



Client Confidence: an important factor in maintaining confidence

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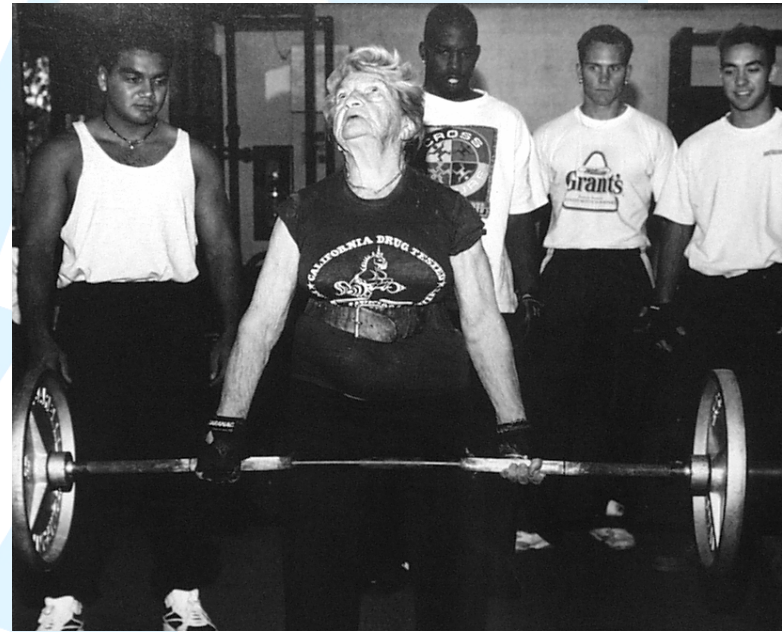


"Hello, incontinence helpline - can you hold?"

