Chapter 15
Behavioural Intervention Programme for Promoting Healthcare Practices in the Community: An Initiative

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Health is the prime concern for every nation. Behaviour is the key to health. Inter relatedness between health and behaviour is well documented; it is an established fact that many of the illnesses are the result of faulty/unhealthy behavioural patterns (Vaillant and Mukamal 2001; Gary and David 2001; Tiwari et al. 2007; Shukla et al. 2016). The long-term behavioural patterns which is often referred to as 'lifestyle', are responsible for a variety of chronic communicable diseases i.e., diarrhea, dysentery, malaria, tuberculosis, conjunctivitis, AIDS, etc., and non-communicable health problems i.e. hypertension, coronary heart disease, diabetes, cancer, etc. Unhealthy lifestyle, with little exercises, poor diet and smoking may reduce one's lifespan by 23 years (*The Telegraph*, 7 July 2015). Evidences reveal that faulty or maladaptive behavioural patterns are one of the most usual reasons for developing illness/disease/disability including inadequate physical environment, hygienic and dietary practices, lethargic lifestyle, smoking, reckless driving, inappropriate health-seeking behaviour, disregarding preventive aspects etc. (Aggarwal et al. 2015; Assefa and Kumie 2014; Barton et al. 2016; Borg et al. 2017; Rose 1981; Shukla et al. 2016; Tiwari et al. 2007).

The links between behaviour and health had been clearly and widely recognized (Heald et al. 2017; Friis et al. 2017). However, deliberate and purposeful efforts to monitor this interrelatedness has never been studied thoroughly. Medical sciences significantly contributed in reducing and curing most of the illnesses but the burden of morbidity in the community is still widespread. The major aim of medical science is to preserve, reinstate and/promote health by reducing the burden of illnesses and distress as well as to provide proper treatment. A large number of health professionals are working on preventive aspects of health. Trails are being

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G. Misra (ed.), *Psychosocial Interventions for Health and Well-Being*,
https://doi.org/10.1007/978-81-322-3782-2_15

made to prevent risk of disease, injury, disability and death. And most of the preventive measures can be adopted just by accepting one or the other kind of healthy behaviour.

Why is it so? What are the reasons behind it? How should one approach the community to eradicate the burden of illness? The answer is simple but difficult to achieve—modify the ill/unhealthy behavioural pattern and adopt a healthy one. This will help in reducing the burden of illnesses, morbidity and mortality. Assessment of relationships between environmental/behavioural/psychosocial and biological factors of health and disease is very difficult. Unpleasant environment or any psychological stressors has a significant role to play in introducing and aggravating communicable and non-communicable diseases. It is reported that some of the psychosocial complications of physical disorders include marital and financial difficulties, personality changes, affective disturbances, memory impairment and intellectual deterioration; psychotic reactions may also occur in some cases (Abiodun 1994). The article further indicates that psychosocial intervention techniques may be required in the management of psychosocial consequences of physical disorders and for some physical illnesses application of biofeedback and relaxation training etc., are beneficial as these help in the management of hypertension. In developing countries where available resources are limited, attention to the behavioural, psychological and social aspects of medical care particularly, will be beneficial (Abiodun 1994; Meinck et al. 2015).

To remain healthy and to preserve health there are three types of preventive measures i.e.—(1) **Primary prevention**: This level is related to pre-disease status and advocates for protection of health by personal and communal efforts such as enhancing nutritional status, immunization and eliminating environmental risks such as contaminated water supplies; (2) **Secondary prevention**: Basically related with early diagnosis and early treatment of the disease when symptoms occur; and (3) **Tertiary prevention**: At this level diseases take its advance shape and one needs to take steps to minimize disabilities and promote the patient to live a dignified life. Another level of care was also added to these three levels of prevention, i.e., **Primordial prevention** which aims at eradicating, eliminating or minimizing the impact of disability or diseases (John 1995). It will be worth mentioning here that preventions which brings much benefits to the people often offers little to each participating individual (Rose 1981).

It can be clearly observed that ultimate connections of all these levels of preventions are related with the behavioural action of the individual (Kang et al. 2010; Band et al. 2015). However, evidence based research from India in relation to the role, nature, dynamics of behaviour correlates in the causation, perpetuation, treatment and outcome of both communicable and non-communicable diseases, is scant. Nonetheless, legislations advocate for abuses of various kinds of substances, sex, child, immorality etc. and awareness generation through mass media for adopting healthy behavioural practices against unhealthy behavioural practices, viz., regulated life, hygienic practices, physical exercises, yogic exercises, health seeking and health information seeking behaviour etc., is present. But the critical question is that how could it be implemented or how many people would adopt it?

