

Royal College of Surgeons in Ireland

Coláiste Ríoga na Máinleá in Éirinn

Illness perceptions as predictors of self-care behaviour in heart failure patients

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Outline

- Self-care behaviour in heart failure
 - Illness perceptions & the Self Regulation Model of Illness
 - Illness perceptions & self care behaviour in heart failure
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Self- Care Behaviour in Heart Failure

- Associated with :
 - ↓ worsening symptoms (e.g. van der Wal et al 2005)
 - ↓ decreased QoL
 - ↑ mortality (e.g. Granger et al, 2005)
 - ↑ hospital admissions & increased length of stay
(e.g. De Geest et al., 2003)
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Self Care Behaviour in Heart Failure

- More than adhering to a complex medication regimen
 - Lifestyle adjustments including :
 - modifying diet
 - modifying activities
 - monitoring and reporting symptoms
 - Complicated by issues such as:
 - comorbidity
 - age-related changes e.g. loss of visual acuity, loss of hearing, changes in functional status
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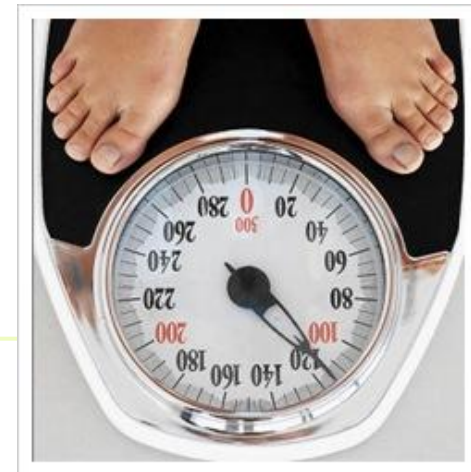
Self Care in Heart Failure

- Optimum self-management difficult to achieve
- Selective adherence common
- Highest levels reported in relation to medication adherence :
 - 10% - 99% (Monane et al 1994; van der Wal et al 2007)
 - Issues of measurement (Self-report vs. objective); definition and depth of assessment

