

# **The role of patients intentions and beliefs in choosing to attend cardiac rehabilitation**

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# What is already known about this topic

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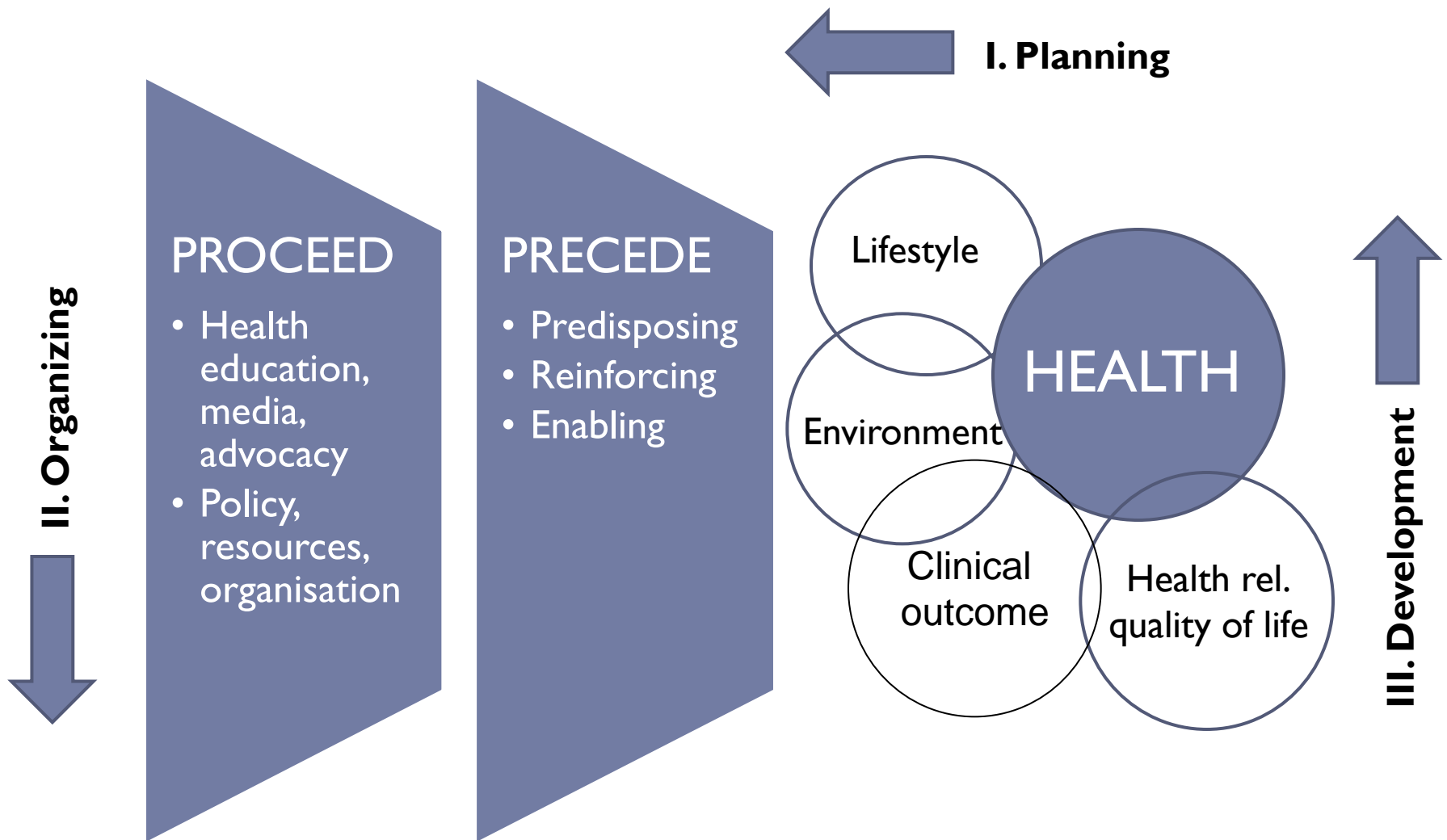
## Many eligible patients do not attend CR

- Little is understood about the beliefs and factors that influence patients willingness and capacity to attend a CR programme

## Some points in terms of patients intentions are under discussion

- Patients decisions about attendance at CR are complex
- Patients decisions about attendance are guided by beliefs about CR, the self, other people and various aspects of coronary heart disease
- Patients can play an important role in promoting participation in other patients

# Disease prevention and health promotion in disease management programmes



Green LW, Wilson RW, Bauer KG.