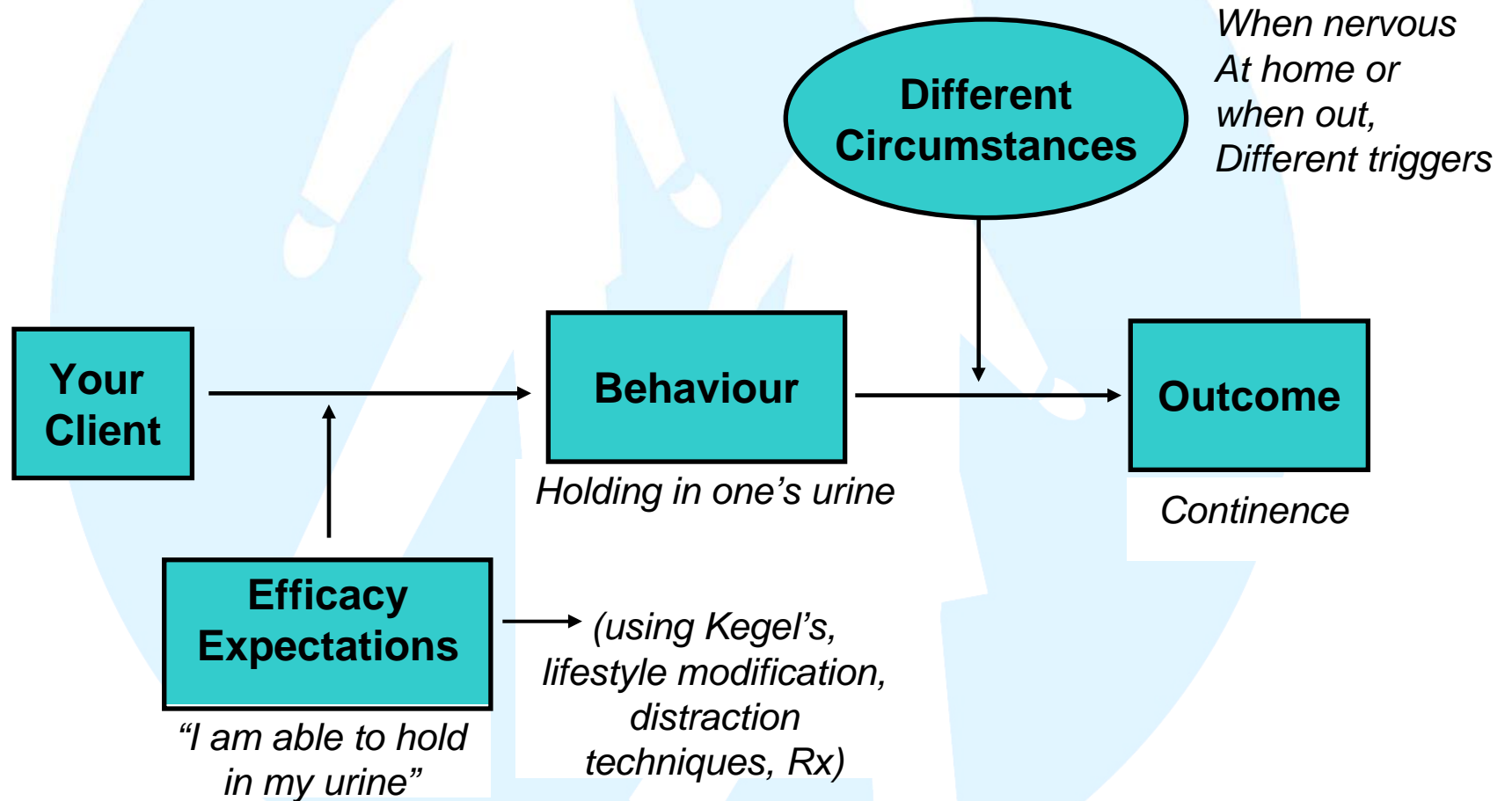
Confidence = Self-efficacy

The belief a person has in his or her ability to perform specific behaviours


*e.g. smoking cessation
physical performance*



Bandura's Social Learning Theory



Bandura, 1977



What proof do we have that confidence is an important factor for maintaining continence?

3 supporting lines of evidence:

- empirical (observation)
- unexplained data from trials
- biological feasibility



How do you explain the following?

Placebo treatment of incontinence in randomized controlled pharmaceutical trials leads to reductions in incontinence episodes ranging from 32% to 65%



Biofeedback positively impacts client's perception of control

For an equivalent improvement in urge incontinence episodes, women with a history of depression had a three-fold increase in perception of control compared to women with no history of depression



Theory of learned helplessness?



Urodynamic parameters are *not* responsible for the majority of improvements seen in older women

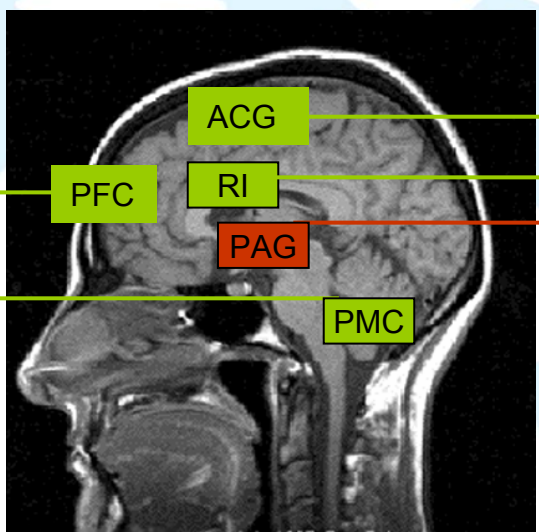
In both pharmaceutical and behavioural intervention trials, there are no significant changes on urodynamic parameters to explain improvements in incontinence

Can self-efficacy for controlling UI be a contributing causal mechanism through which improvements in UI are achieved?

PREFRONTAL CORTEX
Attention, planning
voluntary decisions about
voiding

**PONTINE
MICTURITION
CENTRE**
Provides motor
output to cause
voiding

EFFERENT MOTOR NERVES



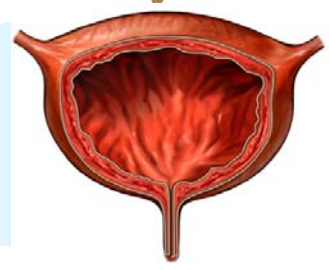
ANTERIOR CINGULATE GYRUS
Processes emotions (conflict, stress)

RIGHT INSULA
Maps bladder
sensation, pain

PERIAQUADUCTAL GREY
Control & coordination of
messages from the body



AFFERENT SENSORY NERVES

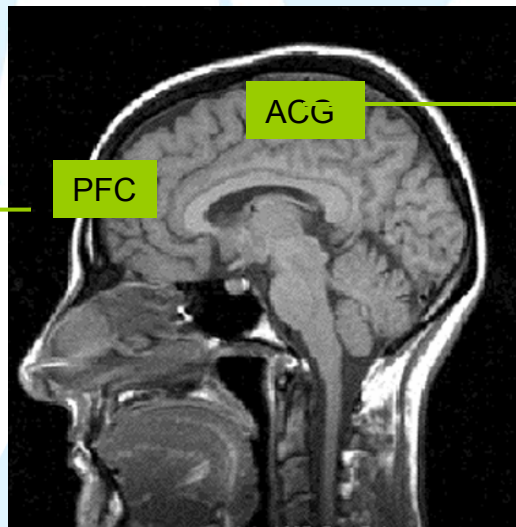


TRIGGERS



PREFRONTAL CORTEX
Plans voluntary decisions
about voiding

ANTERIOR CINGULATE GYRUS
Processes emotions (fear, stress)



What is the best way to measure self-efficacy for maintaining confidence?