It is an established fact that human behaviour is too complex to be understood and explained by armchair theorizing, not so acquiescent to change without active participation and involvement of the index person or community (Joseph and Jaswal 2014). Verbal and/or visual communications apparently are not enough to bring about the desired changes in illness-breeding behaviours. Communications by modelling and knowledge about dynamics (rationale/modus operandi) of intervention compounds may hold key to the success of behavioural interventional strategies. In view of this, a pilot study was planned, developed and carried out by funding support of World Bank through Uttar Pradesh Health System Development Program by the King George's Medical University, Lucknow, in the state of Uttar Pradesh during 2002–2004. The study was named as 'Impact of Behavioural Interventions on illness breeding behaviors' (Tiwari and Associates 2004). The study was aimed to identify faulty behavioural patterns (illness breeding behaviour) in the areas of daily living, healthcare and health promotion as well as to provide strategic interventions to replace those patterns with healthy behaviours. A detailed and comprehensive assessment had to be attained in the following study objectives in a phase-wise manner:

A. **Short-Term Objectives**:

- **Project Development and Intervention Phase**:

  To survey the community:

  (a) To study the operant behavioural correlates in daily living, healthcare and health promotion suspected to be breeding illnesses.
  (b) To identify, train and engage peripheral health workers and people from the community (community interns) in behavioral intervention programmes.
  (c) To study the perceptions and requirements of the community regarding available health education materials through social marketing.
  (d) To carry out interventions employing I.E.C. strategies with identified behavioural correlates.

- **Project Evaluation Phase**:

  To resurvey the community:

  (a) To study the impact of behavioural intervention.
  (b) To finalize Behavioural Intervention Package for primary and secondary prevention for use in healthcare delivery systems.

B. **Long-Term Objectives**:

(a) To develop skilled human infrastructure (resource) from the community and peripheral health workers at primary care level for capacity building, primary and secondary prevention, healthcare and health promotion through behavioural interventions.

(b) To develop health consciousness and positive health-seeking behaviour in the community to care for their own health.
(c) To develop disease-specific and general Behavioural Intervention Packages (Health Education Materials) for use at primary care level for primary and secondary preventions.

It was a pre-post assessment study. Each study area was mapped with the help of local influential persons and with their help at the local level some community volunteers were also identified for getting help in approaching the families. These community volunteers were named as community interns. They were made aware about the programme and trained to visit and strengthen the behavioural interventions. A qualified research team carried out the entire research activities. The research team was also trained to work out behavioural interventions in specific areas with key informants/indexed subjects and impress upon them the need 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 the family members and illness breeding behavioural correlates in the family.

The research team members (psychologists, medical officers and social workers) along with community interns visited the included families. During the initial phase, socio-economic status (SES) and other details of the family were recorded by a social worker. The medical officer and psychologist assessed the physical and 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, healthcare, 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. On an average, 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 at least once a month to advise them on the implementation of the 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 the worked out interventions. Feasible interventions were worked out again as per the requirement. After six months of initial evaluation, final evaluation was carried out and results were found to be very encouraging. Through perceived outcomes of the impact of community, behavioural intervention may be judged (Table 15.1).

The respondents were asked to give their overall assessment about the impact of behavioural interventions in terms of 'perceived' positive changes (in percentage) with regard to some common physical health problems or difficulties that the families usually used to encounter before behavioural intervention. The figure in NA column of Table 15.1 shows the percentage of families where the index health

Table 15.1 Distribution of perceived positive changes (%) in the overall profile of common problems/difficulties amongst study families following behavioural interventions (visual analogue scale)

Problems/ difficulties	Nature of change				
	Nil to negligible	Some impact (25–50%)	Appreciable impact (50–75%)	Significant impact (75 and more)	N.A.
Fever	18	27	42	13	–
Common cold	9	21	47	23	–
Diarrhoea	7	12	31	39	11
Dysentery	3	13	16	27	41
Sleep problems	6	5	11	19	59
Low moods	11	13	16	8	52
Conflicts and quarrels in family	3	12	17	29	39
General well being	19	38	19	17	7
Substance abuse	23	15	17	8	37
Behavioral problems	13	16	37	13	21
Daily living	11	22	31	16	20
Healthcare	7	11	33	18	31
Health promotion	19	23	18	13	27
Family planning practices	21	26	23	11	19