▶ Data required to measure progress on the objectives for the nation in disease prevention and health promotion  
*American Journal of Public Health* (1983)73: 18-24

# How to estimate treatment effects of cardiac rehabilitation

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## *Measuring...*

### Doctors targets

- ▶ **Clinical domains**
  - ▶ Hypertension
  - ▶ Cholesterol
  - ▶ Diabetes
- ▶ **Behavioural domains**
  - ▶ Smoking
  - ▶ Body mass
  - ▶ Exercise capacity

### Patients perception

- ▶ **Functional Classification**
  - ▶ CCS - Angina Classification status
  - ▶ NYHA - Functional Seattle Angina Questionnaire
- ▶ **Health related quality of life**
  - ▶ The SF 36 Health Survey
  - ▶ Kansas City Cardiomyopathy Questionnaire
  - ▶ The MacNew Heart Disease health-related quality of life instrument
- ▶ **Illness perception**
  - ▶ The Illness Perception Questionnaire

# Patients point of view is sometimes different

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After his first MI Norman speculates about CR:

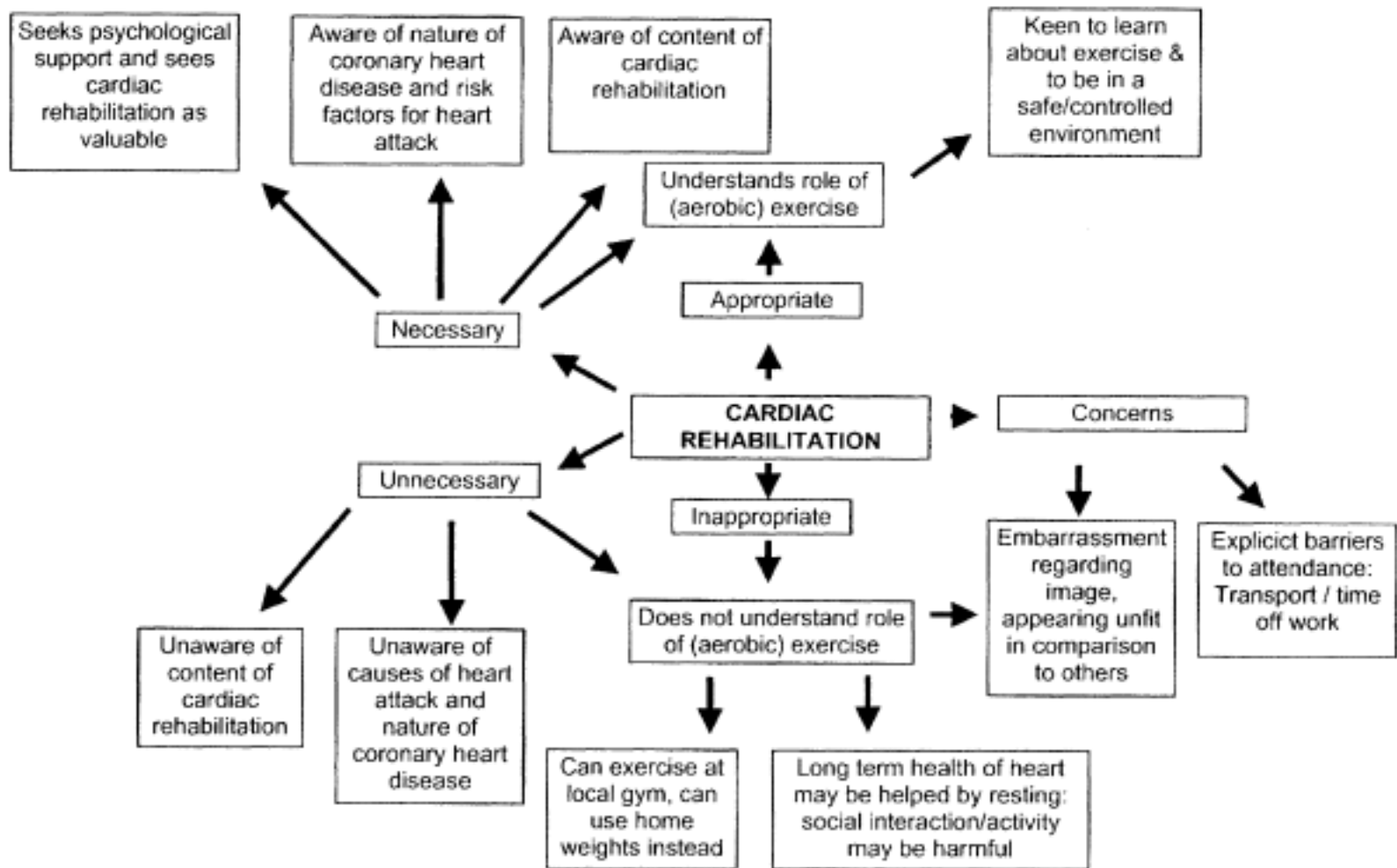
- ▶ *...I don't know what they do there, well, somebody say they do exercise....*