A CIHR-funded study

To develop and test the validity, responsiveness and clinical utility of a new scale called the ***Geriatric Self-Efficacy Index for UI***



Item Generation

The background features a light blue circular graphic. Inside the circle, there are white silhouettes of two people walking towards the right. Above the figures, there is a white sunburst or starburst shape. The overall theme is human interaction and progress.

- 25 efficacy items generated from
 - UI-specific QoL instruments
 - UI symptom indices
 - self-efficacy questionnaires developed for stress UI in younger individuals
- Expert panel evaluated face validity

Phrasing & response scaling

How confident are you that you can hold in your urine ...

when you are at home and have to go to the bathroom?

Not at all
confident
can do



Extremely
confident
can do



3-phase testing

Community-based, non-referred sample

- 75 older adults with UI attending public info sessions on UI: readability, comprehension, comprehensiveness

Community-based, referred new patients recruited from MD's offices

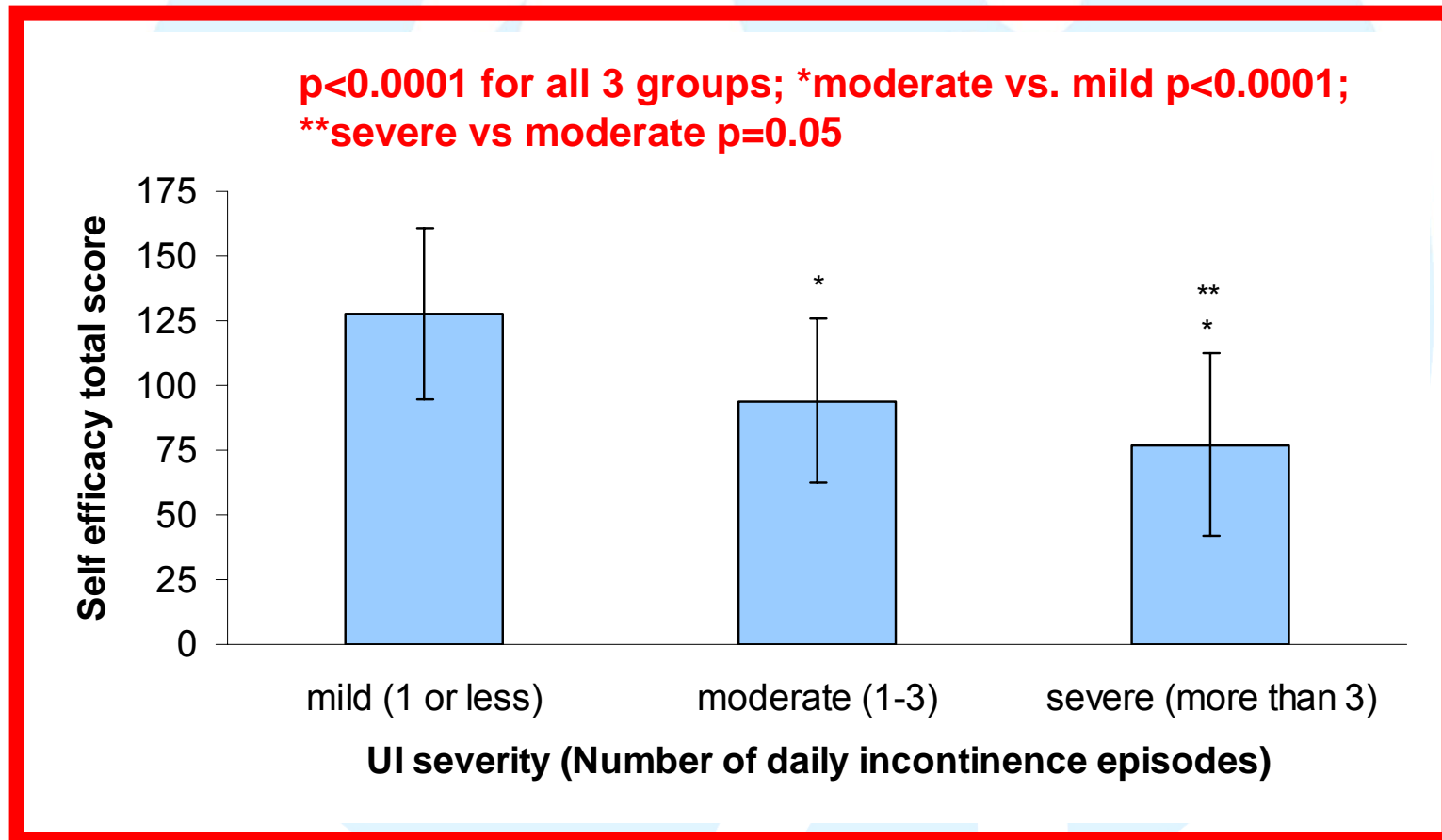
- 116 older adults: validity, test-retest reliability, creation of abridged 12-item version
- A separate set of 89 patients: responsiveness and clinical utility

