



# EVALUATION IN HULL

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## Evaluation in Hull

- Patient Relevant Outcome Measures (PROMs)
- Health related quality of life measures
- SF36
  - Use in Hull
  - General information about SF36
  - Results in Hull
- Evaluation of physical active community groups



## Patient Relevant Outcome Measures (PROMs)



- White Paper stresses PROMs
- Government focus on HSMRs?
- Health Economists interested in measures which will give information on the impacts on the individuals and patient groups health related quality of life over time



## Measures of health related quality of life



- EuroQoL (EQ5D)
  - 5 questions works better for ill populations
- Health Utilities Index (HUI)
  - Good measure summarising to one score, but about 50 questions (less with 'skips')
- Short Form (SF36)
- SF8
- Can use these QoL measures to give cost per quality adjusted life year (QALY)



## SF36



- Used in pilot of 'Stay Healthy Live Longer' Shapes Slimming club
- Now extended to wider commissioned services from a number of providers (2 smoking cessation providers and 3 weight management providers)
- Gives opportunity for commissioning by results
- Can compare costs and outcomes from different providers
- Shows the real impact across a number of domains of health related quality of life
- Gives evidence to support health promotion activities



## Short Form 36 (SF36™)



- 36 questions to evaluate physical and mental health (11 questions some with sub-questions)
- Most questions relate to physical and emotional health in last 4 weeks
- Validated and well-used
- Not freely available (fee payable)
- <http://www.sf-36.org/tools/sf36.shtml>



## SF36™ 11 questions



1. General health
2. Change in health over last year
3. Physical health limiting list of activities (10Q)
4. Problems with physical health (4Q)
5. Problems with emotional health (3Q)
6. Extent health interfered with activities
7. Bodily pain
8. Pain interfered with activities
9. Feelings and how things have been (9Q)
10. Frequency of time health interfered with activities
11. Health statements (4Q)



## SF36™ domains



- 36 questions form 8 domains
- Missing data not a problem provided >50% of questions for domain non-missing
- Easy to calculate scores for the 8 domains (in general some responses reversed and components summed)
- Transformed scores also calculated (from 0=worst to 100=best health)



## SF36™ 8 domains (+HT)

PF	Physical functioning	Extent to which health limits physical activities such as self-care, walking, climbing stairs, bending, lifting, and moderate and vigorous exercises.
RP	Role—physical	Extent to which physical health interferes with work or other daily activities, including accomplishing less than wanted, limitations in the kind of activities, or difficulty in performing activities.
BP	Bodily pain	Intensity of pain and effect of pain on normal work, both inside and outside the home.
GH	General health	Personal evaluation of health, including current health, health outlook, and resistance to illness.
VT	Vitality	Feeling energetic and full of life versus feeling tired and worn out.
SF	Social functioning	Extent to which physical health or emotional problems interfere with normal social activities.
RE	Role—emotional	Extent to which emotional problems interfere with work or other daily activities, including decreased time spent on activities, accomplishing less, and not working as carefully as usual.
MH	Mental health	General mental health, including depression, anxiety, behavioural-emotional control, general positive affect.
HT	Health Transition	Personal evaluation of current health compared to one year ago.



## SF36™ disadvantages

- Wordy questions
- Some questions appear repetitive
- Not really “plain English”
- Interview preference over self-completion
- Eight domains so difficult to assess if one domain improves and another deteriorates
- Fee for usage



## SF36™ advantages



- Relatively short
- Generic health status questionnaire
- Validated, well-used in research, etc
- Interviewer can check responses
- Can cope with missing data
- Summary score can be calculated (Brazier Algorithm – John Brazier from SCHARR)



## Use of SF36™ in Hull



- Shapes Slimming Club
- Fit Fans
- Community Healthcare Partnerships (CHCP - provider service now split from NHS Hull)
  - Active Lifestyles
  - Smoking Cessation

