Mental health and Development:

Multi-site study associating development efforts with mental distress. Preliminary findings

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Background

Many mental health researchers are using a public health and social determinants model for explaining psychosocial health and wellbeing. WHO has noted that "Mental health can be measured in terms of a person's *well-being* where he / she is able to maintain "*an inner sense of comfort*" in as many life situations as possible. Mental health can also be seen in terms of *how good individuals feel about themselves*, feel comfortable with other people and cope with the demands and stresses of everyday life" (p.1) [italics mine] (Chandra, 2001). This orientation away from mental *illness* and towards mental *health* is also found in recent policy documents (Gujarat Mental Health Mission, 2003). Research in the last two decades provides an explanation of of mental distress, disability and illness, against the context of socio economic factors, urbanisation (McKenzie, 2008), health, migration, housing, poverty and gender (Desjarlais, et. al. 1999; Patel, 2005, 2007). Recent evidence base has been varied and multi-disciplinary, including medical psychiatric (Chadda & Sood 2010; McKenzie, 2009), public health (Patel, 2005, 2007) psychological, feminist (Davar 1999; Vindya, 2007), psychosocial and disability linked evidence base in the Indian context (Addhlakha, 2015; Davar 2015). 'The recent research and reviews show the important linkages between public health concerns and mental health (Patel, 2001), particularly in the context of food

[1] Director, Bapu Trust for Research on Mind & Discourse, Pune. Address for correspondence: bvdresearch@gmail.com

insufficiency (Isutzu et. al. 2005), poverty (Patel, et. al. 2006; Patel et. al. 1999), reproductive health, chronic illness, malnutrition and anaemia in the context of developing countries. Mehrayr and Khajavi (1975) accurately predicted many years ago that the mental health consequences of rapid socio economic and societal changes, the impact of that on the social fabric, particularly families, in developing / transitioning countries. Inclusion in Development' has been the battle-cry of this decade for the Global South. The World Bank defines social inclusion as the process of improving the terms for individuals and groups to take part in society. Our study contributes to recent discussions on urban mental health, wellness and development.

While the largely medical evidence base suggests that there are medical cures for the psychosocial impact of social inequalities and disadvantage, there is a thread of thinking in the writings above, that suggests that social empowerment is a 'cure' too, for mental health problems. For example, Patel (2001) argues that, to mitigate the "vicious cycle of impoverishment and mental disorder", social empowerment, especially addressing poverty, indebtedness and education could be adopted as preventive measures. He writes,

> *"The implication of the evidence is that policies and programmes aimed at providing education and reducing poverty, and socioeconomic inequalities are highly likely to help bring down the prevalence of depression. From a public health perspective, the evidence on socioeconomic determinants and depression can be used to consider a number of primary and secondary preventive strategies."*

Development and Mental health Study

Therefore, taking a lead from the above, our study begins with this hypothesis that, if mental health is determined by social economic and other structural factors, any intervention that delivers Empowerment programs would have an unintended positive impact on their client's psychosocial health and well being. To elaborate, we proposed that, at the sites where NGOs are taking up developmental initiatives to a specific vulnerable population, a pychosocial empowerment or wellbeing experience *may also already be* taking place. The objectives of the programme would not include psychosocial aspects, but it may be happening as the side effect of this empowerment initiative. Thus the broader purpose of the study was to see whether Development efforts affected the mental health of the service users. Is an empowerment initiative a stand alone way of developing the psychosocial health of the communities? Does the design of the program play a role in improving psychosocial health, for example, how comprehensive the program is? Asking this question in another way, should a separate psychosocial wellbeing service delivery package be delivered in Development sites, by general medical practitioners, as Patel further argues; or, can they be factored into an existing Development program? If Depression is a disease of poverty, then will poverty reduction strategies cure the depression?

Identifying study sites

Out of 16 NGOs identified in Maharashtra, the team had intensive visits, interviews, and field exchanges with 6 NGOs, finally selecting 3. Criteria for selection included, sustaining service delivery organization (atleast 10 years old), empowering vulnerable groups, grassroots coverage, record keeping strengths, no overt mental health component or module in service delivery, and consent to collaborate. After visiting several NGOs, we selected 3 (MASUM, SWACHCH and Chaitanya) working for over a decade with the grassroots or vulnerable communities (dalit women, rag pickers and rural women respectively) along with control

sites outside the perimeter of those interventions. 2 NGOs (MASUM, Chaitanya) were rural, other was urban. Fieldwork was conducted between February and August of 2012.

Methodology

A structured interview schedule was developed, piloted and administered to the study participants. Sections of the schedule included socio-economic profile; WHO-SELF REPORTING QUESTIONNAIRE; physical health; pain; addictions; disabilities. The WHO-SRQ, a validated tool, has been used widely in low income country context, including India. It is not a diagnostic tool, but identifies distress. Using focus group discussions, a new section on commonly used cultural expressions of psychosocial distress was added. A Pain Scale was also developed and introduced into the tool as a separate section. A last section developed the key Development indicators, including inclusion in family decision making; safety; access to social networks; access to urban development services; and life events. A last section explored self report of impact of NGO intervention. Translation, validation of translation, training and piloting was done, for reliable tool development and delivery.