GSE-UI: The Geriatric Self-Efficacy index for Urinary Incontinence

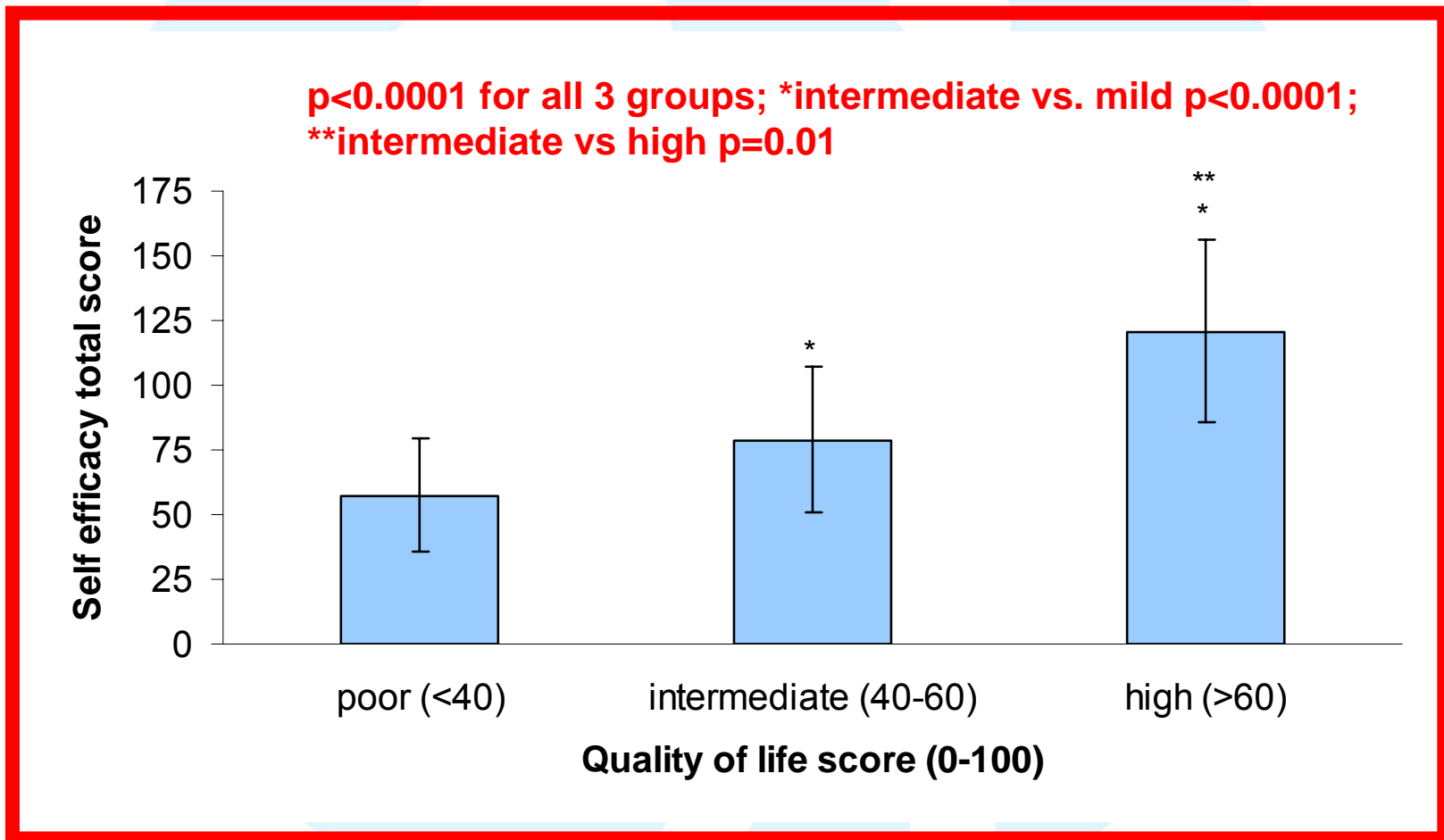
- **How confident are you that you can hold in your urine ...**
- 1- ...long enough to get to the bathroom in time when you are at home?
- 2- ...long enough to get to the bathroom in time when you are away from home?
- 3- ...long enough to get to the bathroom in time during the night?
- 4- ...for at least 20 minutes when you feel the urge to urinate?
- 5- ...when coughing?
- 6- ...when sneezing?
- 7- ...when laughing?
- 8- ...when you are nervous?

