

Chapter 17: Social and Behavioural Change for Improving Health Outcomes

- Theories and Approaches
- What is Social and Behavioural Change Communication?
- Theories of Behaviour Change and their Applications
 - *At Individual Level*
 - *At Community Level*

Chapter 17: Social and Behavioural Change for Improving Health Outcomes

Social and Behavioural Change refers to bringing about a positive transformation with a social system that includes changing behaviour of individuals and the society or social environment as a whole. This is often used in the context of improving public health outcomes, such as getting people to adopt vaccination to prevent polio or encouraging breastfeeding among new mothers. However, it finds application in a variety of settings for broad range of activities such as higher enrolment of girls in schools, greater donation to charitable organizations and so on.

Behaviour change is an evidence-based process for changing knowledge, attitudes and practices of individuals or groups of individuals. This allows groups of individuals to define their needs, demand their rights, achieve their goals and sustain its benefits through a participatory and collaborative process that encourages both dialogue and action.

Individual behaviours are shaped and influenced by cultural practices, social norms and the economic and political landscape. Therefore, to bring about real and sustained change, it is important to consider the community as a whole.

Social change focuses on the community as the unit of change. It is geared towards changing behaviors on a large scale to eliminate harmful social and cultural practices, change social norms and structural inequalities within the community. This allows the community to transform their social system or organization through collaboration, partnerships, public-private dialogue and create joint ownership of the change process.

In this chapter, you will understand the concept of social and behaviour change, learn about key theories and approaches, and understand how these have been applied in practical settings around the globe. This chapter will largely focus on social and behaviour change in the context of public health. The key takeaway of this chapter is to not only understand how people and societies have been transformed but also be able to apply these to your own settings and environment to achieve goals relevant to your group, community and society as a whole. For example, you may feel that in your college or office, people have a culture of snacking on unhealthy food, particularly fried snacks and sweetened beverages. How would you mobilize people to take charge and transform their habits and environment and change the college/office culture? Let us learn by first understanding some basic theories and approaches to behaviour change.

Theories and Approaches

Bringing about social change is one of the most difficult tasks. Change is not only challenging at the individual level but also at the group and community level. Creating a national movement around behaviour change, that too regarding a complex set of behaviours surrounding habits that permeate every aspect of our lives, every single day, is a monumental task, to the say the least. The first step to creating behaviour change is to generate awareness among people about the particular behaviour to be adopted or discarded.

Traditionally, '**Information, Education and Communication**' (IEC) has been used for this purpose. This involves working with individuals, communities and societies to develop communication strategies to promote positive behaviour that are appropriate to their settings. For example, informing people about eating fresh, seasonal and local fruits and vegetables is a positive behaviour that needs to be adopted as it is good for health and the environment. Merely providing people with information and teaching them how they should behave does not lead to desirable change in their response/behavior. However, when there is a supportive environment with information and communication (teaching) then there is likely to be a desirable change in the behavior of the target group.

What is Social and Behavioural Change Communication?

Behaviour Change Communication (BCC) is a step forward from IEC towards enabling action from individuals, communities and societies. It entails providing a supportive environment that will enable people to initiate and sustain positive behaviour, in addition to spreading awareness. For example, providing information and 'nudges' to shop at clean and safe fruit and vegetable markets encourages people to consume fresh, seasonal and local fruits and vegetables.

However, there is no single strategy that works for all individuals and behaviours. Interventions need to be context specific. The more complex the behaviour, the more well thought-out the interventions need to be. Thus, social and behaviour change communication (SBCC), often also only "BCC" or "Communication for Development (C4D)" is an interactive process with individuals, groups or communities which forms a two-way communication process. SBCC is a strategic use of communication to promote positive outcomes, based on proven theories and models of behaviour change.

SBCC is a systematic process starting with formative research and behaviour analysis, communication planning leading to implementation, followed by monitoring and evaluation. The target audience is carefully analyzed and segmented, messages and materials are prepared and pilot-tested, and delivery mechanisms such as mass media (which include radio, television, billboards, print material, internet), interpersonal channels (such as client-provider interaction, group presentations) and community mobilisation are used to achieve defined behaviour change objectives.

Theories of Behaviour Change and their Applications

There are several theories of behavioural change to draw from to design a large-scale social and behavioural change movement at the individual and community levels. Many of these relate to health specifically. We will explore each one of them one by one.

At the individual level are theories such as Health Belief Model, Theory of Reasoned Action and Planned Behaviour, Trans-theoretical model/Stages of change and Social Learning Theory. More recently, the 'Nudge Theory' has gained worldwide attention in influencing behaviour. At the community level are Diffusion of Innovations Theory and Community Mobilization. More recently, the 'Systems Leadership Approach' is gaining traction globally to bring about large-scale behaviour change.