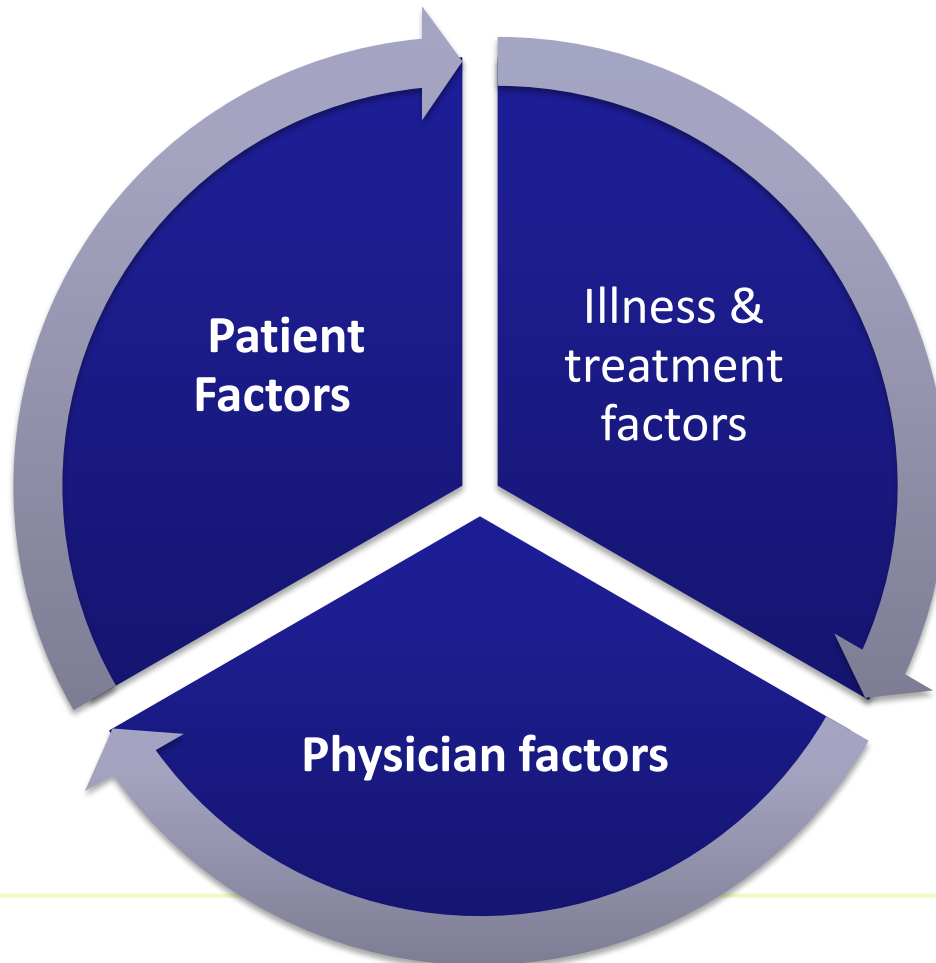


Self Care in Heart Failure

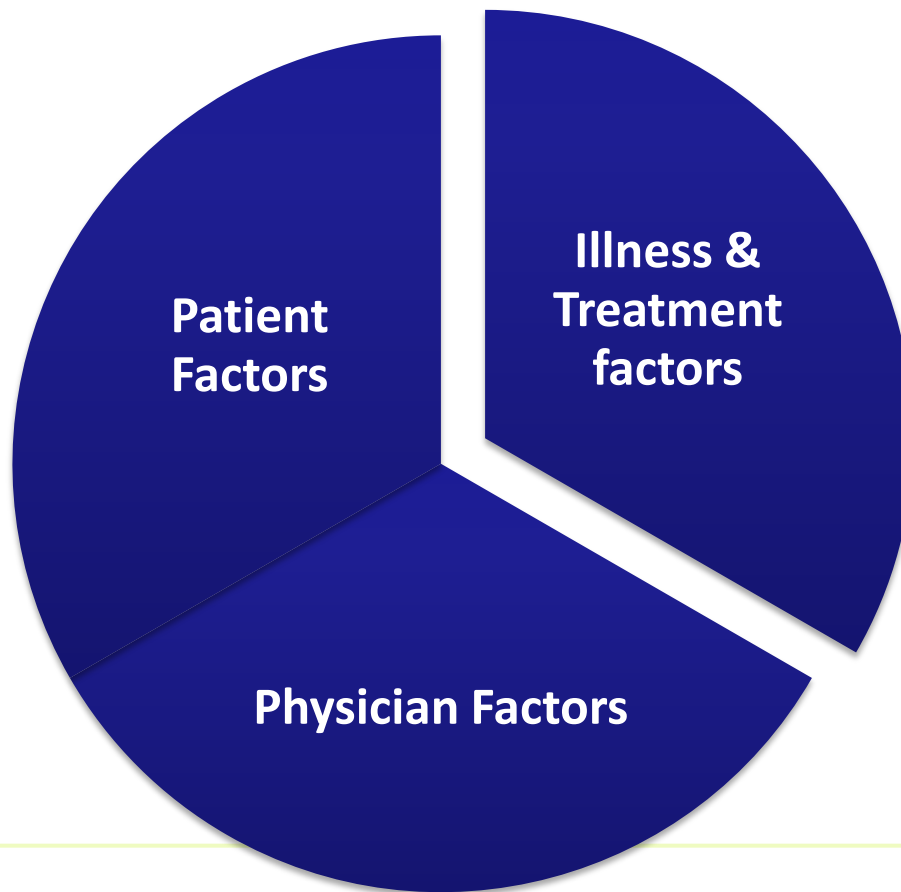
- Lowest: lifestyle change and symptom monitoring and reporting
 - Fluid intake : 70% - 33% (Holst et al, 2007; Stromberg, et al, 2003).
 - Daily weighing: 25 % - 40% (Holst et al 2007; Ni et al., 1999)