- **How confident are you that you can ...**
- 9- ..visit places where you may have difficulty locating the washroom?
- 10- go on social outings without worrying about urine loss?
- 11- prevent urine loss without relying on pads or protection when you are at home?
- 12- prevent urine loss without relying on pads or protection when you are away from home?

UI severity was inversely related to total self-efficacy scores ($r=-0.5$)



UI-related quality of life scores were directly related to total self-efficacy scores ($r=0.7$)



Determining responsiveness and clinical utility

Responsiveness = the ability to detect change when change has really occurred due to the intervention
(Guyatt's Change Index)

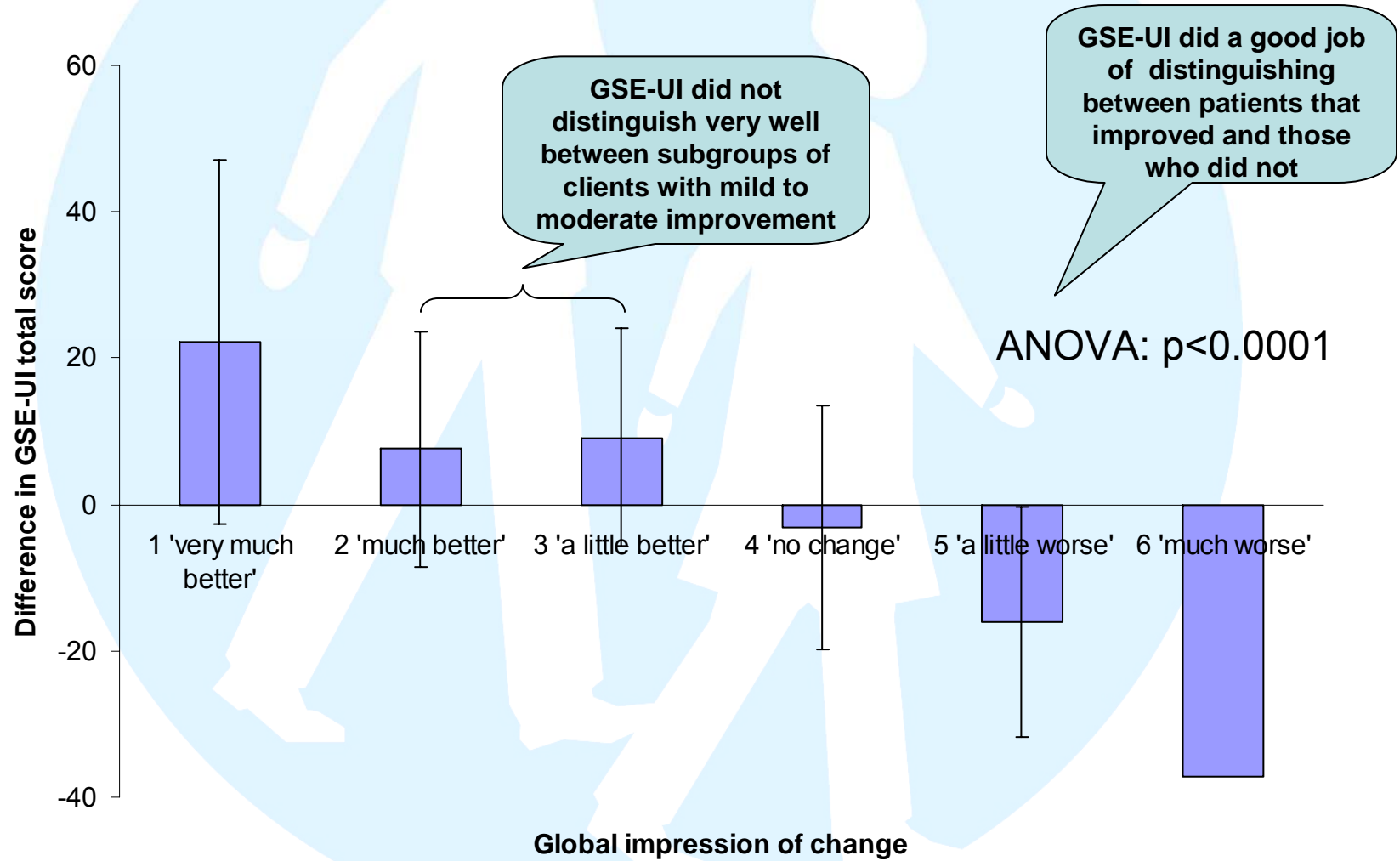
Clinical utility = the ability to detect a clinically **MEANINGFUL** change in status

