

# The effect of spa therapy on health related quality of life in fibromyalgia

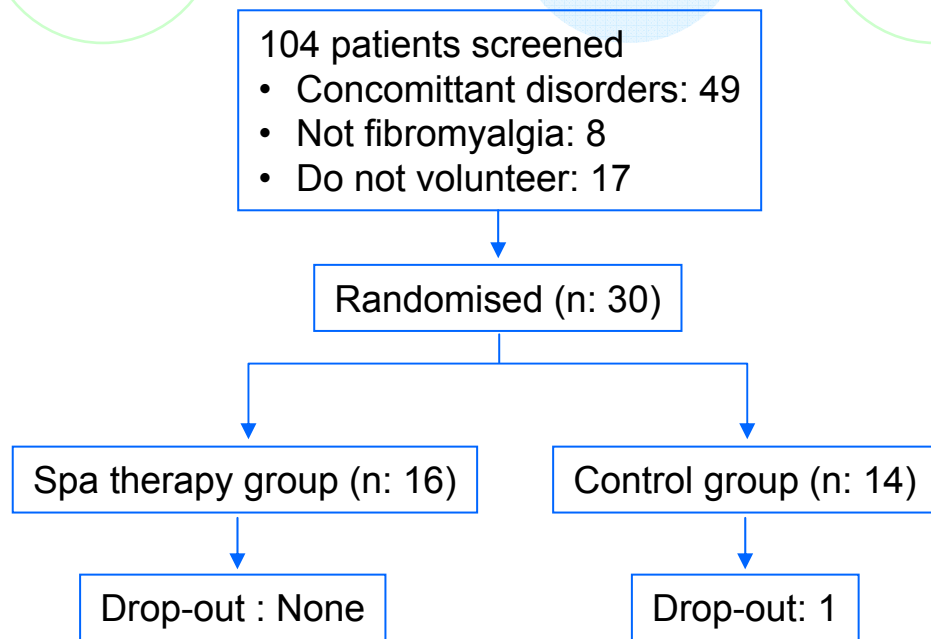
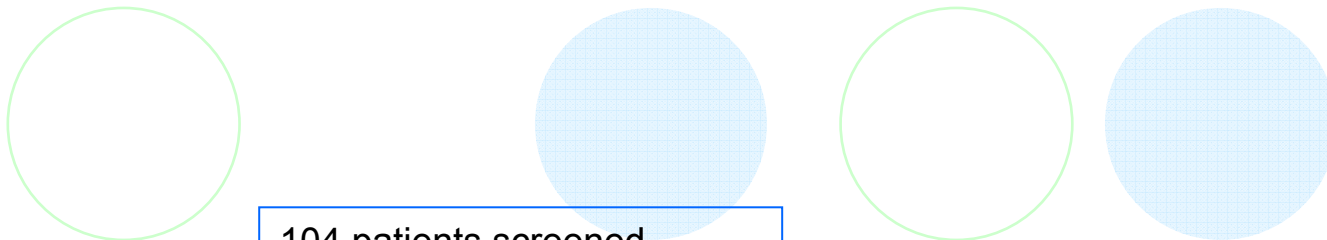
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# Aim



- Quality of life of the FM patients, even their relatives, are impaired during the disease course
- Would complementing the standard medical care with spa therapy provide benefit to FM patients?

# Patients



Demographic Characteristics (mean±SD)		
• Age	43,3±7,5	43,1±6,9
• Duration of Sx.s	11,5±8,5	11,8±7,5
• Educated Years	9,8±4,6	11,0±4,7
• Single or Divorced	4	1
• Employee / Worker	6	5

# Interventions



- Spa therapy Group
  - Regular medication
  - Thermal pool bath every day (36°C, 20 min.s)
  - Pressurised shower / classical massage alternately
- Control group
  - Regular medication

# Assessments



- Day 0, day 15 (end of spa therapy), 1st, 3rd, 6th, and 9th months.
- SF-36
  - Turkish version
  - Valid and reliable. Retested several times.
- FIQ
  - Turkish version
  - Valid and reliable. Retested several times.