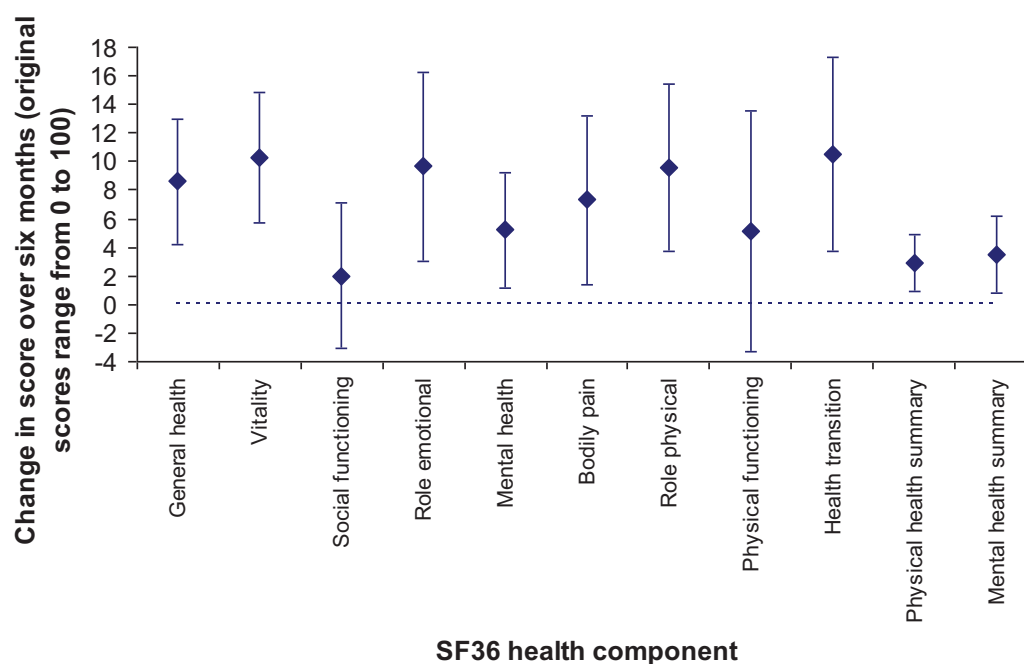


# Shapes Slimming Club

- Weight loss program
  - Weekly weigh-in
  - Cookery demonstrations / sessions / advice
- January 2006 – 65 individuals
- July 2006 – 50 individuals
- Paired analysis involving 50 individuals



# Shapes Slimming Club



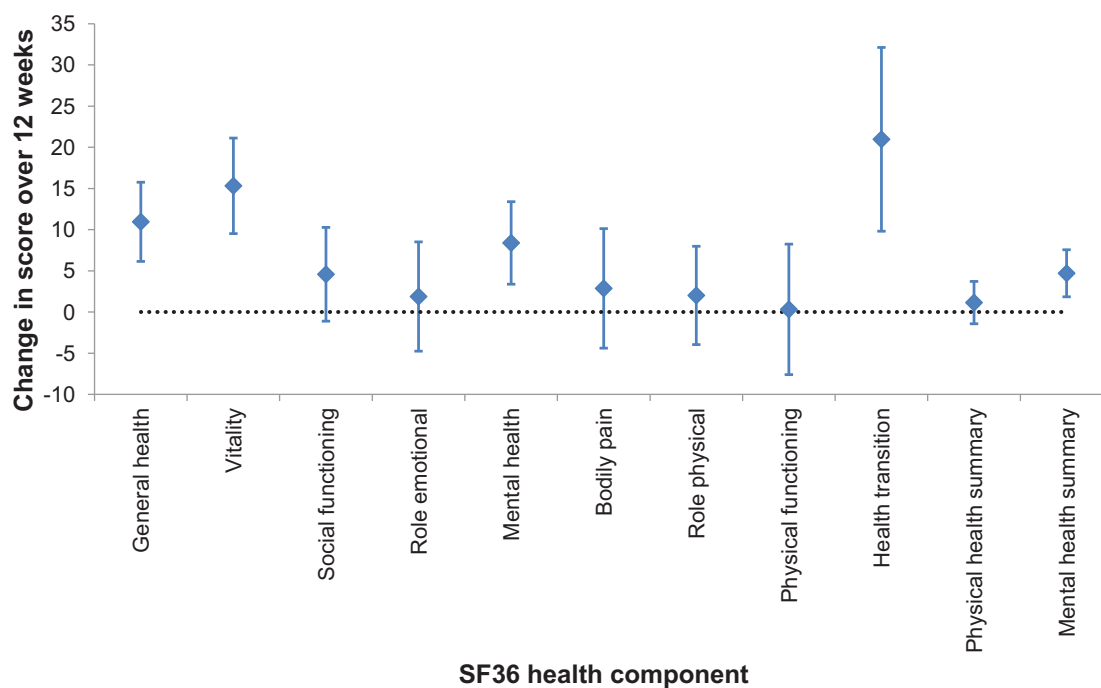


## Fit Fans

- Weight loss program aimed at men 40-65
  - Weight loss course – 1½ hr session weekly
  - Advice on diet, but focus around physical activity (with involvement of local sports clubs)
- 40 participants
  - 9 dropped out
  - Some data missing for one man
- 30-31 participants for analysis



## Fit Fans







## Statistically significant improvement



Statistically significant improvement for both Shapes (6 months) and Fit Fans (12 weeks)		
GH	General health	Personal evaluation of health, including current health, health outlook, and resistance to illness.
VT	Vitality	Feeling energetic and full of life versus feeling tired and worn out.
MH	Mental health	General mental health, including depression, anxiety, behavioural-emotional control, general positive affect.
HT	Health Transition	Personal evaluation of current health compared to one year ago.
Statistically significant improvement for Shapes (6 months)		
RE	Role—emotional	Extent to which emotional problems interfere with work or other daily activities, including decreased time spent on activities, accomplishing less, and not working as carefully as usual.
BP	Bodily pain	Intensity of pain and effect of pain on normal work, both inside and outside the home.
RP	Role—physical	Extent to which physical health interferes with work or other daily activities, including accomplishing less than wanted, limitations in the kind of activities, or difficulty in performing activities.