The sampling procedure was decided upon the assumption that the impact of intervention reaches up to the 60 % population in the respective geographical areas/population. Thus 150 sample was drawn from the beneficiary lists of each NGO. In order to have gender representation 1/3rd sample of men respondents was included as direct or indirect beneficiaries from each site. Thus each site had a total sample of 150 respondents including 100 women and 50 men. A control group was similarly drawn from villages or urban sites not covered by the program. Client list from each NGO was used to identify participants by Systematic Random Sampling method. A total of 882 valid interviews were conducted across 3 sites, (NGO and control). Outliers on income were removed, and a total of 873 interviews were used for the

final analysis. Analysis by SPSS generated a range of associations, a subset of which is presented in this paper [i].

In this paper, we are considering two composite sets of data, across 3 sites- (1) Sociodemograhic data and its association with psychosocial health as shown by SRQ scores and (2) Development factors and its association with SRQ scores.

Findings

Section 1 Sociodemographic and SRQ

The demographic data assessed in the study across the 3 control and 3 main/NGO groups included age, gender, marital status, family type, religion, caste, type of house, education, respondent's and family's income and occupation. Of these, age, marital status, type of home, education, respondent's and family income, all significantly impacted SRQ scores as described in this section.

Age

Age group	Ngo			Control		
	Chaitanya	Swachch	MASUM	Ch. Control	Sw. Control	Mas. Control
18-24	3.1	2.8	4.5	5.8	9.8	4.5
25-40	43.8	63.4	39.7	40.6	69.3	35.1
41-55	32.3	25.4	30.1	26.8	13.7	36.4
56 plus	20.8	8.5	25.6	26.8	7.2	24

Table 1.1: Age groups across the six settings (in percentages)

As can be seen, the major chunk of respondents lies in the 25 – 40 age range, followed by the 41 – 55 age range.

SRQ/Age	18-24	25 - 40	41 - 55	56 plus
zero	13.3	8	5	3.7
low	80	36.8	63.6	59.1
sub-threshold	4.4	16.9	5.1	27.4
clinical	2.2	8.2	6.3	9.8

Table 1.2: SRQ scores and age, cross-tabulated.

SRQ scores across age groups

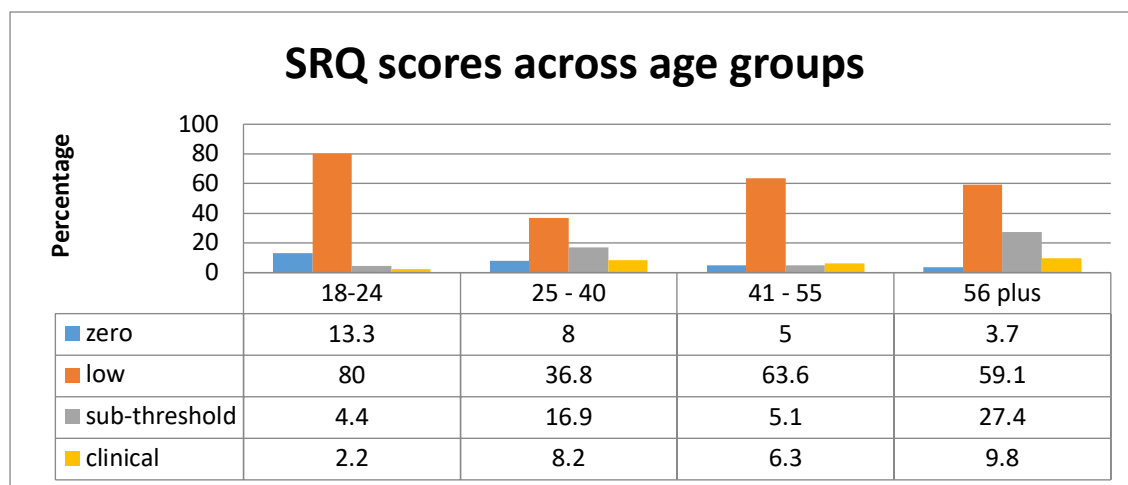|	18-24	25 - 40	41 - 55	56 plus
zero	13.3	8	5	3.7
low	80	36.8	63.6	59.1
sub-threshold	4.4	16.9	5.1	27.4
clinical	2.2	8.2	6.3	9.8

Figure 1.1: Illustrating table 1.2

Age is strongly related to scores on the SRQ. A Pearson product moment correlation was run to understand if this trend is significant. It indeed is a significant trend (r=.163, sig. at .000 level, N = 873) indicating that factors associated with age can affect mental health as measured by the SRQ.

This could be attributed to dependency, lack of an engaging social and/or work life, and increased chances of having a disability as one gets older, plus less attention to the needs of an older individual as they do not actively contribute to the income of the family.

Marital status

	NGO			Control		
	Chaitanya	SWAC HCH	MASUM	Ch. Control	KK. Control	Ma. Control
Never Married	1.5	1.4	0	0.7	6.5	3.9
Married & living with spouse	88.5	76.1	94.2	85.5	76.5	83.1
separated/divorced/not living with spouse	4.6	7.7	0.6	2.2	4.6	3.2
Widow/widower	5.4	14.8	5.1	11.6	12.4	9.7

Table 1.3: Marital status for the six settings (percentages)

Most of the population across the settings is married and living with the spouse.