# Data analysis



- Friedman's test
- Wilcoxon Signed Ranks test
- Mann Whitney U test
- Spearman Correlation test

# Results – Spa therapy Group

	<b>Week 0</b>	<b>Week 2</b>	<b>1<sup>st</sup> month</b>	<b>3<sup>rd</sup> month</b>	<b>6<sup>th</sup> month</b>	<b>9<sup>th</sup> month</b>	<b>X<sup>2</sup></b>	<b>p<sup>a</sup></b>
<b>FIQ</b>	48.5 (37-81)	34 <sup>b</sup> (11-71)	40 <sup>b</sup> (7-60)	42 <sup>b</sup> (13-67)	42.5 <sup>b</sup> (7-72)	49 <sup>b</sup> (8-73)	17.402	<0.001
<b>Vitality</b>	35 (0-60)	70 <sup>b</sup> (30-90)	52.5 <sup>b</sup> (30-80)	50 <sup>b</sup> (15-80)	42.5 <sup>b</sup> (30-100)	47.5 (20-80)	25.420	<0.001
<b>Health Perception</b>	46 (10-87)	57 <sup>b</sup> (30-87)	56 (25-82)	58.5 <sup>b</sup> (30-87)	58.5 <sup>b</sup> (20-95)	46 (25-92)	11.998	0.035
<b>Mental Health</b>	52 (16-68)	76 <sup>b</sup> (44-100)	70 <sup>b</sup> (44-84)	60 <sup>b</sup> (48-100)	62 (32-100)	58 (40-92)	22.574	<0.001
<b>Bodily Pain</b>	44.4 (0-67)	66.7 <sup>b</sup> (44-100)	61.1 <sup>b</sup> (44-100)	55.6 (22-78)	50 (22-78)	55.6 (0-89)	27.890	<0.001
<b>Physical Functioning</b>	55 (5-90)	72.5 <sup>b</sup> (15-100)	72.5 (25-100)	70 <sup>b</sup> (30-95)	75 (30-100)	70 (30-100)	6.081	0.298
<b>Role Emotional</b>	29.2 (0-100)	95.8 <sup>b</sup> (67-100)	66.7 <sup>b</sup> (0-100)	66.7 <sup>b</sup> (0-100)	33.3 (0-100)	50 (0-100)	25.688	<0.001
<b>Role Physical</b>	25 (0-100)	75 (0-100)	75 (0-100)	50 (0-100)	37.5 (0-100)	37.5 (0-100)	8.632	0.125
<b>Social Functioning</b>	55.6 (11-78)	66.7 <sup>b</sup> (44-89)	66.7 <sup>b</sup> (33-89)	66.7 <sup>b</sup> (33-89)	55.6 (22-89)	50 (22-89)	16.315	0.006
<b>PCS</b>	46.8 (4-80)	65.3 <sup>b</sup> (31-88)	62.5 <sup>b</sup> (29-94)	56.2 (28-87)	54.8 (22-92)	48.4 (32-91)	12.429	0.029
<b>MCS</b>	39.3 (7-69)	78.2 <sup>b</sup> (57-91)	63.6 <sup>b</sup> (28-88)	62 <sup>b</sup> (27-84)	46.5 (27-97)	48.5 (21-90)	30.438	<0.001