Self Care in Heart Failure

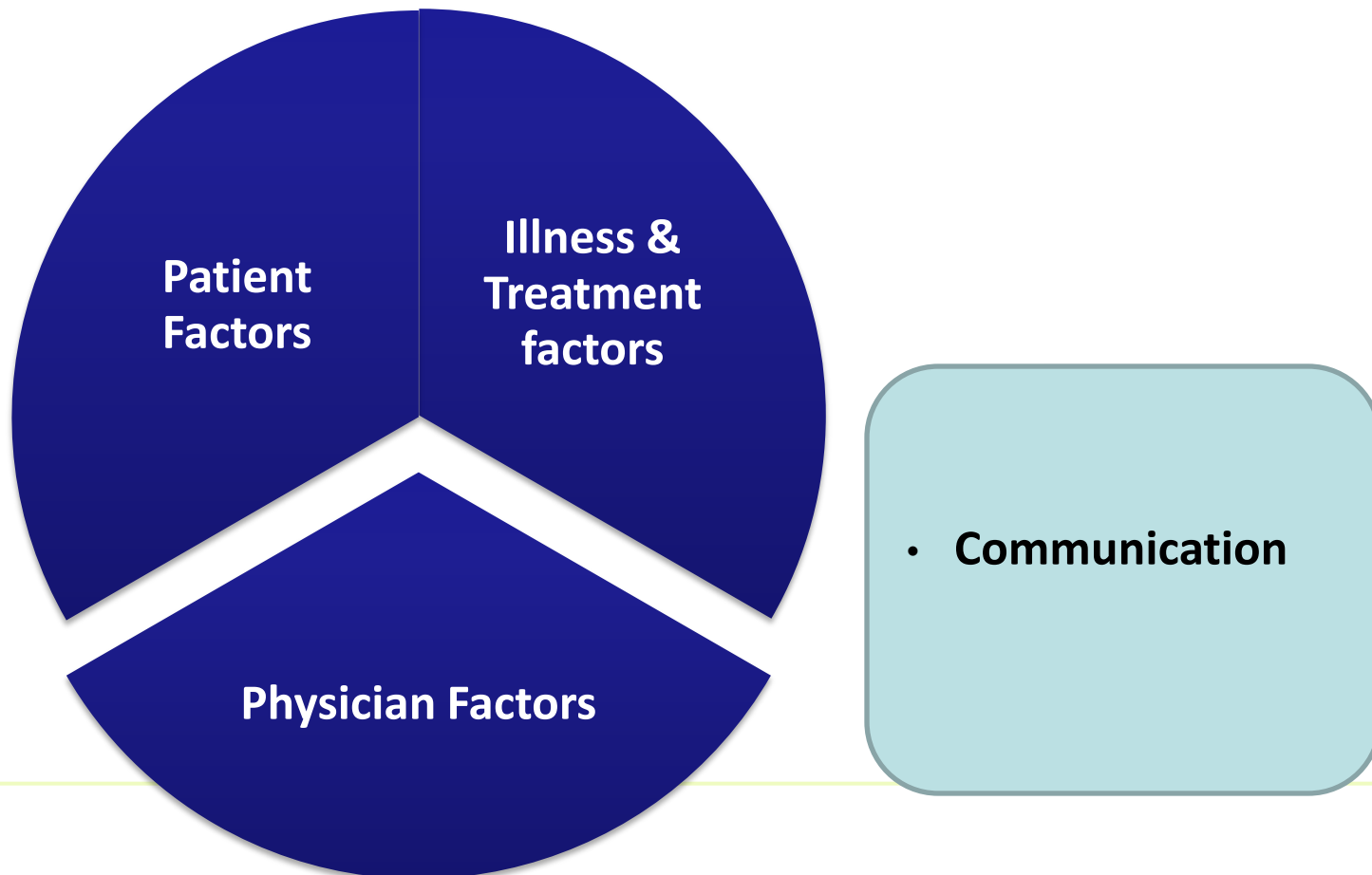


Self Care in Heart Failure



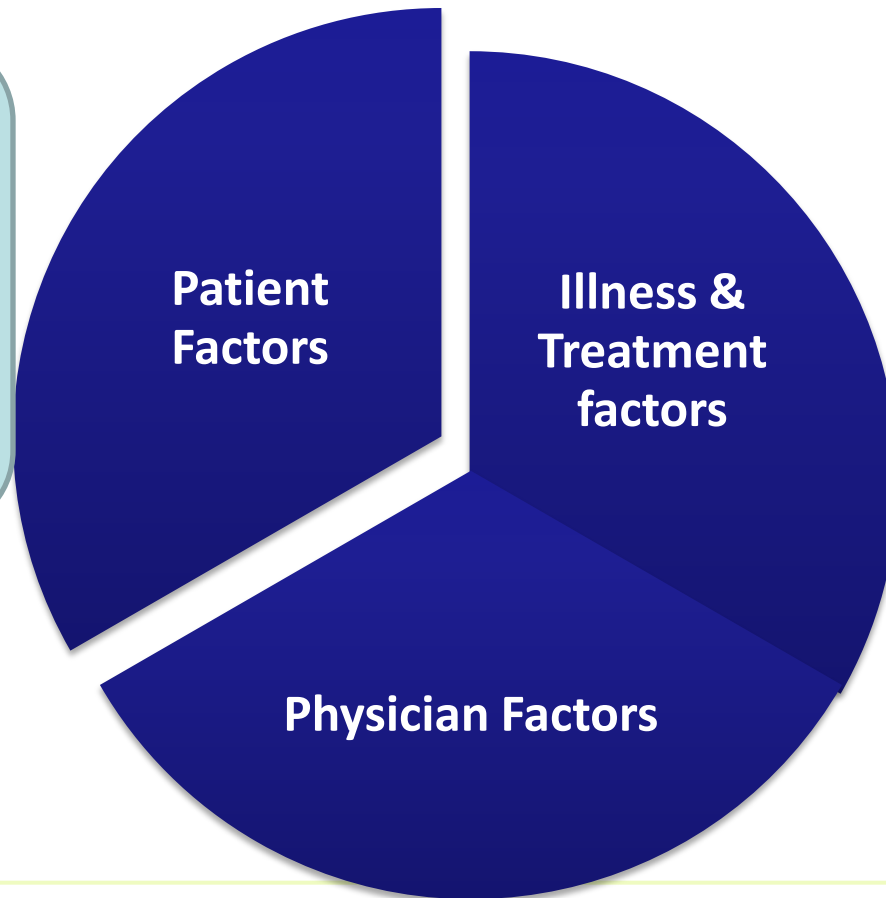
- **Symptoms**
- **Severity (NYHA class)**
- **Years diagnosed**
- **Complexity**
- **Impact on usual activities**