Marital Status/SRQ	zero	low	sub-threshold	clinical
Never Married	19	61.9	14.3	4.8
Married & living with spouse	6.5	67	19.2	7.2
separated/divorced/not living with spouse	6.1	54.5	24.2	15.2
Widow/widower	4.7	54.7	31.4	9.3

Table 1.4: Crosstabs of Marital Status by SRQ

marital status - SRQ cross tabs

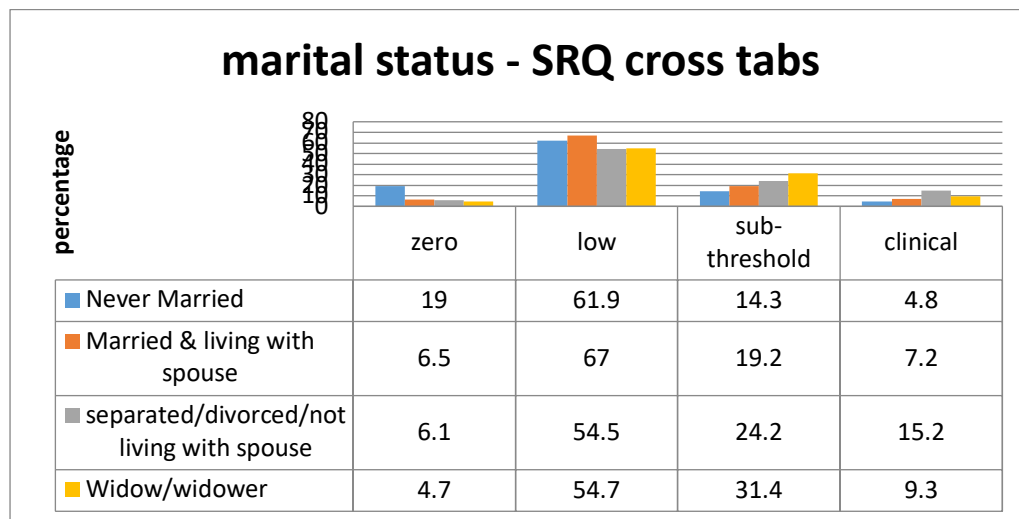|	zero	low	sub-threshold	clinical
■ Never Married	19	61.9	14.3	4.8
■ Married & living with spouse	6.5	67	19.2	7.2
■ separated/divorced/not living with spouse	6.1	54.5	24.2	15.2
■ Widow/widower	4.7	54.7	31.4	9.3

Figure 1.2: Illustrating Table 1.4

Most of the population lies in the 'low' SRQ score category, showing better psychosocial health. The highest levels of 'zero' SRQ scores lie with the 'never married' population. For the sub-threshold and clinical scores, the 'living alone' and 'widower' groups have high levels. The homogeneity assumption satisfied, a one-way ANOVA test results showed a <u>significant</u> difference between the groups (f=6.010, sig =.000 level, N = 871). Tukey's HSD post-hoc test revealed differences between the 'widower' group and 'married and living with spouse' group (2.61 at .004 level) and between the 'widower' group and the 'never married' group (4.34 at .043 level). Mean of 'widower' group was 10.96, and of 'never married group' 6.6 and of 'married and living with spouse' 8.3 respectively. Therefore, the highest likelihood of mental distress as measured by SRQ lies with 'widower' group and the least with the 'never married' group.

Type of house:

Type of Houses	NGO			Control		
	Chaitanya	SWACHCH	MASUM	Ch. Control	KK control	Ma. Control
Other	85.4	86.6	96.2	89.9	73.2	96.1
Pakka	14.6	13.4	3.8	10.1	26.8	3.9

Table 1.5: Types of house across the six settings

The type of house remains similar to the overall trend for all other groups except MASUM and its control group, where a very small number have pakka houses (3 to 4%).

Type of House/SRQ	zero	low	sub-threshold	clinical
Other	6.2	63.7	21.7	8.3
Pakka	9.5	76.2	11.4	2.9

Table 1.6: SRQ and type of house crosstabs

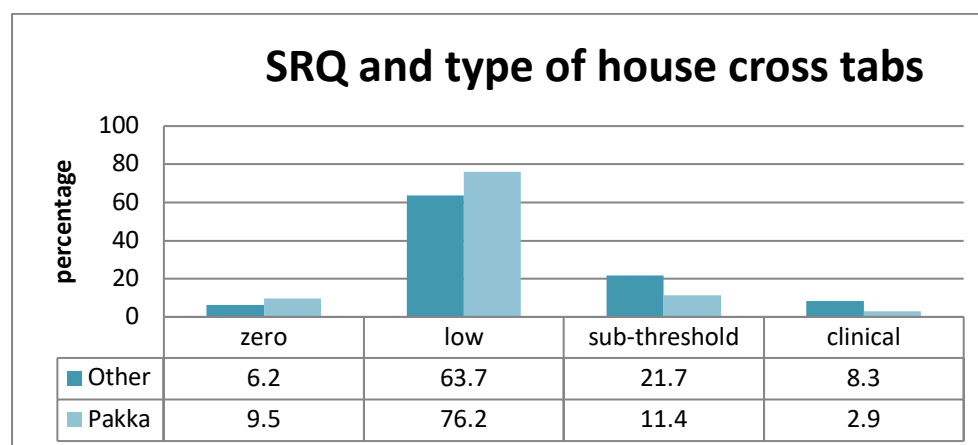Figure 1.3: Illustrating table 1.7

People with insecure houses (*kachcha*) are more likely to be figured in the higher SRQ score ranges. T-test result was significant (t=2.92 at .004 level, df = 871). The mean SRQ score of the 'other' group is 8.9, while that of 'pakka' group is 6.8. Therefore, not having a proper house can have a significant impact on mental health as indicated by SRQ scores.