<sup>a</sup> Friedman's test

<sup>b</sup> Significantly different than the baseline at 0.05 level

# Results – Control Group

	<b>Week 0</b>	<b>Week 2</b>	<b>1<sup>st</sup> month</b>	<b>3<sup>rd</sup> month</b>	<b>6<sup>th</sup> month</b>	<b>9<sup>th</sup> month</b>	<b>X<sup>2</sup></b>	<b>p<sup>a</sup></b>
<b>FIQ</b>	53 (28-77)	46 (31-77)	44 (26-73)	45 (14-68)	50 (18-75)	49 (18-79)	4.989	0.230
<b>Vitality</b>	40 (20-65)	40 (15-100)	50 (25-90)	50 (25-80)	45 (0-80)	45 (20-75)	4.068	0.540
<b>Health Perception</b>	45 (10-72)	52 (20-77)	57 (10-97)	50 (20-97)	57 <sup>b</sup> (20-92)	55 (15-92)	6.250	0.283
<b>Mental Health</b>	64 (36-92)	56 (20-92)	56 (28-84)	64 (16-92)	64 (28-100)	56 (24-100)	1.215	0.943
<b>Bodily Pain</b>	44.4 (11-56)	44.4 (22-78)	44.4 (11-67)	33.3 (0-78)	44.4 (22-56)	44.4 (0-67)	4.102	0.535
<b>Physical Functioning</b>	40 (20-80)	45 (25-80)	60 <sup>b</sup> (15-100)	55 (30-85)	60 <sup>b</sup> (20-80)	65 <sup>b</sup> (15-90)	11.181	0.048
<b>Role Emotional</b>	33.3 (0-100)	33.3 (0-100)	33.3 (0-100)	25.6 (0-100)	33.3 (0-100)	33.3 (0-100)	2.730	0.742
<b>Role Physical</b>	0 (0-50)	0 (0-100)	50 (0-100)	0 (0-100)	25 <sup>b</sup> (0-100)	25 (0-100)	15.206	0.01
<b>Social Functioning</b>	44.4 (11-89)	55.5 (11-89)	66.7 (11-89)	44.4 (11-89)	44.4 (22-89)	55.6 (33-89)	3.675	0.597
<b>PCS</b>	39.1 (13-58)	39.8 <sup>b</sup> (23-74)	53.3 <sup>b</sup> (22-84)	37.3 (16-90)	43.9 <sup>b</sup> (21-82)	47.4 <sup>b</sup> (14-83)	14.449	0.013
<b>MCS</b>	48 (26-85)	53.3 (29-75)	53.1 (16-78)	41.4 (18-90)	46.4 (21-93)	46.9 (22-91)	2.401	0.791

<sup>a</sup> Friedman's test

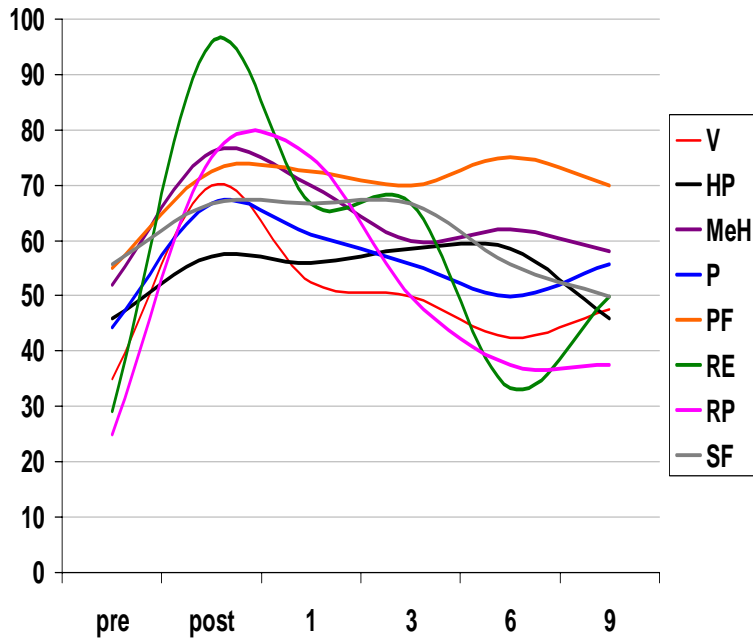
<sup>b</sup> Significantly different than the baseline at 0.05 level