Our gold standard = the Patient's GLOBAL IMPRESSION OF CHANGE

How is your incontinence condition now, compared to how it was the last time we saw each other?

- 1- Very much better
- 2- Much better
- 3- A little better
- 4- No change
- 5- A little worse
- 6- Much worse
- 7- Very much worse

Clinical utility



Establishing clinically meaningful cut-off scores

Gold standard	Clinically meaningful improvement group (GIC = 1)	Any improvement group (GIC ≤ 3)
Best GSE-UI cut-off	14 point difference	5 point difference
Sensitivity	75%	70%
Specificity	78%	78%
Interpretation (using ROC curves)	76% probability of selecting the patient who improved a significant amount from a set of 2 patients, one of whom did not improve a significant amount	79% probability of selecting a patient who improved any amount from a set of 2 patients, one of whom did not improve





Mrs. B.

- 72 year old woman progressively worsening UI x 4 years
- Urge symptoms q1.5-2 hrs during the day, doesn't make it on time to the bathroom, has completely wet pants on occasion
 - Nocturia 2-3x/night, no leaks
- Stress symptoms: on occasion, when coughing or laughing
- Drinks coffee, total liquid intake is 1.5 L/day
- Hypothyroid, hypertensive, past hx depression, osteoporosis, arthritis, left knee replacement
- Synthroid, Norvasc, Fosamax, calcium, Vit D

Mrs. B's initial self-efficacy scores

How confident are you that you can hold in your urine....	
...long enough to get to the bathroom in time when you are at home?	8
...long enough to get to the bathroom in time when you are out?	7
...long enough to get to the bathroom in time during the night?	8
...for at least 20 minutes when you feel the urge to urinate?	3
...when coughing?	5
...when sneezing?	5
...when laughing?	4
...when you are nervous?	4
How confident are you that you can....	
...visit places where you may have difficulty locating the washroom?	2
...go on social outings without worrying about urine loss?	5
...prevent urine loss without relying on pads or protection when you are at home?	3
...prevent urine loss without relying on pads or protection when you are away from home?	2
TOTAL SCORE	56

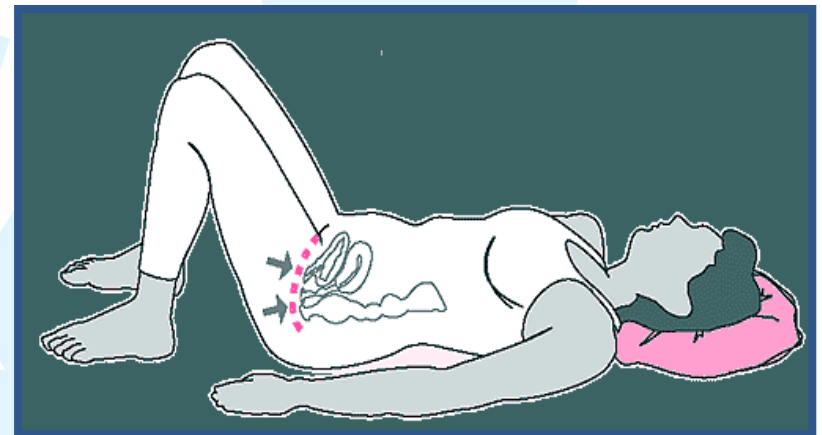
Not at all
confident
can do



Extremely
confident
can do

Therapeutic interventions

- She followed a 12-week protocol consisting of strength, coordination and endurance training exercises designed to strengthen her pelvic floor muscles
- Consultation with a physiotherapist who used biofeedback techniques to ensure that she was performing the exercises properly
- Eliminated coffee from her diet
- Followed a bladder retraining protocol using distraction techniques
- No pharmacologic intervention