Education:

Education Level	NGO			Control		
	Chaitanya	SWACHCH	MASUM	Ch. Control	KK. Control	Ma. Control
No education	33.8	59.2	32.1	41.3	41.2	54.5
1st to 4th	12.3	16.9	13.5	13	23.5	14.3
5th to 10th	46.2	21.1	45.5	41.3	32.7	24
11-12th	5.4	2.1	5.8	1.4	2.6	5.8
Diploma/graduation	1.5	0.7	2.6	0	0	0.6
Adult literacy program	0.8	0	0.6	2.9	0	0.6

Table 1.8: Education level for all 6 settings

The highest percentage of people with no education belongs to SWACHCH and MASUM control respectively. The lowest percentage of no education lies with 'MASUM. The highest percentage of people with 5th to 10th standard education lies in Chaitanya and MASUM.

Education level/SRQ	zero	low	sub-threshold	high
No education	3.9	60.5	24.3	11.3
1st to 4th	8	59.5	25.5	6.6
5th to 10th	8.2	71.8	15.1	4.9
11-12th	20.6	64.7	14.7	0
Diploma/graduation	0	100	0	0
Adult literacy program	0	100	0	0

Table 1.9: Education SRQ crosstabs.

With 'zero' SRQ scores, those with 11-12th Education tend to be present the most. With 'low' scores, highest percentage is from people with 5-10th education. For Sub-threshold scores, highest percentage is those with 1st – 4th education, and for high scores, those with no education form the highest percentage. A one-way ANOVA was done to see if the

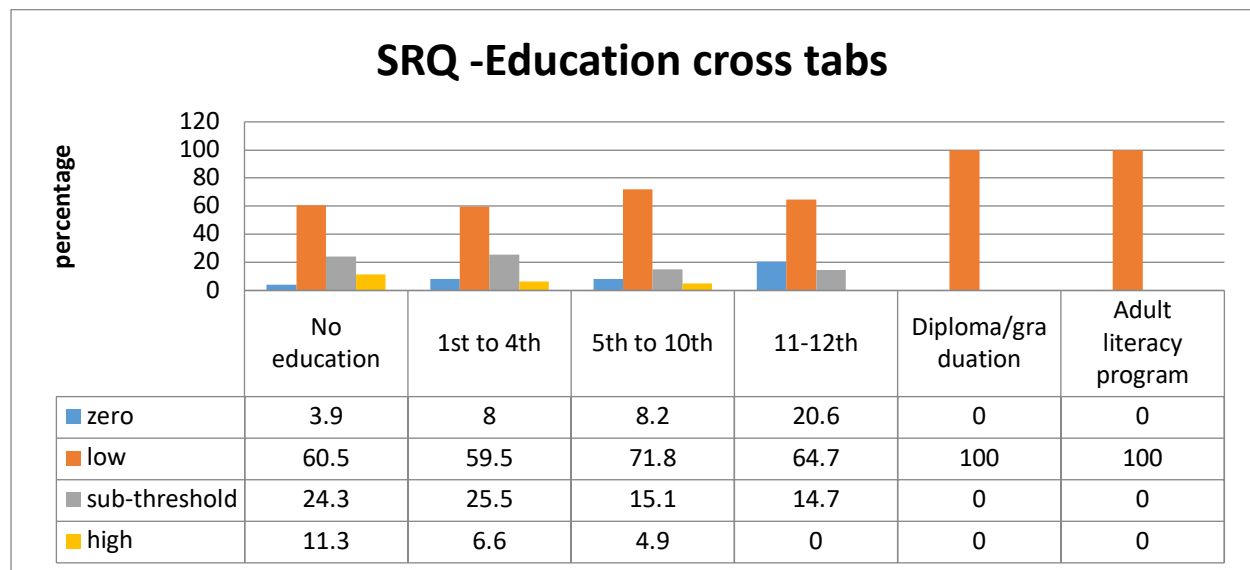differences are significant but the sample did not meet the homogeneity assumption and thus could not be done.

SRQ -Education cross tabs

	No education	1st to 4th	5th to 10th	11-12th	Diploma/gra duation	Adult literacy program
zero	3.9	8	8.2	20.6	0	0
low	60.5	59.5	71.8	64.7	100	100
sub-threshold	24.3	25.5	15.1	14.7	0	0
high	11.3	6.6	4.9	0	0	0

Figure1.5: Illustrating Table 1.9

However, an independent t-test was done to understand the findings in the absence of ANOVA. Since only two groups could be chosen, the 'no education' group was compared with the '5th-10th' group on SRQ scores, since these two groups are where most of the population also lies. The results indicated a significant difference (t=5.38 at .000 level, df = 685). The mean SRQ score of 'no education group was 10.08 and of '5th to 10th' group was 7.25. Therefore, lack of education correlated with higher mental health risks as indicated by SRQ scores.