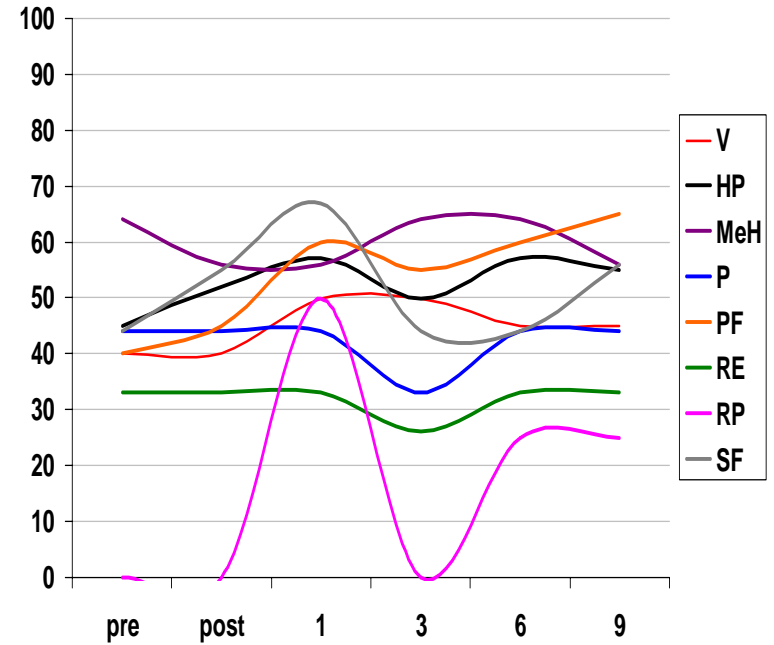
# SF-36 Scores



Spa Arm



Control Arm

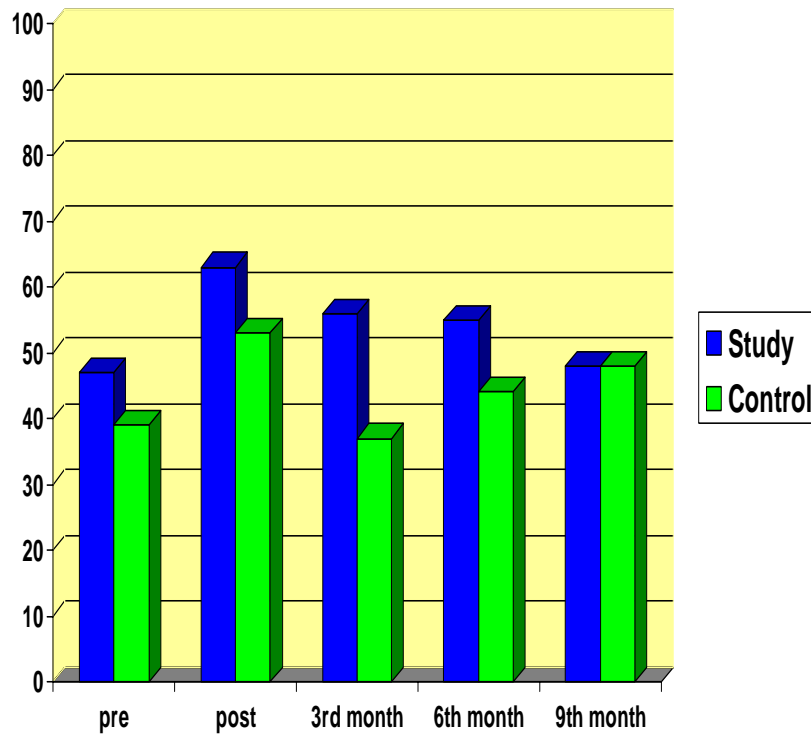


# Summary Scales



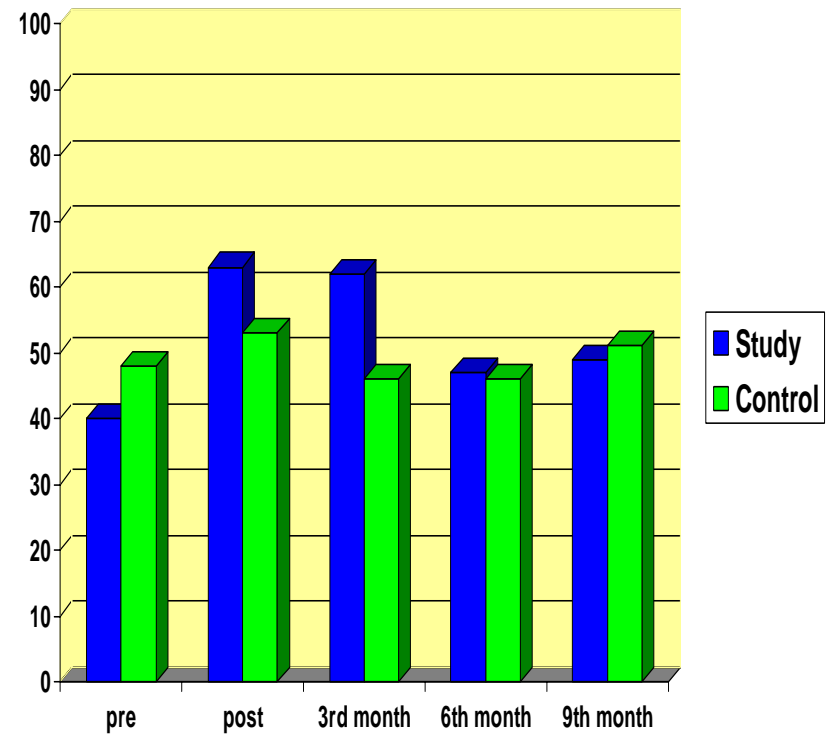
## Physical Component Score

Change by Time and by Group



## Mental Component Score

Change by Time and by Group



# To summarise ...

- FIQ
  - Significant improvement (up to 9 months) in the spa therapy group.
  - Insignificant changes in the control group.
- SF-36
  - Improvements in most items in both groups.
  - Significance matters only in spa therapy group
- There is a good correlation between FIQ and SF-36 scores, especially with summary scales PCS and MCS ( $r_s$ :-0.74 and  $r_s$ :-0.62 respectively)

# To summarise ...



- The addition of spa treatment to the standard medical care is beneficial in patients FM
- Spa therapy-added group scored higher at all follow-up evaluations in almost all items, although most of them are not significant as compared to the baseline.
  - their in-group variations are smaller than the control group.
- These beneficial effects persist up to 9 months in most cases.

# To summarise ...



- Considering the components of MCS the balneotherapy group show better results than the controls
  - The spa treatment supplied a peaceful and supporting environment.
- The changes within the items of PCS are surprising
  - Impact of the intervention is greater and significant changes takes place in the control group. With our current understanding, we could not be able to rationalise and conceptualise this finding in relation with spa therapy.

# To summarise ...

- Neumann et al\* :

“Significant improvement on most subscales of the SF-36 and on most symptoms of FM accomplished with the 10-day stay at the Dead Sea area. The improvement in balneotherapy group is better where improvement in physical aspects of QoL lasted up to 3 months, but improvement in psychological measures was shorter.”
- Our data
  - CONGRUOUS: The most striking differences observed at the end-of-treatment examination and these beneficial effects are relatively stable until the 3rd month.
  - CHALLENGING: Improvement in psychological measures longer than the physical measures in balneotherapy group.
    - differences in study designs. In Neuman study both groups were benefited from the spa environment whereas in our study spa therapy group only.

# Conclusion



- Spa therapy may be effective in fibromyalgia patients
- Beneficial effects are observed both in short and long term
- Mechanisms that mediate improvements and maintenance are poorly understood
  - Increased time for self care ?
  - Changed behaviours and attitudes, life styles ?
- There is a need for further controlled studies to verify these results.