Self Care in Heart Failure



Self Care in Heart Failure

- Knowledge
- Attitudes
- Beliefs

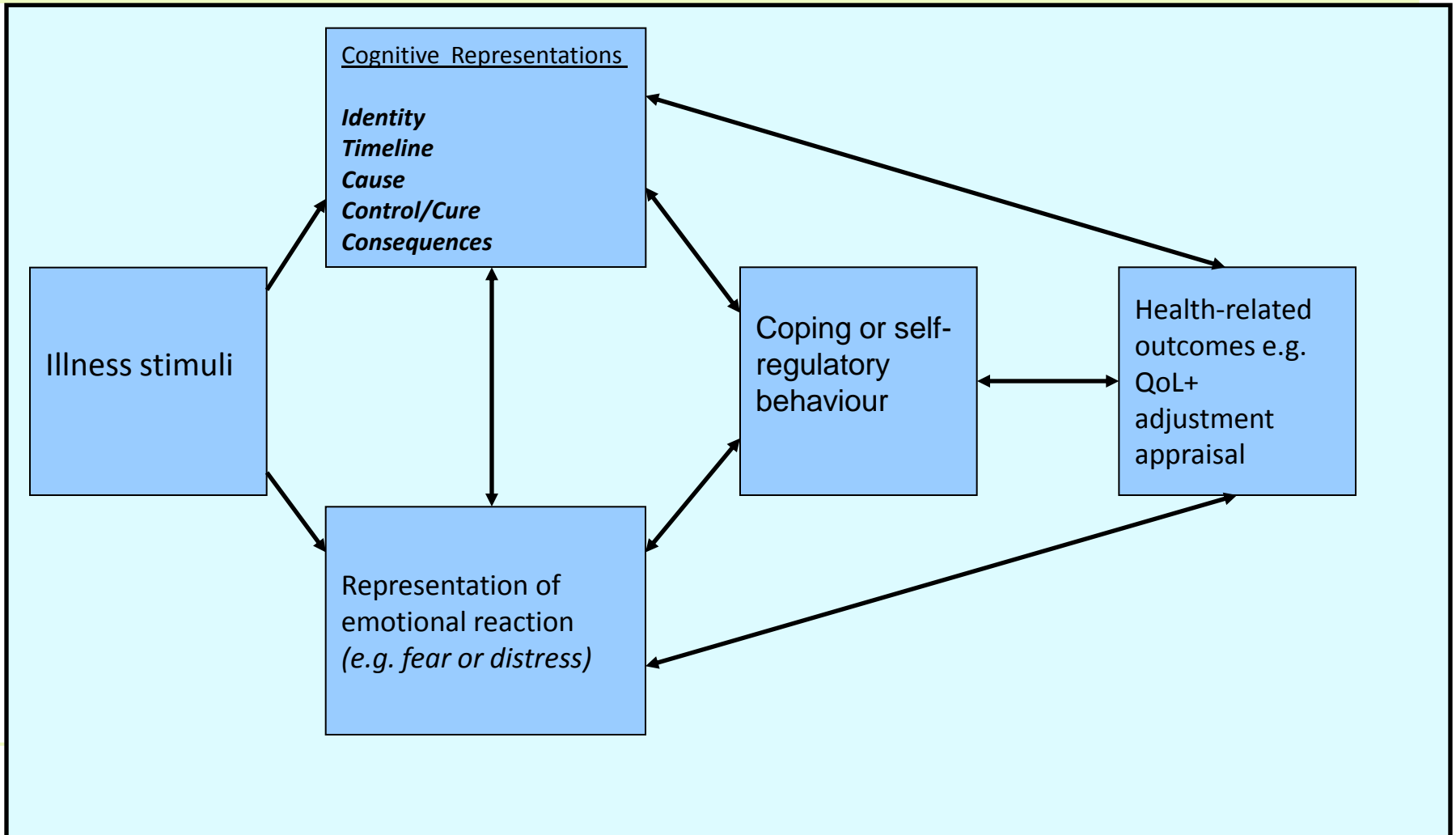


Illness Perceptions

Self-Regulation Model (SRM) (Leventhal et al., 1980):