Respondent's income and Family Income:

Control mean is significantly higher than NGO.

R. Income	NGO			Control		
	Chaitanya	SWACHCH	MASUM	Ch. Control	KK. Control	Ma. Control
<30,000	8.5	44.4	1.9	2.2	13.7	50

31-60,000	3.1	43.7	3.8	2.2	65.4	16.7
>60,000	3.1	12	4.5	0.7	20.3	33.3

Table 1.10: Respondent income for all 6 groups

Family Income	NGO			Control		
	Chaitanya	SWACH	MASUM	Ch. Control	KK. Control	Ma. Control
<50,000	32.3	28.2	26	36.8	15.1	38.2
50,000 - 1,00,000	29.2	45.1	20.8	31.6	42.1	33.6
>1,00,000	37.7	26.8	53.2	31.6	42.8	28.3

Table 1.11: Family income for all 6 groups

SWACHCH control group has the highest percentage of participants in the '50,000 – 1,00.000' bracket. The highest percentage in the '>1,00,000' bracket is from MASUM control. For Family Income, Highest percentage of participants in the '<50,000' bracket comes from MASUM's control. Highest percentage for '50,000 – 1,00,000' bracket comes from SWACHCH, while the highest for '>1,00,000' comes from MASUM.

R. Income/SRQ	zero	low	sub-threshold	clinical
<30,000	6	63.2	18.8	12
31-60,000	10.8	62.5	21	5.7
>60,000	11.3	71	17.7	0

Table 1.12: Respondent income and SRQ

F. Income/SRQ	zero	low	sub-threshold	clinical
<50,000	5.1	62.5	21.7	10.7
50,000 - 1,00,000	7.2	61.3	21.2	10.3
>1,00,000	7.2	71.2	18.4	3.1

Table 1.13: Family income and SRQ

respondent income and SRQ

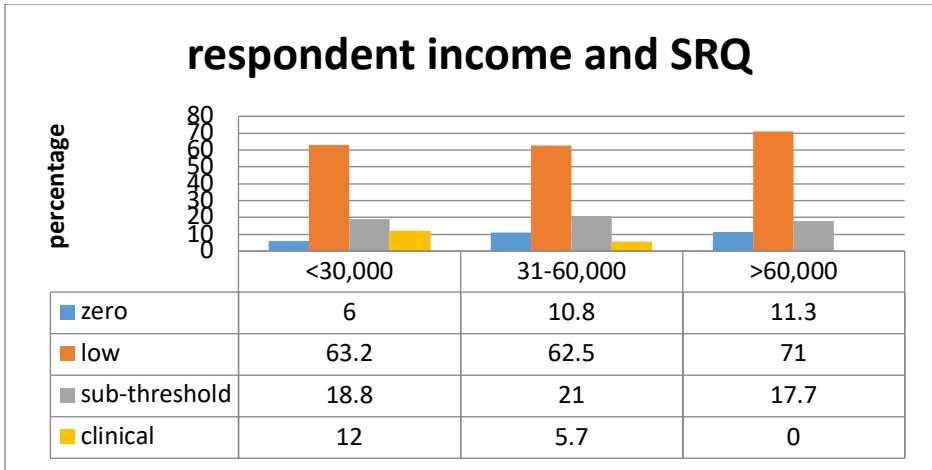|	<30,000	31-60,000	>60,000
■ zero	6	10.8	11.3
■ low	63.2	62.5	71
■ sub-threshold	18.8	21	17.7
■ clinical	12	5.7	0

Figure 1.16: Illustrating table 1.12

For respondent income, we see that as income increases, the likelihood of having clinical scores decreases. The participants with >60,000 income have the highest percentage of zero (11.3) and sub-threshold (71) scores. Those with <30,000 income have higher percentage of clinical scores (12).

Family income and SRQ

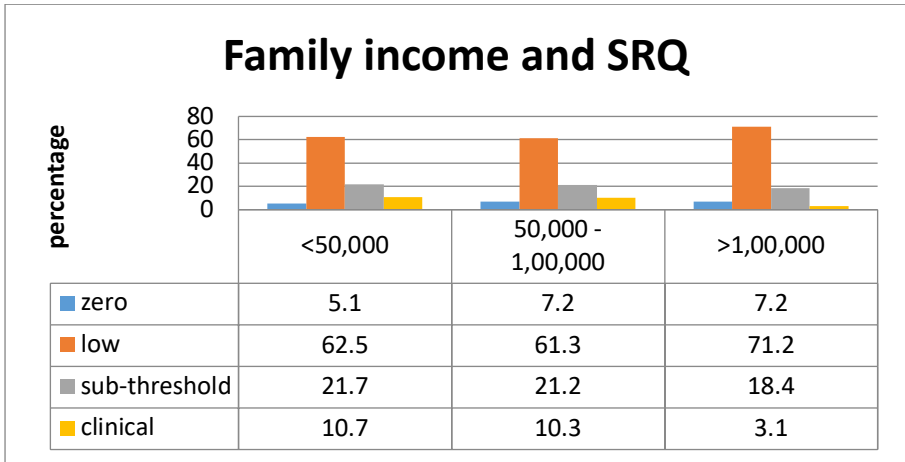|	<50,000	50,000 - 1,00,000	>1,00,000
■ zero	5.1	7.2	7.2
■ low	62.5	61.3	71.2
■ sub-threshold	21.7	21.2	18.4
■ clinical	10.7	10.3	3.1

Figure 1.17: Illustrating Table 1.13

This trend is also seen with Family income. The lowest clinical scores are for the >1,00,000 income bracket. Combining low and zero scores, the highest percentage of non-clinical population belongs to the highest income group. The highest percentage of clinical scores (10.7) and sub-threshold scores (21.7) is from the lowest income group.

