



Impact of Behavioral Intervention Program on Overall Health of Families: a Report from Barabanki, Uttar Pradesh

Devashish Shukla

Senior Consultant, Dept. of Psychiatry, Dr. RML Hospital, Gomti Nagar, Lucknow, Uttar Pradesh

Nisha M. Pandey

Assistant Professor (Non-medical Research), Dept. of Geriatric Mental Health, King George's Medical University, Lucknow U.P

S.C. Tiwari

Professor & Head, Dept. of Geriatric Mental Health, King George's Medical University, Lucknow U.P

ABSTRACT

Present article is based on the data of a study titled "A Study of the Impact of Behavioral Interventions on Illness Breeding Behaviours (BIP)" which was carried out by the authors with funding support of World Bank through Uttar Pradesh Health Development Project (UPHSDP). The paper aimed to demonstrate proportion of benefit of behavioral interventions on the health status of families who were assessed, intervened and reassessed after a period of 6 months.

Archived data of recruited families and their overall health status at the stage of initial evaluation (baseline) and final evaluation (outcome i.e. after 6 months of intervention) has been taken in consideration. The overall health status of the families was divided in two broad categories i.e. ill group and well group. The results are presented applying percentage statistics.

KEYWORDS : Behavioral intervention, health status, family, illness breeding behavior

Introduction:

Inter relatedness between health and behaviour is well documented. Further, it is an established fact that many of the illnesses are the result of faulty/ unhealthy behavioural patterns.^[1,2,3] The long term behavioural patterns, often referred as "life style", are responsible for a variety of chronic communicable i.e. diarrhea, dysentery, malaria, tuberculosis, conjunctivitis, AIDS etc. and non-communicable health problems i.e. hypertension, coronary heart disease, diabetes and cancer etc.^[4] Last year on July 7, 2015 *the Telegraph* reported that true cost of an unhealthy lifestyle of little exercise, poor diet and smoking has been quantified by scientists who found that it can reduce lifespan by 23 years^[5] And, a number of evidences reveal that faulty behavioural patterns are one of the most usual reasons for developing an illness including inadequate physical environment, hygienic and dietary practices, lethargic life style, smoking, reckless driving, inappropriate health seeking behaviour, disregarding preventive aspects etc. These faulty behavioural patterns often responsible for generating an illness or disease and therefore, may be referred as "illness breeding behaviour". It is also worth mentioning that in today's society individual's chronic illnesses often reveal direct association with his/her behavioural pattern which can generally be observed by detailed evaluation of his habits, lifestyle and choices. Such kind of faulty behavioural patterns may be corrected or modified by adopting healthy behavioural patterns.

In cognizance to this, a World Bank sponsored study titled "A Study of the Impact of Behavioural Interventions on Illness Breeding Behaviours"^[6] was carried out in King George's Medical University. A total of 1134 families were identified and recruited in this study. Of these, majority were from Barabanki i.e. 1031. Present paper aimed to provide the responses of the key informants/ heads of the studied families of Barabanki regarding impact of behavioural interventions on overall health of the family members.

The objectives of the paper are to;

- Provide the overall health status of the studied families at the time of initial evaluation.
- Describe the impact of behavioral interventions.

Materials & Method:

It was a pre-post assessment study. Data obtained from 5 urban and 5 rural areas of Barabanki District of Uttar Pradesh, India is being presented in relation to objectives of the paper. From each study area approximately 100 families were identified and recruited. In each study area local influential persons were identified and they were briefed about the study and then with their help at local level some commu-

nity volunteers were also identified for getting help in approaching the families and also to strengthen carried out interventions. In each locality 3-5 such facilitators were identified and designated as community interns. They were given training to strengthen the intervened activities which were given in the areas of daily living (DL), health care (HC) and health promotion (HP).