- Looks at illness from the perspective of the patient
 - Belief about an illness influences patient responses and coping behaviours, e.g. seeking help, adhering to treatment
 - Important determinants on health related outcomes e.g. Psychological wellbeing, QoL,
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Self-Regulation Model (SRM)



Illness Representations

- Identity: associated with symptoms experienced
- Timeline: My illness will last a long time
- Cause: My illness was caused by genetic factors
- Cure/Control: My illness can be treated effectively with medication
- Consequences: My illness create financial stress for me
- Emotional representations: My illness makes me feel afraid

Illness Perception Questionnaire (revised) (IPQ-R)



- Three main sections:
 - Identity (symptom endorsement)
 - Cause (assess list of factors and rank)
 - Timeline, consequences, cure/control emotional representations (Likert response scale)
- Well validated & widely used in studies of adaptation & chronic illness

ILLNESS PERCEPTION QUESTIONNAIRE (IPQ-R)

Name..... Date.....

YOUR VIEWS ABOUT YOUR ILLNESS

Listed below are a number of symptoms that you may or may not have experienced since your illness. Please indicate by circling Yes or No, whether you have experienced any of these symptoms since your illness, and whether you believe that these symptoms are related to your illness.

	I have experienced this symptom since my illness		This symptom is related to my illness	
	Yes	No	Yes	No
Pain	Yes	No	Yes	No
Sore Throat	Yes	No	Yes	No
Nausea	Yes	No	Yes	No
Breathlessness	Yes	No	Yes	No
Weight Loss	Yes	No	Yes	No
Fatigue	Yes	No	Yes	No
Stiff Joints	Yes	No	Yes	No
Sore Eyes	Yes	No	Yes	No
Wheeziness	Yes	No	Yes	No
Headaches	Yes	No	Yes	No
Upset Stomach	Yes	No	Yes	No
Sleep Difficulties	Yes	No	Yes	No
Dizziness	Yes	No	Yes	No
Loss of Strength	Yes	No	Yes	No

We are interested in your own personal views of how you now see your current illness.

Please indicate how much you agree or disagree with the following statements about your illness by ticking the appropriate box.

	VIEWS ABOUT YOUR ILLNESS	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
IP1	My illness will last a short time					
IP2	My illness is likely to be permanent rather than temporary					
IP3	My illness will last for a long time					
IP4	This illness will pass quickly					
IP5	I expect to have this illness for the rest of my life					
IP6	My illness is a serious condition					

SRM – Evidence

- Successful in predicting different aspects of adaptation (including adherence) and recovery in chronic illness
 - Supported by meta-analysis of 45 studies (Hagger & Orbell, 2003)
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Illness perceptions & self care

- Diabetes mellitus
 - Control beliefs accounted for 39% of the predicted variance in total adherence (self-reported) (Griva et al 2000)
 - Asthma
 - Beliefs about consequences – 11% variance in prescription refilling behaviour (Horne & Weinman, 2002)
 - Haemophilia
 - Identity and treatment necessity – 33% variance in frequency of prophylactic infusions (Llewellyn et al., 2003)
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Illness perceptions & Self Care Behaviour in Heart Failure

- Longitudinal study of adaption in HF
 - Self care behaviour & illness perceptions assessed
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Study Participants

	T1 (n=161)	T2 (n=90)*
	Profile	Profile
Mean age (yrs) (<i>SD</i>)	69(9)	70 (10)
Male (%)	81	79
Married (%)	81	82
Living with others (%)	87	88
Some second level education (%)	94	95
Time diagnosed (years)	4.9	5.2

* n=45 patients died between T1 & T2 (28%)