Since the graphs are presenting a very strong income-SRQ picture, a Pearson product moment correlation was run to see if the trend is significant. The results were significant. As

respondent's income went up, their SRQ scores decreases (-.138 at .009 level, N=355). As the family income went up, the SRQ scores decreased as well (-.157 at .000 level, N = 865). Therefore, income has a significant impact on mental health as measures by SRQ scores.

Section 2: Distress scores across sites

In this section, and for purposes of this paper, a subset of the data analysing overall SRQ and Pain scores between the sample and their controls are described in detail. The analysis focussed on whether there is an overall significant difference between the main samples and the controls in the 3 selected sites.

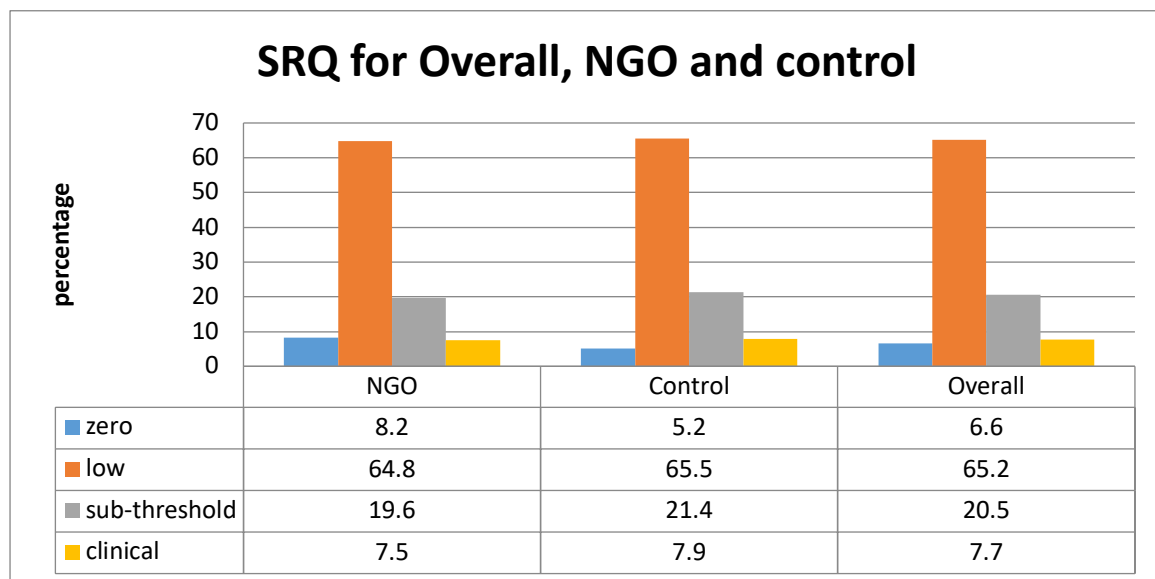| Population	zero	low	sub-threshold	clinical
NGO	8.2	64.8	19.6	7.5
Control	5.2	65.5	21.4	7.9
Overall	6.6	65.2	20.5	7.7

Table 2.1: SRQ for the population

Figure 2.1: Illustrating Table 2.1

Therefore, the highest percentage for zero scores as well as the lowest percentage for the clinical scores lies with the NGO group, and the inverse is seen for the control group. All 3 empowerment sites showed less distress scores than the control sites.

Population	No pain	low	moderate	severe
NGO	33.6	48.5	15.2	2.8
Control	29.3	45.3	19.6	5.2
Overall	31.4	47.2	17.4	4