Mrs. B's 3-month follow-up scores

How confident are you that you can hold in your urine....		
...long enough to get to the bathroom in time when you are at home?	8	9
...long enough to get to the bathroom in time when you are out?	7	7
...long enough to get to the bathroom in time during the night?	8	8
...for at least 20 minutes when you feel the urge to urinate?	3	9
...when coughing?	5	7
...when sneezing?	5	7
...when laughing?	4	8
...when you are nervous?	4	7
How confident are you that you can....		
...visit places where you may have difficulty locating the washroom?	2	8
...go on social outings without worrying about urine loss?	5	8
...prevent urine loss without relying on pads or protection when you are at home?	3	8
...prevent urine loss without relying on pads or protection when you are away from home?	2	7
TOTAL SCORE	56	93

**Not at all
confident
can do**



**Extremely
confident
can do**



A light blue circular graphic in the background. Inside the circle, there is a white silhouette of a person walking with a walker. Above the person's head is a white sun with rays.

Mrs. S.

- 85 years old, complains of nocturnal incontinence, worsening x 1 year, tired and frustrated, started wearing a diaper at night.
- Awakes with urgency 4-5 times per night, often wets the bed or leaks on the way to the bathroom
- During the day, she is able to get to the bathroom in time, walks with a walker
- Hypertensive, hx of stroke 2 years ago, arthritis, venous insufficiency, cataracts, hypercholesterol
- Tenormin, Lasix, Lipitor, Aspirin, Tylenol, Ativan
- Drinks tea, occasionally a beer

Mrs. S's initial self-efficacy scores

How confident are you that you can hold in your urine....	
...long enough to get to the bathroom in time when you are at home?	5
...long enough to get to the bathroom in time when you are out?	10
...long enough to get to the bathroom in time during the night?	0
...for at least 20 minutes when you feel the urge to urinate?	5
...when coughing?	10
...when sneezing?	10
...when laughing?	10
...when you are nervous?	8
How confident are you that you can....	
...visit places where you may have difficulty locating the washroom?	7
...go on social outings without worrying about urine loss?	8
...prevent urine loss without relying on pads or protection when you are at home?	3
...prevent urine loss without relying on pads or protection when you are away from home?	10
TOTAL SCORE	86

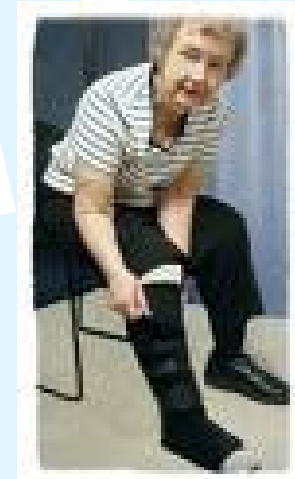
Not at all
confident
can do



Extremely
confident
can do

Therapeutic interventions

- To treat her leg swelling she was prescribed elastic stockings and told to elevate her legs at 7 pm for 1 hour.
- The Ativan was tapered slowly and discontinued.
- The Lasix was replaced by hydrochlorothiazide and taken at 2 pm instead of before bed.
- Eliminated tea and beer drinking, especially before bed
- Was taught Kegel exercises to strengthen pelvic floor muscles. Told to strengthen quads and mobility
- A bedside commode was recommended but she refused