Study Participants

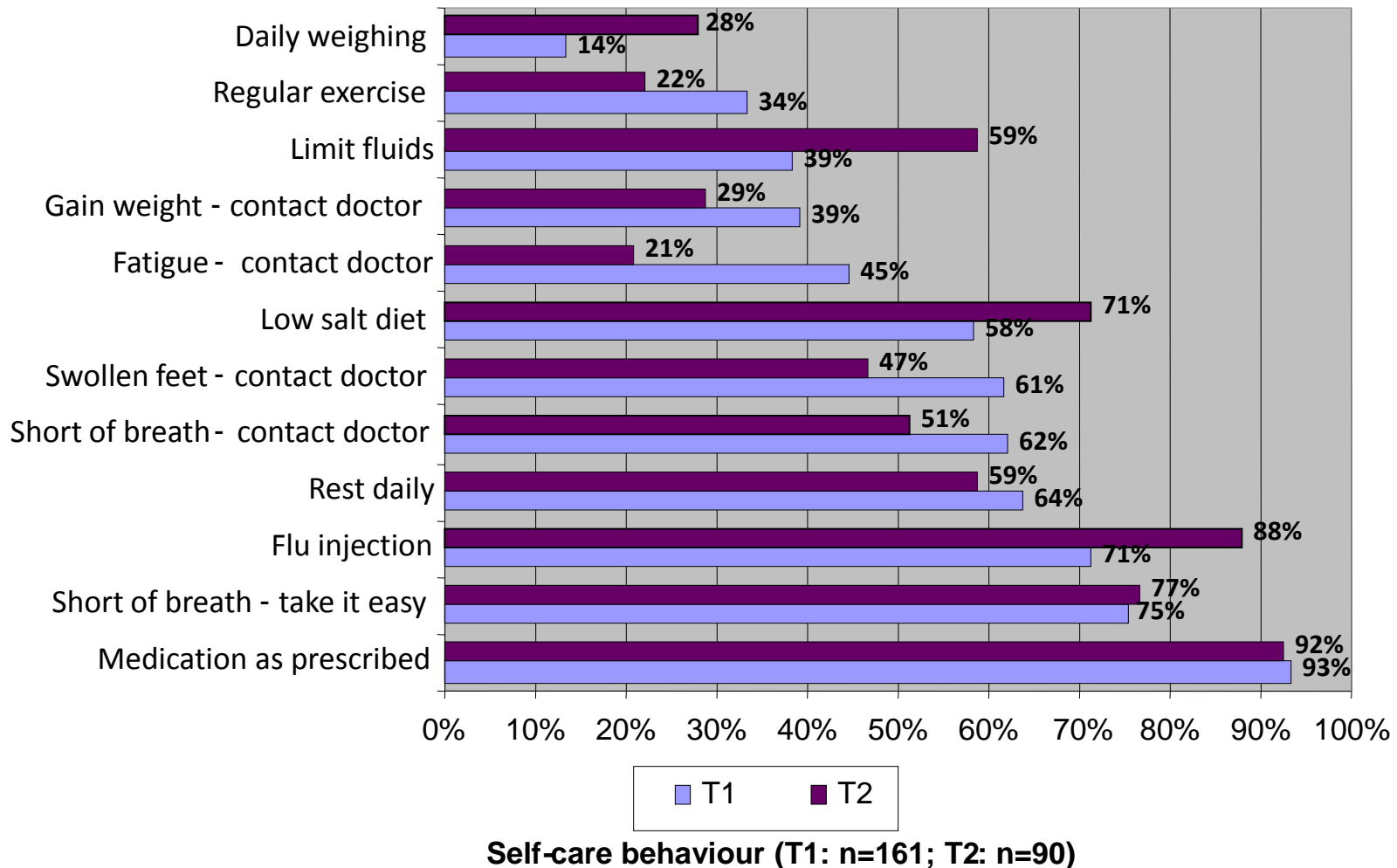
	T1 (n=161)	T2 (n=90)
	%	%
NYHA class		
I	30	26
II	48	45
III	17	23
IV	5	6

- At each time point respondents reported a moderate level of functional impairment (Duke Activity Status Index)

