



UNIVERSITY OF TURKU

# **POSITIVE EFFECTS OF COUNSELLING AND ACTIVATION ON DEPRESSIVE SYMPTOMS**

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## RESEARCH TEAM

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## BACKGROUND

- mild depressions are common, especially among chronically ill or disabled
- mild depressions are treated in primary care
- need for development of treatment of mild depressions and critical assessments of treatment programmes ("evidence-based treatment")



## AIMS OF STUDY

- describe the effects of a counselling and activation programme on
  1. health behaviour
  2. conventional risk factors of CHD,
  3. health (including psychic health),
  4. physical functional abilities,
  5. social activities and
  6. life satisfactionin coronary heart disease patients aged 65 years or over



## MATERIAL

### Basic material

- 268 persons
- suffering from coronary heart disease (CHD)
- living at home in Lieto
- participating in the Lieto Study in 1998 – 1999

### Randomisation

- counselling and activation programme
- usual health care

### Actual material

- 227 persons participated in follow-up measurements (118 in intervention group and 109 in control group)



## COUNSELLING AND ACTIVATION PROGRAMME

- from autumn 1999 to the end of 2000
  - Heart District of South-Western Finland and Health Centre in Lieto
1. Lectures by professionals in health care and social care (16)
  2. Group discussions (8)
  3. Physical exercises in groups (6)
  4. Group social activities (3)



## METHODS

- interviews, clinical tests and laboratory tests
  1. before the intervention, in 1998 - 1999
  2. after the intervention period of about 1.5 years, in the end of 2000
- statistical methods for longitudinal changes and differences in changes
  1. nominal or ordinal variables
    - chi-square test
    - Fisher exact test
  2. continuous variables
    - t-test for two correlated samples
    - Mann-Whitney U-test



## MEASURES

1. Health behaviour
  - frequency of physical exercises
  - fat content of milk
  - quality of fat used on bread
  - quality of fat used in cooking
  - smoking
2. Conventional risk factors of CHD
  - serum cholesterol, HDL-cholesterol, LDL-cholesterol
  - blood pressure
3. Health
  - symptoms of CHD
  - depressive symptoms (Zung Self-rating Scale, ZSDS)
  - self-rated health
  - medications
4. Physical functional abilities
  - ADL, IADL
5. Social activities
  - social participation rate
  - frequency of visits
  - hobby activities
6. Life satisfaction
  - satisfaction with marriage
  - satisfaction with children
  - satisfaction with friendships
  - overall life satisfaction



## DISTRIBUTION BY AGE

	INTER- VENTION	CONTROL
	N (%)	N (%)
<u>Men</u>		
64-74 yrs.	41 (71)	34 (63)
75-84 yrs.	15 (26)	19 (35)
85 yrs.-	2 (3)	1 (2)
Total	58 (100)	54 (100)
<u>Women</u>		
64-74 yrs.	30 (50)	28 (51)
75-84 yrs.	24 (40)	22 (40)
85 yrs.-	6 (10)	5 (9)
Total	60 (100)	55 (100)



## NO SIGNIFICANT CHANGES IN THE FOLLOWING HEALTH BEHAVIOUR VARIABLES

- frequency of physical exercises
- quality of fat used on bread
- quality of fat used in cooking
- smoking

either in the intervention group or in the control group

DURING THE FOLLOW-UP PERIOD



# CHANGES IN FAT CONTENT OF MILK

	INTERVENTION				CONTROL			
	Baseline		Follow up		Baseline		Follow up	
	N	(%)	N	(%)	N	(%)	N	(%)
<u>Men</u>								
No milk	17	(31)	18	(33)	10	(19)	13	(24)
0% fat	7	(13)	9	(16)	2	(4)	6	(11)
1% fat	4	(7)	7	(13)	10	(19)	6	(11)
About 2% fat	16	(29)	12	(22)	16	(30)	18	(33)
> 2.5% fat	11	(20)	9	(17)	16	(30)	11	(20)
<u>Women</u>								
No milk	14	(25)	15	(26)	13	(25)	17	(32)
0% fat	11	(19)	10	(18)	7	(13)	7	(13)
1% fat	3	(5)	9	(16)	5	(9)	5	(9)
About 2% fat	21	(37)	16	(28)	5	(9)	6	(11)
> 2.5% fat	8	(14)	7	(12)	9	(17)	7	(13)

A significant change in the intervention group among the total intervention population (men and women together) ( $p= 0.053$ ).