problems were denied. It would appear from Table 15.1 that fever, common cold, lack of general well-being, diarrohea, problems associated with use of family planning practices, problems of daily living behavioural problems were commonest among families (present in more than 75% of the families). Problems associated with health promotion, healthcare, non-medical use of dependence producing drugs, conflicts and quarrels in the households and dysentery were reported to be the next common (present in 50–75% families), sleep problems, problems associated with low moods were common in 40–50% families. Through behavioural interventions it was possible to negotiate profitably the conflicts and quarrels in the household, dysentery, sleep problems, diarrohea, healthcare and common cold in more than 90% of the families; low moods, daily living, behavioural problems, fever and problems associated with general well-being in 80–90% families; family planning practices, substance abuse in 75–80% families. The most noticeable impact of behavioural intervention was reported in counteracting diarrohea and common cold, an 'appreciable to significant' impact in 70% families. Other common problems/difficulties where the impact of behavioural intervention was from an 'appreciable to significant' extent in 50–55% families were reported to have fever, healthcare and behavioural problems. Behavioural interventions had an 'appreciable to significant' impact on 40–50% families who had problems/difficulties

associated with daily living, conflicts and quarrels in the households, dysentery and sleep problems. Behavioural interventions were also reported to have had an 'appreciable to significant' impact on 30–40% families with problems/difficulties in areas of general well being, family planning practices and health promotion. Substance abuse and low moods were reported to be the two problem areas where behavioural interventions could make an 'appreciable to significant' dent in 25 and 24% of families respectively. In majority of the families (38%) only 'some' dent could be made through behavioral interventions with regard to the problems associated with general well-being followed by fever (27%), family planning practices (26%), health promotion (23%), daily living (22%), common cold (21%), behavioral problems (16%), substance abuse (15%), low moods and dysentery (13% each), conflicts and quarrels in the household and diarrhea (12% each), healthcare (11%) and sleep problems (5%).

All those behaviours had been sorted out which had positive impact on the healthcare of family members. On the basis of these interventions, information, education and communication (IEC) materials were prepared in the areas of DL, HC and HP. The behavioural intervention package (BIP) in all the areas incorporated behavioural posters/calendar, songs, flip books. This revealed possibility for devising those research instruments through which one can identify 'illness breeding' and 'health ameliorating' behavioural profiles in the areas of 'daily living', 'healthcare' and 'health promotion'. Some of the studies demonstrated that community participation can be successfully utilized in the development and implementation of healthy behavioural strategies (Sakalidis and Geddes 2016; de Souza-Talarico et al. 2009; van der Meer and van der Weel 1999). The study also revealed that cooperation and participation of the community can easily be enlisted through communication, modelling and modus operandi explanations (Adamchak and Mbizvo 1991; Bhatia et al. 2004). Community awareness on health-related issues can be enhanced without argument and positive health-seeking behaviours can be strengthened (Delfabbro and King 2017; Saaka and Galaa 2011; Siril et al. 2017). This will also be worth mentioning that community participation in their own healthcare-related issues can be increased through the establishment of 'health clubs' manned by enthused, motivated and trained local 'community interns'. Behaviour holds the key to '*health*' and '*morbidity*': healthy behaviours promote wellness, preserve health; protect from illness, and reduce morbidity. A health logo and slogan was also devised:

'*Na Koi Kharch, Na Koi Killat; Swasth Vyavhar Hi Kare Jeevan Unnat*', which means *without making any expenditure, without scarcity, healthy behaviour improves life*.

In view of findings of the presented study it may be said that in healthcare services with *least input, maximum output* can be achieved by applying behavioural interventions.

Implications:

- Introduction of new syllabus for 'Behaviour and Health' in 'medical education' and 'general education' courses.
- The need and gains of behavioural changes, and the usual behaviour modification procedures to be popularized.
- Development of field evolved cost-effective, feasible and acceptable Behavioral Intervention Package (IEC materials).
- Integration of physical and mental healthcare services.
- Creation of the positions of 'Behaviour Scientist' at primary health centres, counsellors at sub-centres.
- Use of mass media communication methods at community level to increase health consciousness.
- 'Health promotion' programmes to be given more emphasis along with 'Healthcare' programmes.
- The language, presentation and dissemination of healthcare and health promotion materials should have a mass appeal.
- Health education materials should ensure participant and personalized delivery.
- Introduction of 'least input maximum output' concept at the primary healthcare level.
- Introduction of new paradigm in primary healthcare: community health clubs and community interns for healthcare.
- The behavioural interventions should have three components: (a) audio-visual communications; (b) communications through modelling; (c) rationale/modus operandi.
- Emphasis on human infra-structural development and community capacity building for primary healthcare.
- Integration of like-minded services and programs sponsored by other governmental and non-governmental agencies operant in the community.
- Establishment of training, research and data retrieval cell at every district headquarter.
- Extension and application of Behavioral Intervention Package (I.E.C. materials) to other areas of the state.

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