After taking the consent of the families detailed assessment was done. At the pre assessment Socio-economic status (SES) of the families was measured through the SES scale^[7]. The study was conducted in three phases i.e., Preparatory phase, Main (Initial evaluation) phase and Follow-up (follow-up and winding up) phase. Qualified and skilled research team members were given training to identify illness breeding behavioural profiles in the areas of daily living, health care and health promotion (DL, HC & HP). The research team also given training to work out behavioural interventions in specific areas with key informants/ indexed subjects and impress upon them to adopt these interventions in their day to day living, as and when required. The research data was collected on a number of schedules and proforma which were developed to find out familial details, physical/ mental health status of individuals in the family and illness breeding behavioural correlates.

The research team members (psychologist, medical officer & social worker) along with community intern visited the included families. During initial phase, SES and other details of the family were taken by the social worker. Medical officer and psychologist assessed the physical & mental health status of each family member on a pre-coded proforma. Faulty (illness breeding) behavioural profiles operant in the family on different aspects related to their physical environment, cooking practices, dietary and nutritional habits, health care, interpersonal relationship, child rearing and elderly care etc. were assessed individually by each team member on a structured and coded proforma. On the basis of all these information, the psychologist and medical member of the team worked out and provided adoptable and feasible interventions to the key informant/ index person. Averagely, around two hours were usually needed and therefore spent with each family for the entire activity. Subsequently community interns of the locality also followed-up the families' atleast once a month to advise on implementation of worked out behavioural interventions.

The senior members of the research team did mid term evaluation of the families after three months of the initial inclusion to enquire about facilitators/ difficulties in the implementation of worked out interventions. Feasible interventions were worked out again as per the requirement. After six months of initial evaluation, final evalua-

tion (winding up phase) was done. The same team members revisited families to assess the impact of behavioural interventions in terms of change in their health (physical/ mental) status.

All the assessments related to overall health status of the families categorized on 6 parameters of 'excellent', 'good', 'average', 'with mild problems', 'with moderate problems' and 'with severe problems' in accordance with the best overall judgment of the interviewer. In arriving at this decision the information provided by the key informants and individual assessment of family members formed the basis. The responses obtained as following were given successively assigned codes-

all/most family members enjoys better than average physical health-**excellent**;

no physical problem, some members enjoys better than average physical health-**good**

no significant physical problem by and large all members enjoy normal/average health- **normal/average physical health**

somewhat sick or sickly family: some members have some problems but not of much significance-**mild problem**

somewhat sick or sickly family; some members have some significant problems causing concern-**moderate problems category**

generally sick/sickly family, by and large most or all members are sick/sickly-**severe problem**

At final evaluation, the key informants/ heads of the families (respondents) were specifically asked to give their subjective opinion regarding usefulness, acceptability and benefits of the behavioural intervention programme *per se*. Their specific opinion on usefulness, acceptability and satisfaction with behavioural intervention programme as well as benefits (subjective evaluation of overall change in health status) as reported by the incumbents are presented in the paper.

Observations & Results: Description of families studied is provided in table 1:

Table-1: Area and SES wise details of families studied in Barabanki

Description	RURAL (%)	URBAN (%)
No. of families	513 (100)	518 (100)
Upper SES	82 (14.6)	148 (25.9)
Middle SES	280 (49.7)	299 (52.4)
Lower SES	201 (35.7)	124 (21.7)

Approximately equal proportion of families were recruited from both study areas and majority of them were belonging to middle SES followed by lower and upper SES.

Table II: Physical Health Status of Families at Initial and Final evaluation by Area

Physical Health Status	AREA				
	RURAL		URBAN		
	Pre ass.	Post ass	Pre ass.	Post ass	
Well Group	Excellent	11(2.14)	24(4.58)	14 (2.70)	26 (5.02)
	Good	13(2.53)	111(24.05)	9 (1.74)	137(26.54)
	No Problem	145(28.27)	208(38.79)	143(27.61)	192(37.07)
Ill Group	Mild	178(34.70)	112(21.53)	173(33.40)	110(21.24)
	Moderate	133(25.93)	49(8.63)	140(27.03)	40 (7.72)
	Severe	33(6.43)	9(2.13)	39 (7.53)	13 (2.51)
Total	563	513	513	518	

Table II reveals that in both the areas there were more families in the 'morbid group' i.e. n=169 in rural and n=166 in urban areas. The number was increased in the 'well group' after implementation of behavioural interventions. The decrease in the 'ill group' was more prevalent in urban area in comparison to rural areas.