Results – Illness perceptions

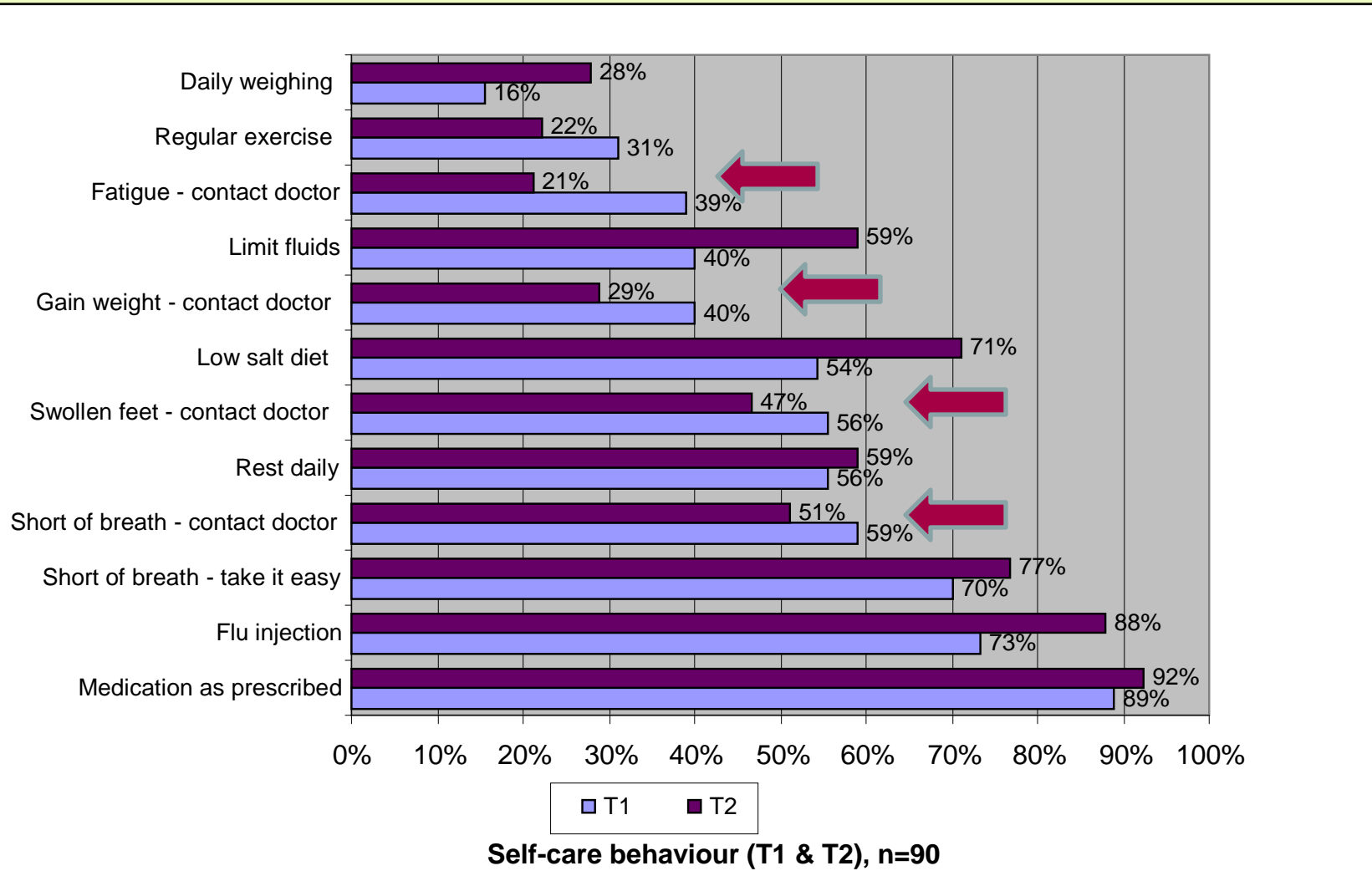
	T1 (n=161)	T2 (n=90)
	Mean (SD)	Mean (SD)
Timeline acute/chronic	3.9 (0.7)	3.8 (0.7)
Timeline cyclical	2.8 (0.9)	3.1 (0.9)
Consequences	3.4 (0.6)	3.5 (0.8)
Personal control	3.4 (0.6)	3.0 (0.7)
Treatment control	3.3 (0.5)	3.5 (0.8)
Identity	5.0 (3.0)	6.0 (2.9)
Illness coherence	3.5 (0.7)	3.3 (1.0)
Emotional representations	3.0 (0.8)	2.8 (0.8)

Results – Self Care



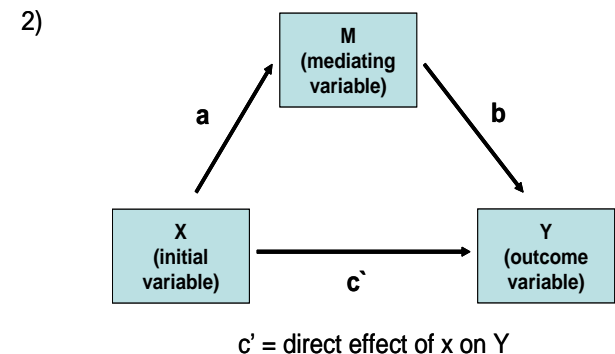
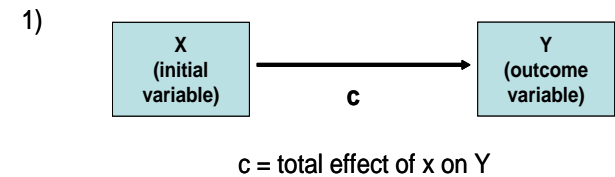


Results – Self Care



Analysis

- Multivariate analysis to assess illness representation – outcome relationships
- Mediation effects evaluated using bootstrap analysis (Shrout & Bolger, 2002)
- Complete & partial effects reported