Cognitive domain is important

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# A qualitative study investigating patients beliefs about cardiac rehabilitation



# Why patients do not attend CR: differences in illness perceptions and risk factors between diagnostic categories

Illness perception was measured using Weinman's IPQ

	Attenders (n = 55)	Non-attenders (n = 82)	Significance
Female	10 (18.2)	22 (26.8)	NS
Age (years)	58.4	64.9	p = 0.0002
Confidence interval	55.95 to 60.89	62.55 to 66.71	
Range	39 to 77	39 to 81	
Employed	29 (52.7)	22 (26.8)	p = 0.007
Smoking history			
Never	15 (27.3)	22 (27.5)	
Past	34 (61.8)	53 (66.3)	NS
Present	6 (10.9)	5 (6.2)	
Diagnosis			
AMI	22 (40)	42 (51.2)	
CABG	20 (36.4)	22 (26.8)	NS
CABG + AMI	13 (23.6)	18 (22)	
Illness perceptions			
Control/cure	24.9 (24.0 to 25.8)	23.4 (22.7 to 24.1)	p = 0.01
Consequences*	13.5 (12.6 to 14.5)	12.6 (12.2 to 13.3)	p = 0.08
Timeline	9.8 (8.9 to 10.6)	9.8 (9.2 to 10.4)	NS
Causal attribution*			
Lifestyle	3.45 (1.1)†	2.8 (1.2)†	p = 0.008
Stress	3.6 (1.1)†	3.3 (1.3)†	NS
Intention to attend	51 (92.7)	48 (58.5)	p = 0.00001
Knowledge of			
Blood pressure	45 (81.8)	64 (79)	NS
Total cholesterol	38 (69.1)	40 (48.8)	p = 0.02
Previous regular exercise	26 (51.0)	37 (54)	NS
Body mass index (kg/m <sup>2</sup> )	25.8 (24.4 to 27.1)	25.7 (24.5 to 26.8)	NS
History of heart disease	31 (62)	42 (58.3)	NS

Where count data are given actual numbers are shown with percentages in parentheses; for continuous data the mean score for each variable is shown with the confidence intervals in parentheses.