Table IIa: Impact of Behavioral Intervention on Overall Physical Health Status of the studied families in Rural Area

Overall Physical Health Status of the family	Pre assessment			Post assessment			
	No.	%		No.	%		
Well Group	Excellent	11	2.14	32.94	24	4.85	66.86
	Good	13	2.53		111	24.05	
	No Problem	145	28.27		208	38.79	
Ill Group	Mild	178	34.70	67.06	112	21.53	33.14
	Moderate	133	25.93		49	8.63	
	Severe	33	6.43		9	2.13	
Total	513			513	100		

Table IIa reveals that at baseline assessment majority of the families were found to be in ill group (67.5%) against the well group families 32.9%. And, after intervention significant proportion of families shifted to well group from the ill group. The difference was also found to be significant at 0.01 level.

Table IIb: Impact of Behavioral Intervention on Overall Physical Health Status of the studied families in Urban Area

Overall Physical Health Status of the family	Pre assessment			Post assessment			
	No.	%		No.	%		
Well Group	Excellent	14	2.70	32.36	26	5.02	69.20
	Good	9	1.74		137	26.45	
	No Problem	143	27.61		192	37.07	
Ill Group	Mild	173	33.40	68.02	110	21.24	31.07
	Moderate	140	27.03		40	7.72	
	Severe	39	7.53		13	2.51	
Total	513	100.0		513	100.0		

Table IIb also provides similar findings as reveals that at baseline assessment majority of the families were found to be in ill group (68.02%) against the well group families 32.36%. And, after intervention significant proportion of families were found to be shifted to well group from the ill group. The difference was also found to be significant at 0.01 level.

Discussion & Conclusion:

The paper describes the opinion of the key informant of the households regarding interventions and its impact in terms of overall change in health status of the families. Results of the study reveal positive outcome. A total of 1031 (rural=513; urban=518) families were included in the study. In rural areas majority of the families were from the middle (49.7) socio economic status, followed by lower (35.7) and upper strata (14.6) families which is similar to the usual profile of the rural society. However, in urban area majority of the families were from middle SES (52.4) followed by upper (25.9) and lower (21.7) SES families.

Further, pre and post assessment responses of the key informants/ head of the family on overall health was analyzed (table-II; IIa; IIb) in terms of excellent, good, no problem as families in well group and ill group incorporated families with mild, moderate and severe health problems. It was a positive indicator for acceptance of behavioral interventions. It may be said that interventions were accepted by majority of the families. Some studies also report that one may obtain long- term positive health outcomes by using and adopting specific interventions^(8,9)

Behavioural intervention is now widely practiced to control morbidity level. Multi-contact interventions (initial session with midterm and follow up contacts) at the doorstep of the family made the recipients more comfortable. The main characteristic feature of these interventions was to identify the faulty behavioral profile (illness breeding behavior) with the help of the Head/ key informant of the family at the ground to reality level. Further, if the key informant or head get convinced with suggested behavioral interventional strategies adoption of healthy behavioral profiles become easier for the entire family. The reinforcement of assurance with regard to long-term gains

and benefits motivate them to change/ modify accordingly. Thus, the reported overall changes in health status of the families in both urban/ rural areas were found to be high. A latest report states that an unhealthy lifestyle of little exercise, poor diet and smoking can reduce lifespan by 23 years.^[5] The report further states that people who develop largely preventable conditions like heart disease, stroke and type two diabetes are cutting their life short by decades. Behavioural interventions may be applied as key in avoiding high rate of preventable illness.^[10]¹ (McGinness and Foege, 1993). It can also be said that there is no side effects of behavioural interventions and these are cost effective strategy too. It respects human dignity too.

Conclusion:

Interventions of healthy behavioural strategies may be helpful as primary preventive measure and may be introduced at primary health care services. Such efforts will definitely be useful for early identification of behavioural anomalies and also help in health care health promotion activities. This is a low cost, feasible, acceptable and achievable health care strategy, which definitely reduce the morbidity level, enhance the healthy environment and improve quality of life of each and every citizen.

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