Results I

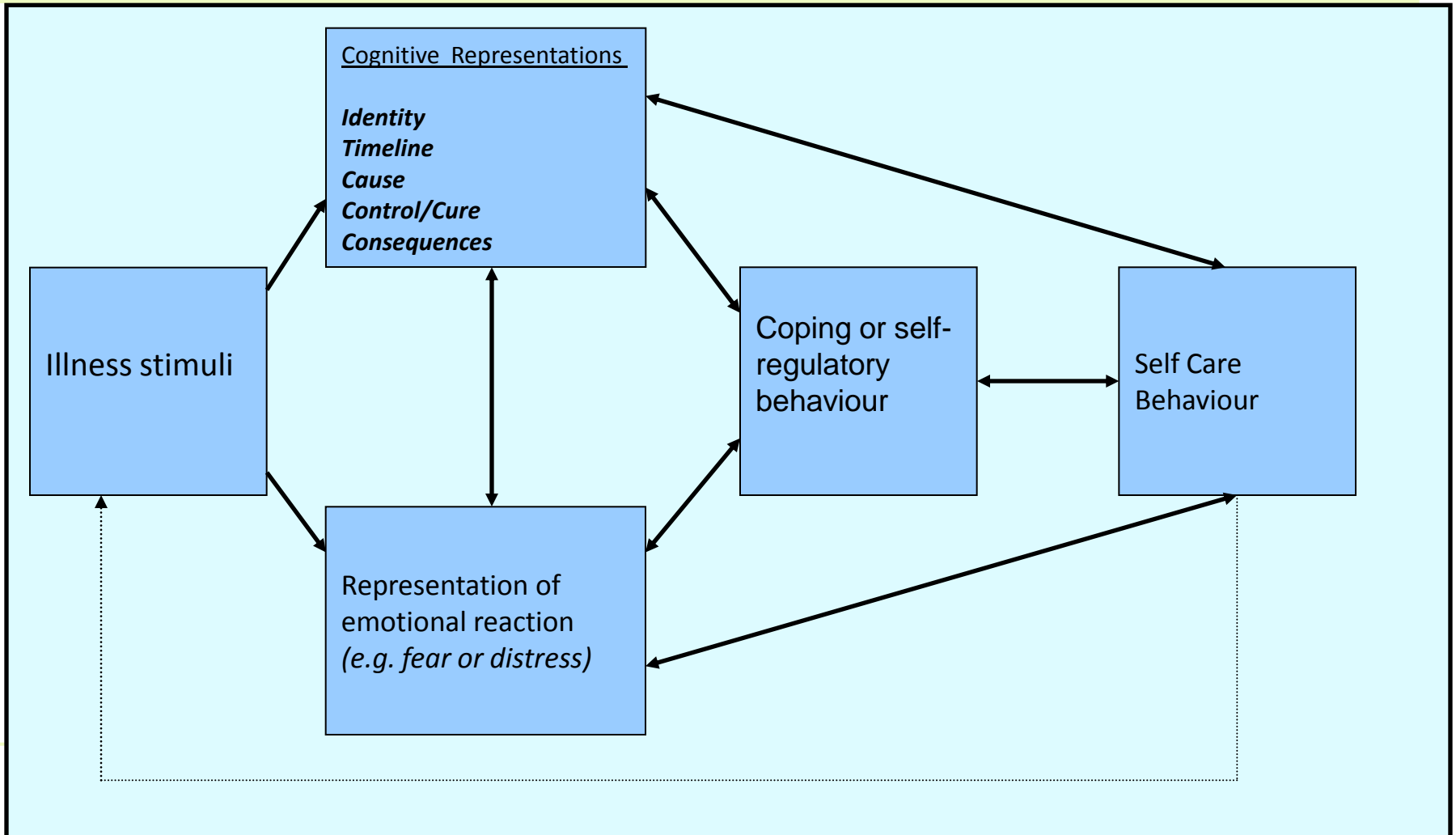
- Illness perceptions stable over time
- Univariate analysis: timeline, consequences treatment, identity and emotional representations associated with self care scores
- Self - reported medication adherence levels high at T1 & T2
- Symptom monitoring (daily weighting) - lowest levels
- Mean scores stable over time
- Mean scores correlated with illness perceptions, NYHA class and years diagnosed
- No association with education, age or gender

Results II

Variable	Standardised regression coefficients		R	R ²	Adj R ²	F change	F
	Model 1	Model 2					
(i) Step 1			.278	.078	.066		6.642**
NYHA	.168*	.143*					
Years	-.176*	.132					
(ii) Step 2			.637	.405	.378	16.878***	14.907***
Timeline cyclical		.196**					
Consequences		.124					
Treatment control		-.046					
Emotional reps		.459***					
Identity		.082					

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Results III



Implications

- Illness perceptions associated with self care behavior in heart failure - potential for targeted intervention
 - Monitoring and reporting symptoms an area of concern
- ‘I don’t want to die in A&E ... I want to be at home’

Acknowledgements



- Healthy Ageing Research Programme (HARP)
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