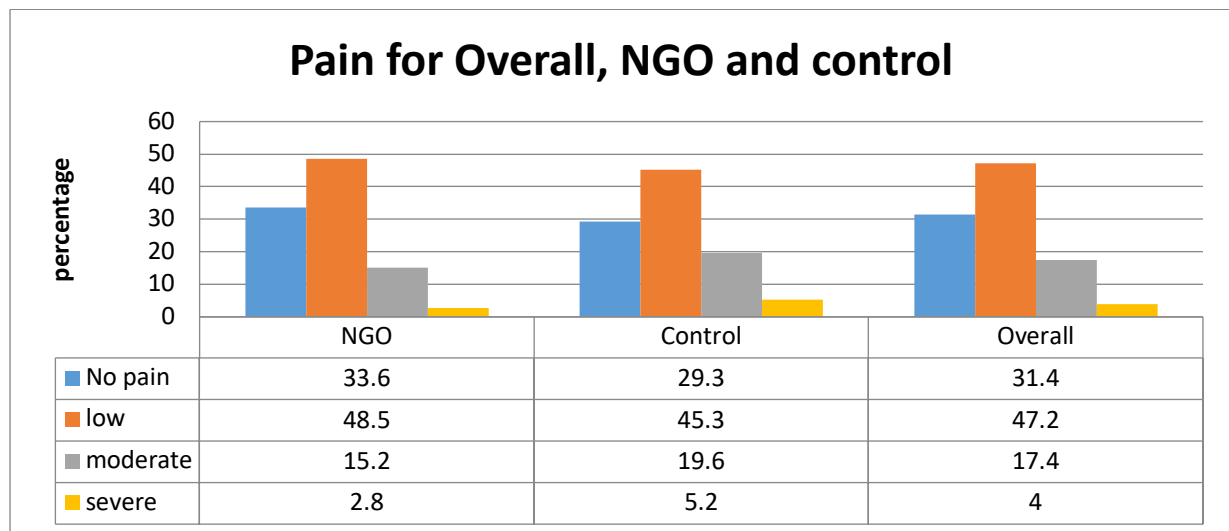Table 2.2 : Pain across the population

Figure 2.2: Illustrating Table 2.2

A similar trend was also seen with respect to Pain Scores. The highest percentage of 'No pain' is with NGO and so is the lowest percentage of 'Severe pain'. The highest percentage of Severe Pain is in control group.

SRQ	NGO			Control		
	Chaitanya	KKPKP	MASUM	Ch. Control	KK. Control	Ma. Control
zero	10.6	12	17.9	8	11.1	7.2
low	53.8	48.7	51.3	48.6	54.2	56.9
sub threshold	13.6	17.4	20	18.3	20	7.2
high	22	19.3	17.3	26.1	16.3	28.8

Table 2.2: SRQ scores across the six groups

SRQ across the six groups

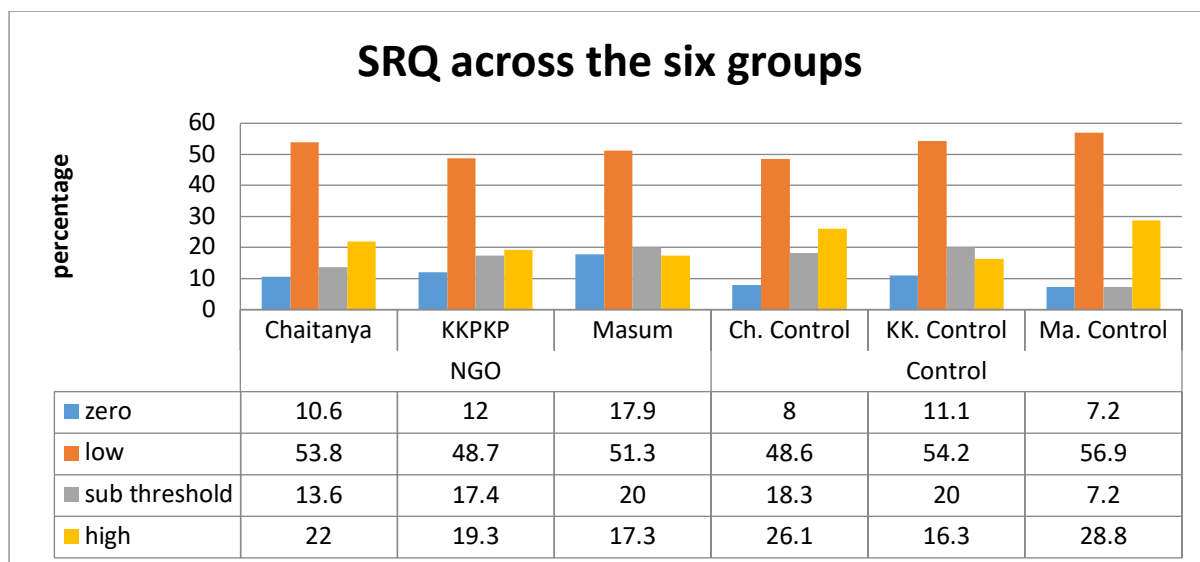|	Chaitanya	KKPKP	Masum	Ch. Control	KK. Control	Ma. Control
		NGO			Control	
zero	10.6	12	17.9	8	11.1	7.2
low	53.8	48.7	51.3	48.6	54.2	56.9
sub threshold	13.6	17.4	20	18.3	20	7.2
high	22	19.3	17.3	26.1	16.3	28.8

Figure 2.2 Illustrating Table 2.2

If we compare across the 3 empowerment sites, as we can see, Chaitanya and MASUM samples have a lower percentage of people having high and clinical scores as compared to control, with the most obvious difference being for MASUM.

The highest percentage of people with zero scores on SRQ again come from the MASUM sample (17.9). Its control has only 7.2 % people with zero scores. Therefore, the difference between MASUM and its control is quite apparent.