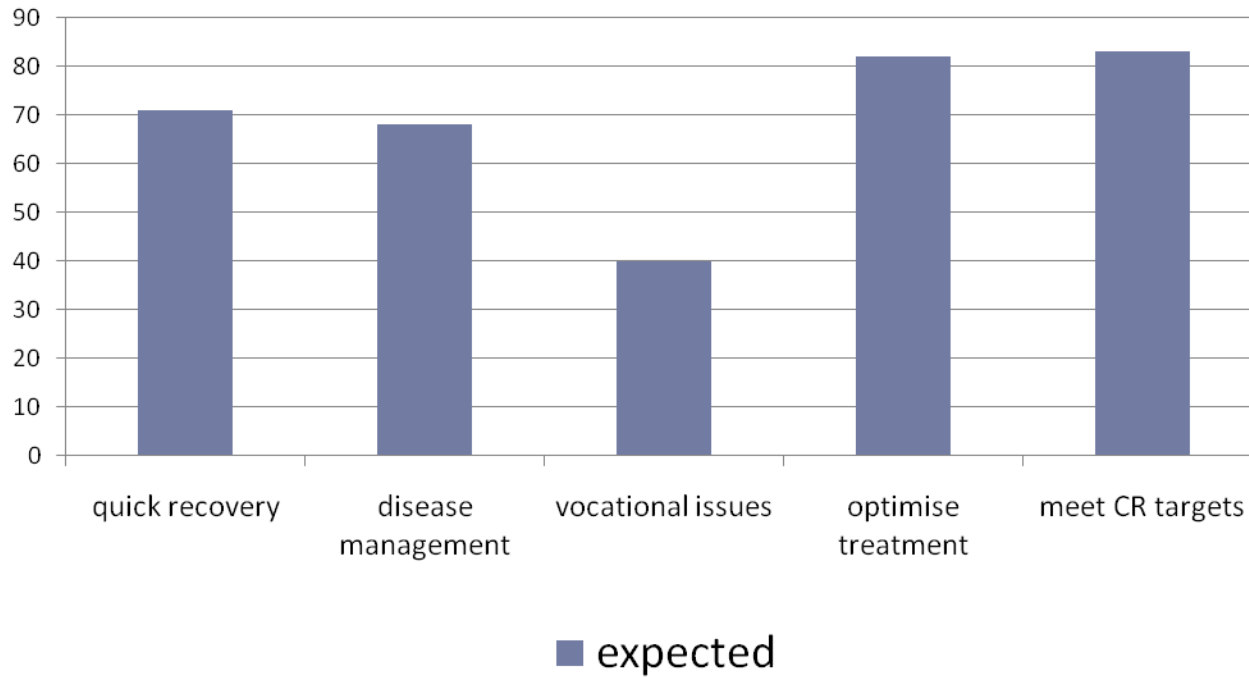
\*Mann-Whitney U test; †SD.

NS, not significant.

# Patients expectations in cardiac rehabilitation

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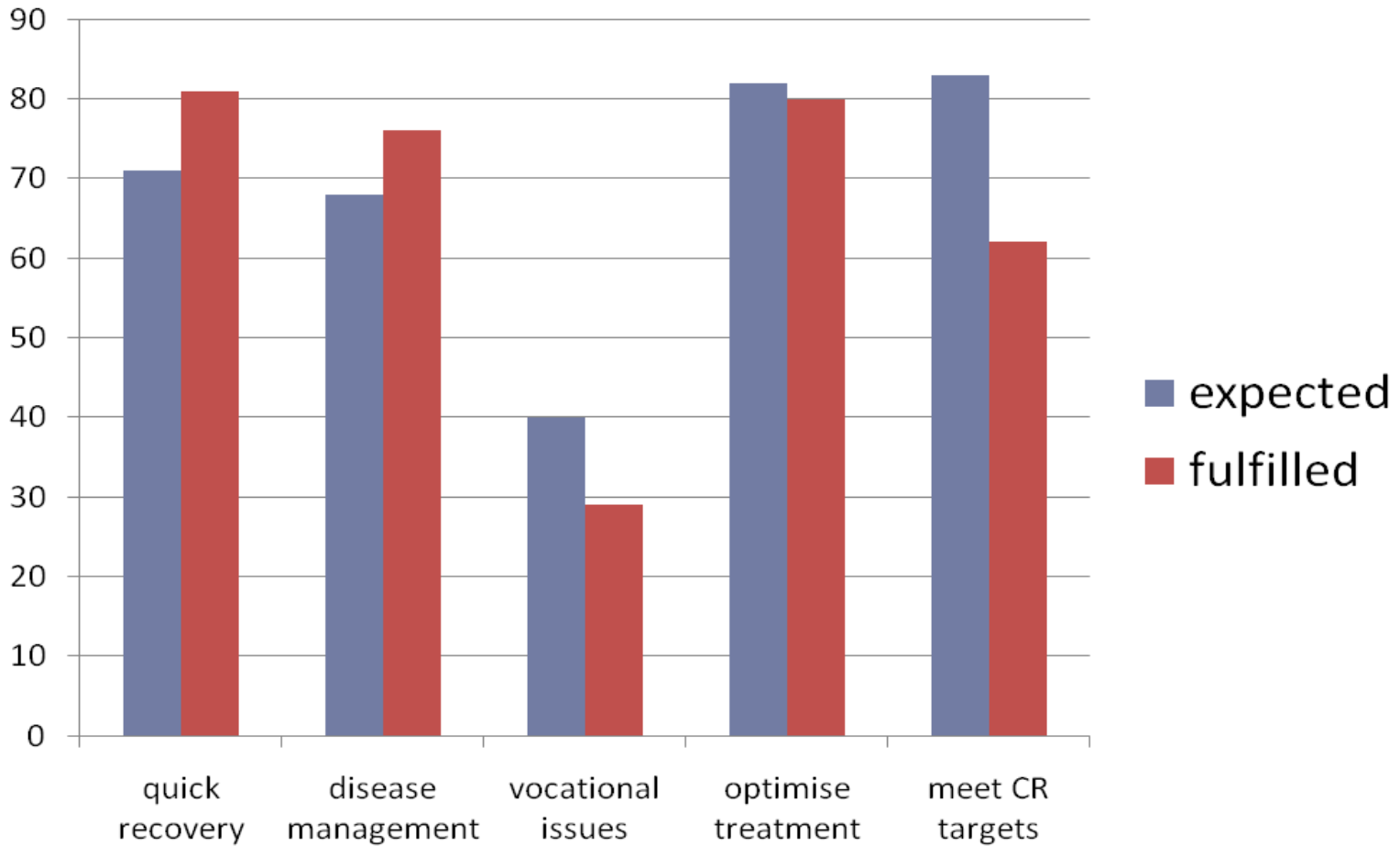
% of pts.



