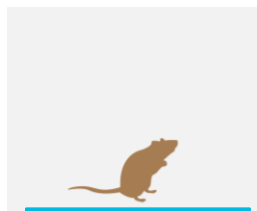
- Focus on **information** about the **aversive stimulus** or **outcome**



Electric shock grid

Box A

- Presence of light signals shock
- Absence of light signals no-shock
- Shock is predictable



Electric shock grid

Box B

- No signal
- Shock is unpredictable

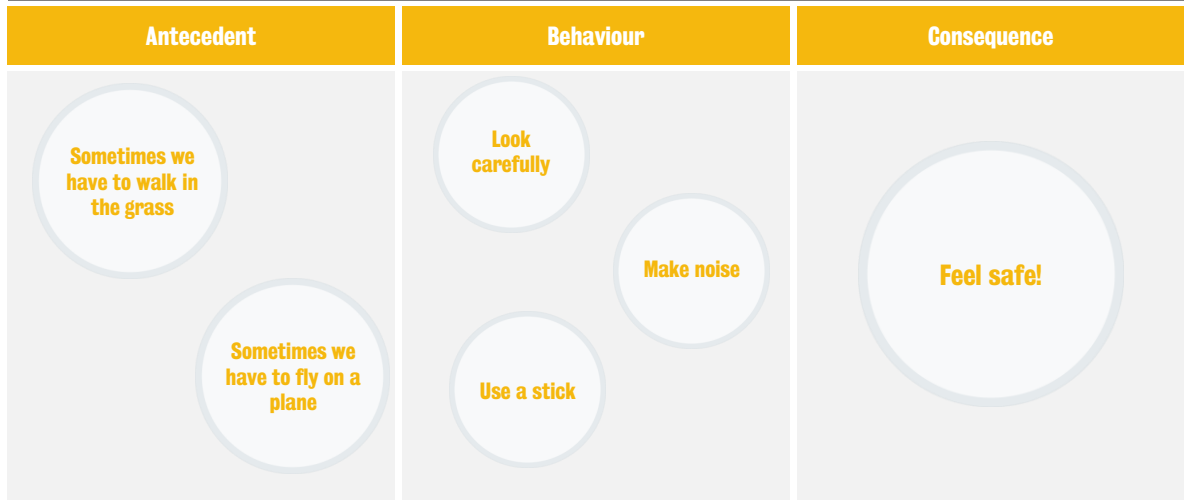
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Safety behaviour (1)

Influential in understanding the maintenance of maladaptive avoidance

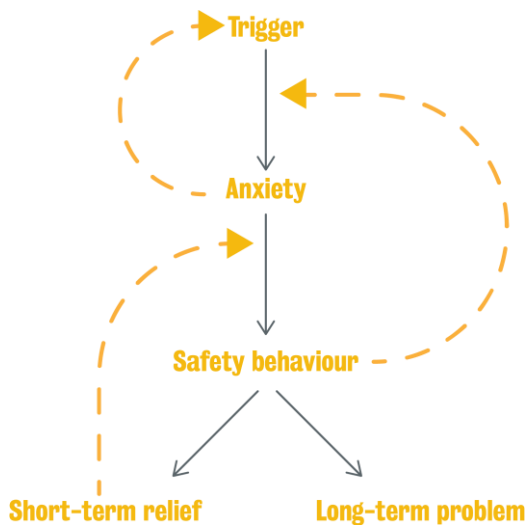


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Safety behaviour (2)



Superstitious behaviours can be considered safety behaviours

- Lucky charms

We can become dependent

- We learn we are safe because of the safety behaviour
- This mechanism may maintain phobia

Safety behaviours can become problematic

- Obsessive compulsive behaviours

Week 5 Psychological therapies: From behaviour modification to cognitive therapy

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Summary

What we have covered:

- Direct derivation from Pavlovian and operant learning theory
- American tradition: Operant principles, problem behaviour
- British tradition: Classical conditioning, reciprocal inhibition and desensitisation
- Role of modelling and social learning
- Importance of avoidance in the maintenance of maladaptive learning
- Need to incorporate cognitive components within behavioural accounts

References

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Attributions

Leaflet: The Maudsley at War: The Story of the Hospital During the Great War
<http://www.slam.nhs.uk/media/376274/The%20Maudsley%20at%20War%20-%20updated.compressed.pdf>