Pain level	NGO			Control		
	Chaitanya	KKPKP	MASUM	Ch. Control	KK. Control	Ma. Control
No pain	29.2	38.7	32.1	18.8	52.9	15
low pain	53.1	47.3	46.2	52.2	38.6	47.7
moderate pain	15.4	10	19.9	22.5	6.5	30.1
severe pain	2.3	4	1.9	6.5	2	7.2

Table 2.3: Pain level across the 6 groups

pain across the six groups

	Chaitanya	KKPKP NGO	Masum	Ch. Control	KK. Control Control	Ma. Control
No pain	29.2	38.7	32.1	18.8	52.9	15
low pain	53.1	47.3	46.2	52.2	38.6	47.7
moderate pain	15.4	10	19.9	22.5	6.5	30.1
severe pain	2.3	4	1.9	6.5	2	7.2

Figure 2.3: Illustrating Table 2.3

MASUM also has the lowest percentage of people with severe pain scores (1.9 %). As can be seen, people with 'no pain' are the ones most prevalent in the zero SRQ score category as well.

Discussion

This study shows, like many others before, that there is a strong correlation between socio-economic variables and mental distress. Further, the study shows that where there exists an empowerment program, willy nilly, there may be some positive psychosocial impact. This is evidenced by the consistent finding of lower distress scores from the MASUM sample on the SRQ and Pain scales. Similar trends of better outcomes for psychosocial health were also found across more specific development domains fielded by the tool, including Access to Development, Safety, Violence, Life events, civic amenities, autonomy, etc.

Limitations of the study

As with all social science research, the study depended on self reporting of clients from organizations. While all means were adopted to ensure that the staff do not come in the way of the interviews, there was no way to verify contamination by peer or organizational

pressure. We covered for this by randomizing for the entire geographic coverage of the program, including the spread of villages. A second limitation of the study was that, our search for a "No development" or "Zero development" site was belied, in Maharashtra. As researchers, we were relieved that this was so, and that every part of Maharashtra seemed to have atleast government presence, we had to compromise on control sites, by taking those available sites with *least* development efforts, closer to zero.

Conclusion

This paper suggests that a new line of social science inquiry could be undertaken, by studying the psychosocial and mental health impact of Development efforts. Such studies would help strengthen empowerment projects by providing critical data on wellbeing. Initial data suggests that organic project designs can be developed for such a research program. Preliminary findings also suggest that we may expect a positive mental health impact from *any* interventions. Why some interventions have higher impact than some others could be the subject of another paper.

References:

Chadda, R.K.& Sood, M. (2010), Indian research on women and psychiatry, Indian Journal of Psychiatry, 52:229-32.

Chandra, P., Herrman, H., Fisher, J., Kastrup, M., Niaz, U., Rondon, M.B. & Okasha, A. (2009), Contemporary Topics in Women's Mental Health- Global Perspectives in a Changing Society. New Jersey: Wiley-Blackwell.

Davar, B.V. (1999). *Mental health of Indian women.* New Delhi: Sage Publications.

Davar, B.V. (2001). [Ed.] Mental health from a gender perspective. New Delhi: Sage Publications.

Desjarlais, R., Eisenberg, L., Good, B., & Kleinman, A. (1995). *World mental health: Problems and priorities in LAMICS*. New York: Oxford University Press.

Gujarat Mental Health Mission (2003). Strategy paper on the development of the mental health sector in Gujarat. Government of Gujarat.

Isutzu, T., Tsutsumi, A., Sato, T., Naqibullah, Z., Wakai, S. & Kurita, H. (2005). Nutritional and mental health status of Afghan refugee children in Peshawar, Pakistan. A descriptive study. Asia Pacific Journal of Public Health, 17(2): 93-98.

McKenzie, K. (2008). Urbanisation, social capital and mental health. Global Social Policy, 8(3): 359-377.

Mehryar, A. & Khajavi, F. (1975). Some implications of a community mental health model for developing countries. International Journal of Social Psychiatry, 21: pp. 45-52.

Patel, V. (2001). Is depression a disease of poverty? WHO: Regional Health Forum – 5(1): 14-23

Patel, V., Araya, R., de Limad, M., Ludermire, A. & Todd, C. (1999). Women, poverty and common mental disorders in four restructuring societies. Social Science & Medicine 49: pp. 1461-1471.

Patel, V., Kirkwood, B.R., Pednekar, S., Weiss, H. & Mabey, D. (2006). Risk factors for common mental disorders in women: Population-based longitudinal study. British Journal of Psychiatry, 189, 547 - 555.

Vindhya, U. (2007). Psychological Research on Gender Quality of Women's Lives in India: Some Findings from Two Decades of psychological research on gender. Feminism & Psychology, 17, 337-356.

[i] **Operational definitions** used in the study: 'Development Factors'- For this study, the factors included as development factors were as follows– 1. Socio-economic status of the respondent 2. perceptions about freedom and respect the respondent is having in the family 3. social network of the respondent 4. access to development in consideration of the basic needs like food, education, recreation, occupation and perceived safety within family and community. 'Clinical Population'- In this study the cases have been considered under the clinical population whose composite value was calculated by adding two type of scores, one was if the score of WHO-SRQ 20 scale questions was 11 or above and secondly whose score was 1 or above out of 4 psychosis questions. If the score of WHO-SRQ 20 scale questions is 11 or above and if out of 4 psychosis questions score was 1 or above, then both these scores of a particular respondent have been combined. This population from the sample was called as the clinical population for the study. 'Subthreshold population'- In this study the cases have been considered under the sub-threshold population whose WHO-SRQ score was between 7 to 10 out of 20 scale questions.