# Patients expectations in cardiac rehabilitation

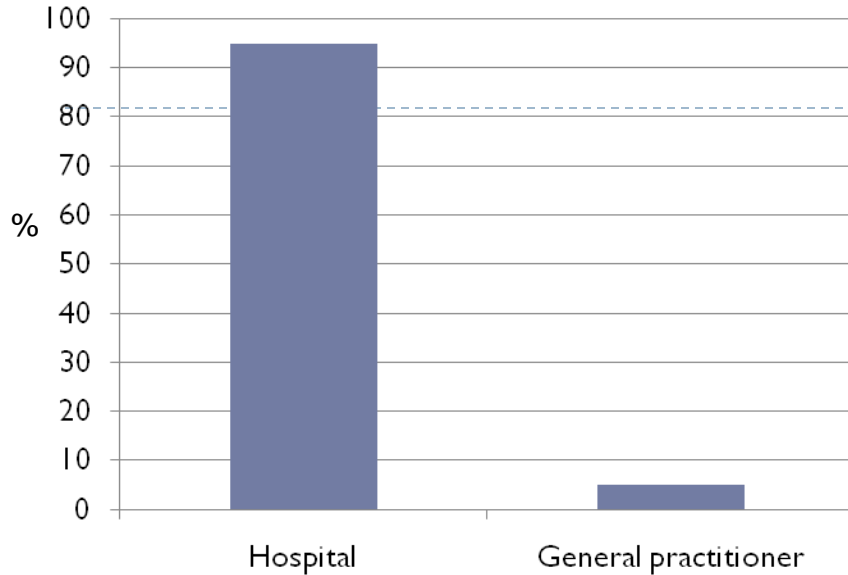
Pts. expectations	women	men	p- value
To relax	2.4	1.9	<0.01
Disease management	2.1	1.7	<0.01
Vocational / house keeping issues	7.8	6.9	<0.01
Better treatment	2.9	2.7	<0.01
Meeting predefined CR targets	1.9	1.2	<0.01