## Evaluation of physical active community groups



- Community groups involving some physical activity (mainly older women)
- Four rounds of data collection (6 monthly)
- 621 forms from 360 individuals (168 completed at least two rounds)
- Key outcome measures:
  - Frequency of physical activity
  - Mental health index (SF-36™)



## Frequency of exercise

Frequency of physical activity on first form (30 min sessions per week)	N	Frequency of physical activity (frequency of 30 minutes per week) on the last form completed for the survey (%)				
		<30m or 30m 1pw	30m 2-4pw	30m 5pw	30m 5+pw	Total (col %)
<30m or 30m 1pw	27	44.4	25.9	18.5	11.1	17.0
30m 2-4 pw	46	8.7	63.0	19.6	8.7	28.9
30m 5pw	26	7.7	42.3	15.4	34.6	16.4
30m 5+pw	60	6.7	16.7	21.7	55.0	37.7
<b>Total (row %)</b>	<b>159</b>	<b>13.8</b>	<b>37.7</b>	<b>19.5</b>	<b>32.1</b>	<b>100.0</b>

Overall, 17% did <30m or only one session of 30mins on their round form but this decreased very slightly to 14% in their last round.

The percentages in the main body of the table are row percentages. For instance, of the 27 who did the least exercise in their first round, 44% continued to do the same levels in their last round, and 26% did 2-4 sessions per week, etc.

Those who exercised the least in their first round tended to have increased their exercise frequency in their last round (regression to mean effect and not large effect).



## Exercise levels in relation to survey responders

Gender/age	Number in community survey	Fulfil national exercise guidelines (%)		
		Community survey	Local Health & Lifestyle survey	Difference (95% CI)
Men 55+	41	65.9	11.9	53.9 (38.4, 66.7)
Women 55+	204	40.2	12.3	27.9 (20.9, 35.0)

There is a very large difference in the percentages exercising to the national guideline levels for people in the community groups compared to the local health and lifestyle survey.

Around 1 in 8 (12%) of men and women aged 55+ years exercise for 30 minutes sessions 5+ times a week in the local survey compared to 2 in 3 (66%) men and 4 in 10 (40%) women for the community groups.



## Mental Health Index

Mental Health Index (first form)	N	Mental health index (last form)					
		0-49 (worst)	50-59	60-69	70-79	80-100 (best)	Total (col %)
0-49 (worst)	19	21.1	36.8	10.5	31.6	0.0	14.1
50-59	25	8.0	32.0	32.0	16.0	12.0	18.5
60-69	34	2.9	23.5	29.4	26.5	17.6	25.2
70-79	40	5.0	2.5	30.0	47.5	15.0	29.6
80-100 (best)	17	0.0	0.0	5.9	52.9	41.2	12.6
<b>Total (row %)</b>	<b>135</b>	<b>7.4</b>	<b>20.0</b>	<b>27.4</b>	<b>36.3</b>	<b>17.8</b>	<b>100.0</b>

There appears to be a general shift with higher percentages reporting better mental health on the last form compared to on their first form.

54% had a MHI of 70+ in their last round (36.3+17.8) compared to 42% in the first round.



## Mental Health Index

- 135 persons two rounds with MHI (0-100)
- Mean (95% CI)
  - First round: 64.6 (63.3 to 66.0)
  - Last round: 65.4 (64.1 to 66.7)
- Difference statistically significant
- Difference (95% CI): 2.6 (0.4 to 4.7)
- Clinically important?
- 2.6 on scale 0-100 is a relatively small improvement.



## MHI in relation to survey responders (aged 55+)



MHI	Gender	Number in community survey	Fulfil national exercise guidelines (%)		
			Community survey	Local H&L survey	Difference (95% CI)
>80 (good)	Men	40	22.5	46.8	-24.3 (-35.2 to -8.8)
	Women	194	19.6	33.8	-14.3 (-20.4 to -7.2)
<60 (poor)	Men	40	22.5	13.4	9.1 (-1.5 to 24.3)
	Women	194	22.7	22.6	0.1 (-6.1 to 7.1)

There are large differences in the percentages with good mental health, with people in the community groups much less likely to have good mental health.

Therefore, any improvements in mental health (or sustaining levels) which occur because of involvement in community groups could be important.



## Health Economics



- Can use SF36 to obtain Quality Adjusted Life Year (QALY) with Brazier algorithm



## Finally

- Sound evaluation indicates broad health benefits from schemes
- Organisational change brings challenges
- Need to continue to promote evaluation and evidence based approach within a health economics paradigm



## Questions?

- Further information within our Joint Strategic Needs Assessment Foundation Profile

[www.hullpublichealth.org](http://www.hullpublichealth.org)

[www.jsnaonline.org](http://www.jsnaonline.org)