## CHANGES IN SERUM LIPID CONCENTRATIONS (mmol/l)

	Baseline		Follow-up		p-value (change)
	M	(±SD)	M	(±SD)	
<u>Intervention, men</u>					
Total chol	5.4	(1.0)	5.2	(1.0)	0.027
HDL-chol	1.3	(0.4)	1.3	(0.3)	0.637
LDL-chol	3.4	(0.9)	3.2	(0.9)	0.061
<u>Intervention, women</u>					
Total chol	6.1	(1.1)	5.4	(1.2)	0.000
HDL-chol	1.5	(0.4)	1.4	(0.4)	0.310
LDL-chol	3.8	(0.9)	3.3	(1.0)	0.0002
<u>Control, men</u>					
Total chol	5.4	(0.8)	5.1	(0.8)	0.0007
HDL-chol	1.3	(0.3)	1.3	(0.3)	0.468
LDL-chol	3.4	(0.7)	3.2	(0.7)	0.002
<u>Control, women</u>					
Total chol	6.0	(1.1)	5.8	(1.2)	0.045
HDL-chol	1.5	(0.4)	1.5	(0.4)	0.551
LDL-chol	3.8	(1.0)	3.6	(1.0)	0.107

p-value between the change in intervention group and the change in control group significant for serum total cholesterol concentration among women (p= 0.018)



## CHANGES IN BLOOD PRESSURE VALUES (mmHg)

	Baseline		Follow-up		p-value
	M	(±SD)	M	(±SD)	(change)
<u>Intervention, men</u>					
Systolic	150.1	(22.9)	146.8	(19.7)	0.257
Diastolic	80.3	(10.6)	78.1	(10.1)	0.129
<u>Intervention, women</u>					
Systolic	157.8	(19.2)	151.7	(22.9)	0.020
Diastolic	79.7	(9.0)	76.0	(10.0)	0.0008
<u>Control, men</u>					
Systolic	152.9	(23.0)	144.9	(22.9)	0.009
Diastolic	79.6	(9.7)	75.6	(10.3)	0.012
<u>Control, women</u>					
Systolic	160.1	(25.5)	151.6	(22.9)	0.013
Diastolic	81.0	(11.5)	76.9	(12.5)	0.006

No significant differences between the change in intervention group and the change in control group among men or women



# CHANGES IN DEPRESSIVE SYMPTOMS IN TOTAL POPULATION

	INTERVENTION		CONTROL	
	Baseline	Follow-up	Baseline	Follow-up
	N (%)	N (%)	N (%)	N (%)
<u>Men</u>				
ZSDS < 45	40 (70)	41 (72)	45 (88)	55 (69)
ZSDS ≥ 45	17 (30)	16 (28)	6 (12)	16 (31)
<u>Women</u>				
ZSDS < 45	41 (69)	42 (71)	37 (67)	37 (67)
ZSDS ≥ 45	18 (31)	17 (29)	18 (33)	18 (33)

A significant increase in the proportion of depressed men in the control group (p=0.016)



## CHANGES IN DEPRESSIVE SYMPTOMS AMONG PERSONS SCORING HIGH (ZSDS sumpoints 45 or over) AT THE BASELINE

	Baseline	Follow-up	p-value	
	M (±SD)	M (±SD)	(change)	
<u>Intervention</u>				
Men (n=17)	48.4 (3.6)	46.6 (4.7)	0.175	
Women (n=18)	48.5 (3.5)	44.4 (8.7)	0.040	
<u>Control</u>				
Men (n=6)	49.8 (3.8)	53.7 (6.4)	0.076	
Women (n=18)	47.7 (3.4)	45.0 (6.4)	0.053	

p-value between the change in intervention group and the change in control group:

men                      p=0.016

women                    p= non-significant



## CHANGES IN USE OF LIPID- LOWERING MEDICATION

	INTERVENTION				CONTROL			
	Baseline		Follow-up		Baseline		Follow-up	
	N	(%)	N	(%)	N	(%)	N	(%)
<u>Men</u>								
Uses	15	(26)	24	(41)	12	(22)	13	(24)
Does not use	43	(74)	34	(59)	42	(78)	14	(76)
<u>Women</u>								
Uses	4	(7)	12	(20)	7	(13)	10	(18)
Does not use	56	(93)	48	(80)	48	(87)	45	(82)

A tendency of increase in the proportion of users in men in the intervention group (p=0.077).

A significant increase in the proportion of users in women in the intervention group (p=0.032)



NO SIGNIFICANT DIFFERENCES BETWEEN  
THE CHANGE IN THE INTERVENTION GROUP  
AND THE CHANGE IN CONTROL GROUP IN

- symptoms of CHD
- self-rated health
- physical functional abilities
- social activities
- life satisfaction

AMONG MEN OR WOMEN



## CONCLUSIONS

Counselling and activation programme had positive effects on

1. fat content of milk used
2. the use of lipid-lowering medications among women
3. serum total cholesterol concentration among women
4. depressive symptoms among men; especially among men with a high amount of depressive symptoms at the baseline



# COUNSELLING AND ACTIVATION PROGRAMME HAD POSITIVE EFFECTS ON

1. psychic health among men and
2. conventional risk factors of  
CHD among women

# IN OLDER PATIENTS WITH CORONARY HEART DISEASE



## EXPLANATIONS

- a high incidence of CHD in middle-aged Finnish men has led to trials to lower conventional risk factors of CHD and to affect negative health behaviour in men
- conventional risk factors and health behaviour of women have not been the topic of specific trials
- health behaviour of women is more positive than that of men in middle-aged and older age groups
- serum cholesterol concentrations increase with age, especially in women
- Finnish middle-aged and older men are supposed to be work-oriented and to have smaller amounts of social contacts compared to women