# Patients expectations in cardiac rehabilitation



# Patients intentions to participate in the Austrian Outpatient Cardiac Rehabilitation Programme

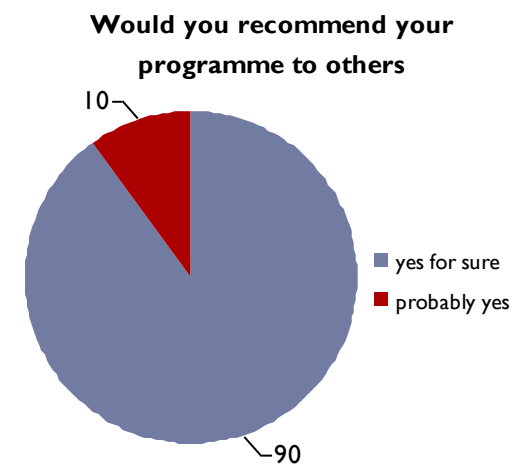
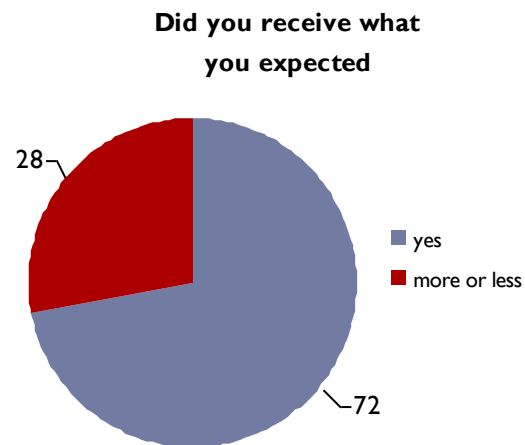
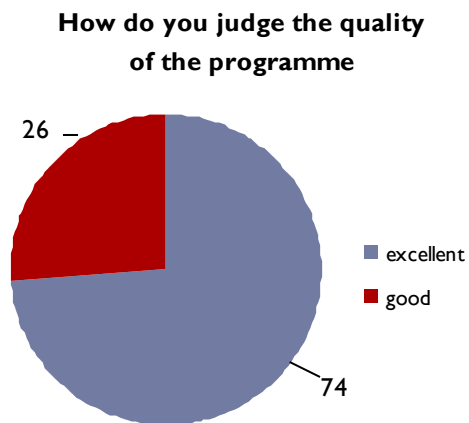
Invitation for CR



INTENTIONS TO PARTICIPATE (%)	first	second	third
Physical fitness	38	15	10
Disease management	15	12	18
Lifestyle changes	10	15	23
Doctors advise	5	10	28
Others	32	48	21

# Programme acceptance and treatment satisfaction of patients participating in the Austrian Outpatient Cardiac Rehabilitation Programme

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Questionnaire: ZUF-8

% of patients agreed

# Barriers of well documented benefits of cardiac rehabilitation

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- ▶ **Non-attendance /non-completion - many recent studies have examined this phenomenon**  
*(Yohannes et al 2007; Cooper et al 2007)*
- ▶ **Completion rates range from 58%-89%**  
*(Sanderson et al 2003; Jennings et al 2006)*
- ▶ **Non-attendance rates range 4%-14%**  
*(Turner et al 2002; Roblin et al 2004)*
- ▶ **Drop out rates range 30%-50%**  
*(Farley et al 2003; Chan et al 2005)*

# Predictors of dropout from cardiac rehabilitation

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## The Ontario exercise-heart collaborative study

- ▶ The Ontario Exercise-Heart Collaborative Study was a multicenter randomized clinical trial of high intensity exercise for the prevention of recurrent myocardial infarction in 733 men.
- ▶ Of the 678 subjects who could have participated for at least 3 years, 315 (46.5%) dropped out.
- ▶ **The consistent and statistically significant predictors of dropout in both analyses were *smoking and a blue collar occupation.***

# Conclusions and implications

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- ▶ Patients decisions about attendance in CR remain complex.
- ▶ Patients decisions about attendance are guided by their beliefs about CR. This beliefs are sometimes different from evidence based CR targets.
- ▶ Patients cognitive function influences his/her disease and treatment perception.
- ▶ Patients role in promoting participation in CR is as important as doctors standpoints.
- ▶ A major challenge of CR implementation will be to direct patients beliefs, policy targets and doctors standpoints towards quality approved CR programmes.