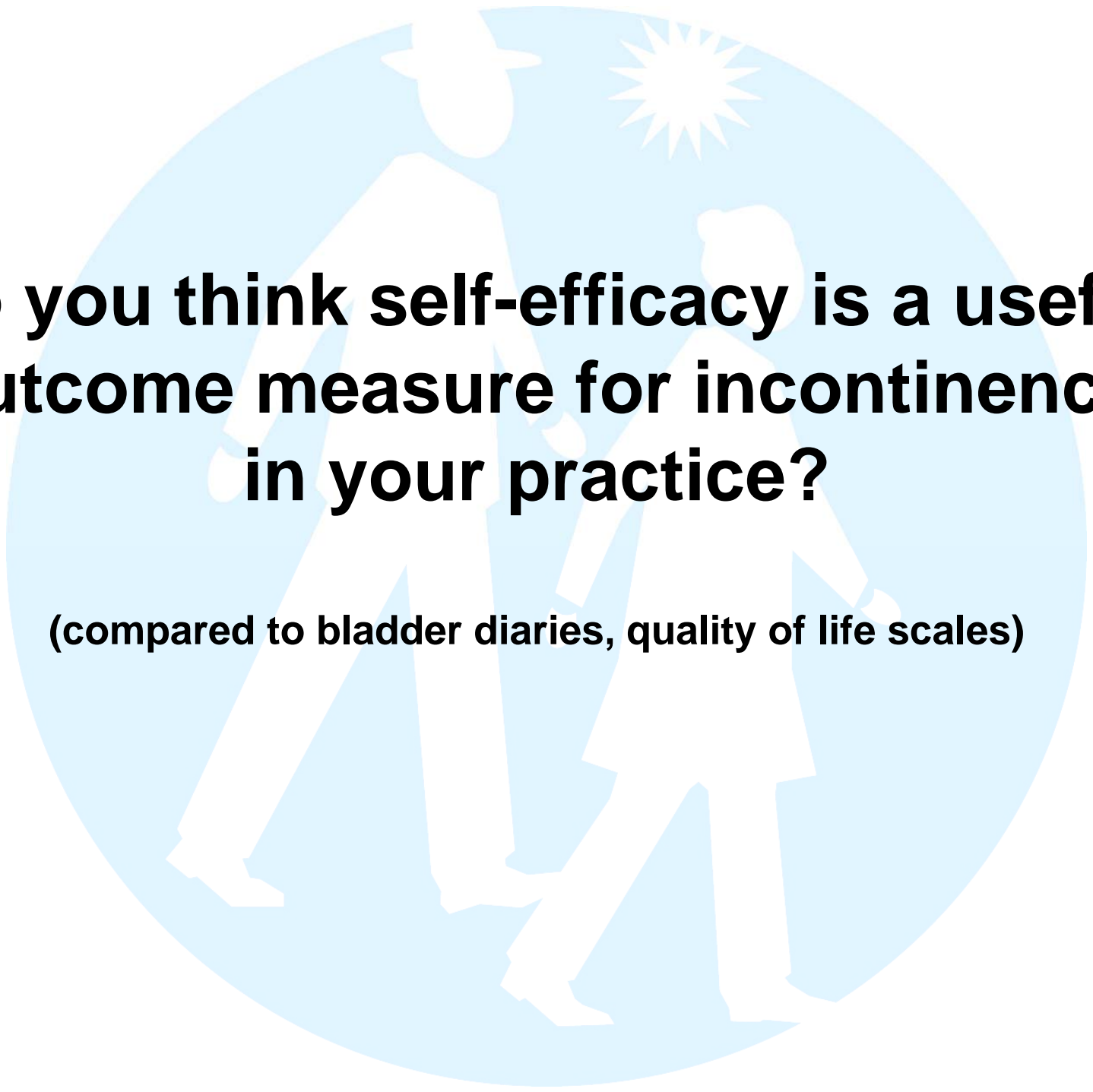
Mrs. S's 3-month follow-up scores

How confident are you that you can hold in your urine....		
...long enough to get to the bathroom in time when you are at home?	5	8
...long enough to get to the bathroom in time when you are out?	10	10
...long enough to get to the bathroom in time during the night?	0	7
...for at least 20 minutes when you feel the urge to urinate?	5	8
...when coughing?	10	10
...when sneezing?	10	10
...when laughing?	10	10
...when you are nervous?	8	8
How confident are you that you can....		
...visit places where you may have difficulty locating the washroom?	7	8
...go on social outings without worrying about urine loss?	8	9
...prevent urine loss without relying on pads or protection when you are at home?	3	7
...prevent urine loss without relying on pads or protection when you are away from home?	10	10
TOTAL SCORE	86	105

**Not at all
confident
can do**



**Extremely
confident
can do**



**Do you think self-efficacy is a useful
outcome measure for incontinence
in your practice?**

(compared to bladder diaries, quality of life scales)

Are there methods for specifically increasing self-efficacy for maintaining continence?

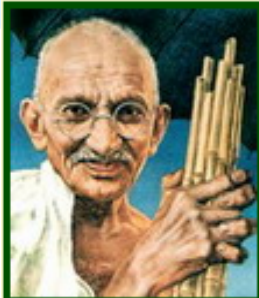


Bandura suggests:

- 1. Linking new skill acquisition to recent successes**
- 2. Reinforcing effort and persistence**
- 3. Stressing peer modeling**
- 4. Helping strugglers identify or create personally important goals**



"Hello, incontinence helpline - can you hold?"



**"If I have the belief that I can do it,
I shall surely acquire the capacity to do it
even if I may not have it at the beginning."**

~ Mahatma Gandhi ~

Thank you