



## SERVICE INNOVATION: SCHIZOPHRENIA OUTREACH IN LARKANO (SOUL): Programme development, implementation and outcomes after 7 years

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### BACKGROUND

There is a huge resource gap in mental health service provision & service utilisation in low & middle income countries (WHO, 2012)

In Pakistan the gap stands at the alarming 90% level and community mental health programmes are non-existent. To our knowledge, there is no previous example of community based mental health outreach work in the South Asia. SOUL is the only community based programme in Pakistan which uses home based care using the principles of assertive outreach and managed on charitable donations.

### SOUL PROGRAMME AIMS

SOUL programme combines psychiatric outreach with work with patients and families through home based treatment. The key objectives include early recognition, treatment, family education and psychosocial support in order to maximize clinical and functional outcomes. Additional aim includes social recovery of the patients and generating clinical (BPRS), functional (CGI, GAF) outcomes at 4 monthly intervals.

### STUDY CHARACTERISTICS

#### Single prospective cohort design

The cohort is recruited on continual basis over time with innovative service structure and culturally relevant open label intervention design developed with local academic psychiatric unit in Larkano, Pakistan.

**Selection criterion:** Adult patients with schizophrenia (who cannot afford private treatment). Recruitment through referrals by any route.

**Intervention used:** The service design works on structured training of local psychiatrists and outreach nurses, process of assessment, delivering care, and use of recognized clinical outcome measures namely BPRS, CGI-S, CGI-I and GAF. Periodic family meetings for information, education and support are also regularly organised.

### KEY DEMOGRAPHIC FREQUENCIES

Age	Number	Gender	Number	Marital status	Number	Employment	Number
0-20	10	Male	101	Single	91	In work	42
21-40	112	Female	46	Married	52	Not in work	104
41-60	24			Divorced	3	Unknown	1
61-74	0			Unknown	1		
75+	1						
<b>Total</b>							<b>147</b>

### DURATION OF ILLNESS

Gender	Number	Mean (years)	Median (years)
Male	45	6.7	5
Female	99	8.3	6
<b>Total</b>	<b>144</b>		

### GENDER DIFFERENCES IN SCORES IN MEAN SCORES AT START OF ILLNESS- MORE MEN ARE ILL

Gender	No. Patients	Mean BPRS	Mean CGI-S	Mean GAF
Male	92	64.1	5	42.6
Female	41	57.5	4.6	48
<b>Total</b>	<b>133</b>			

### SIGNIFICANT IMPROVEMENT IN ALL OUTCOME MEASURES

(From baseline to initial 12 months, Sig (2 tailed) = 0.0

Timeline	Mean BPRS	Mean CGI-S	Mean GAF
At baseline	63	4.8	44
At 12 months	44	4.1	57
<b>Sig (2 tailed)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

### SIGNIFICANT IMPROVEMENT IN ALL OUTCOME MEASURES

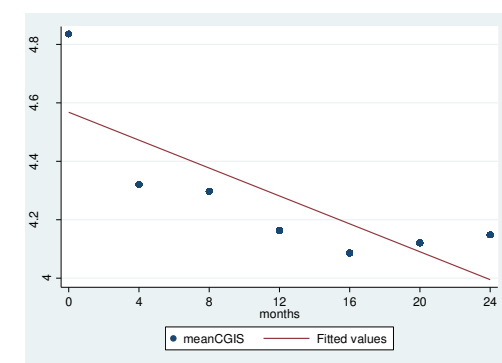
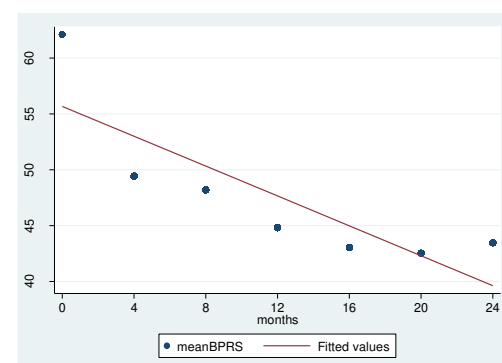
(From baseline to 24 months, Sig (2 tailed) = 0.0

Timeline	Mean BPRS	Mean CGI-S	Mean GAF
At baseline	66.7	4.9	42.8
At 24 months	43.5	4.1	56.7
<b>Sig (2 tailed)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

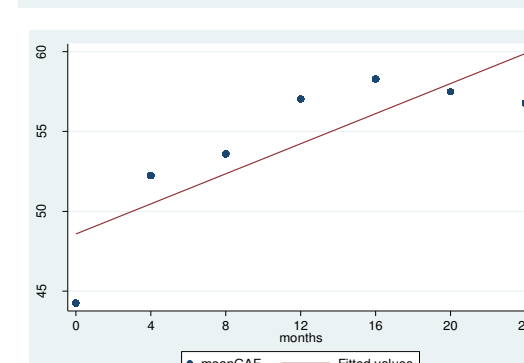
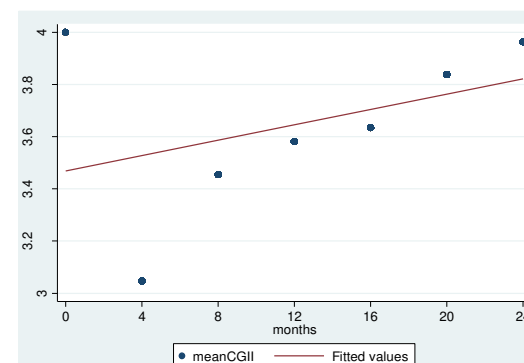
### RESULTS

1. Our analysis demonstrates higher BPRS and lower GAF ratings for men in comparison to female cohort at the baseline.
2. Our 7-year follow up has demonstrated statistically significant clinical improvement on BPRS, CGI and GAF. All measures have demonstrated a statistically significant improvement of  $P \leq 0.05$

### MEAN BPRS & CGI-S REDUCED OVER 24 MONTHS



### MEAN CGI-I & GAF OVERALL INCREASED OVER 24 MONTHS



### CONCLUSIONS:

1. SOUL Programme is a highly effective and cost-efficient intervention model for treatment of schizophrenia in the developing countries.
2. Our 7-year follow up study confirms the feasibility and cultural value of this intervention model through close working with patients and families.
3. There is scope to replicate this model in other geographical areas and to carry out further research including carer's satisfaction and economic analysis.