At Individual Level

The Health Belief Model is one of the oldest theories on behaviour change (Rosenstock, 1974). Developed in the 1950s by social psychologists Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles, and Howard Leventhal at the U.S. Public Health Service, suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behaviour. This means that people will not adopt a positive health behaviour or change a negative one unless they believe they are at risk of a disease, understand the benefits of the behaviour change, are able to overcome barriers to adopting that health behaviour and have self-efficacy, i.e. they believe they have the ability to perform the health behaviour and have a sense of control on themselves and their environment.

Case Study: The Health Belief Model was applied to a nutrition education intervention for staff members of a university (Abood et al, 2003). An 8-week nutrition education programme was created to promote healthful dietary behaviours that reduce risks for cardiovascular disease and cancer. The intervention focused on specific health beliefs, nutrition knowledge, and dietary practices to demonstrate the effect of the intervention. The participants were divided into two groups. One group received the intervention and the other did not. As a result of this education programme, perceived benefits of healthy nutrition practices and nutrition knowledge related to cardiovascular disease and cancer significantly improved among the participants who received the intervention. These participants also significantly reduced total calories, fat, saturated fat, and cholesterol intake compared to those participants who were not part of the intervention. This experimental case-study suggests that targeting people's beliefs, perceptions and improving their self-efficacy in adopting healthy behaviours leads to improved health outcomes. Therefore, if you were to design a health intervention, it would be useful to create and design education programmes accordingly.

Theory of Planned Behaviour and Reasoned Action Approach (ToRA or TRA) was developed by Martin Fishbein and Icek Ajzen in 1967. It posits that an individual's decision to engage in a particular behaviour is based on the outcomes the individual expects will come as a result of performing the behaviour. This theory was later revised and expanded to overcome any discrepancies in the Attitude-Behaviour relationship with the Theory of Planned Behaviour (TPB) and Reasoned Action Approach (RAA) (Fishbein & Ajzen, 2011). TRA states that a person's intention to perform behaviour is the main predictor of whether or not they actually perform that behaviour. This is further influenced by social norms. TPB also adds that perceived behavioural control in performing the behaviour plays a critical role in individuals actually performing that behaviour.

Case Study: In the context of improving health, it is a challenge to get people to exercise to reduce the incidence of obesity and its related health issues. How would we apply this theory to motivate people to exercise? In 1981, a study by Bentler and Speckart examined to what extent attitudes caused behaviour change. Their study revealed that the intent to exercise was determined by a person's attitude toward exercise, as predicted by the Theory of Reasoned Action (Bentler et al, 1981). Similarly, Mok WK, et al (2013) studied 486 students ranging in age from 11 to 18 years in Hong Kong. By means of self-administrated questionnaire, demographic data, past physical activity and variables of theory of planned behaviour, such as attitude, subjective norm and perceived behavioural control were measured. Results of this study gave evidence that the theory of planned behaviour was a

useful framework for prediction of physical activity intention and behaviour of adolescents in Hong Kong. Among the variables, perceived behavioural control and past behaviour also played a significant role.

What does this mean in terms of bringing about behavioural change in people? It implies that we need to first examine people's attitude towards that particular behaviour and see if they have any intention to perform it. This would likely predict if they actually perform it. So, for example, you would like to get people in your organization or college to exercise more, according to this theory, you would need to first examine their existing attitudes and intention to exercise. If their attitude towards exercise are negative, then you would have to work towards changing their attitude first and make sure they have the intention to exercise. This theory underlines the need to consider attitudes and intentions when designing any large-scale intervention.

Trans-theoretical Model of Behaviour Change (TTM) is an integrative theory of therapy that assesses an individual's readiness to act on a new healthier behaviour and provides strategies or processes of change to guide the individual. The model is composed of constructs such as: stages of change, processes of change, levels of change, self-efficacy, and decisional balance (Prochaska, 2013). TTM integrates processes and principles of change from across leading theories, hence the name Trans-theoretical. According to TTM, health behaviour change involves progress through six stages of change: pre-contemplation (not ready for change), contemplation (getting ready for change), preparation (ready for change), action (creating change), maintenance (monitoring), and termination. Ten processes of change have been identified for producing progress along with decisional balance, self-efficacy, and temptations. The ten processes of change include, Consciousness-raising (Get the facts), Dramatic relief (Pay attention to feelings), Self-re-evaluation (Create a new self-image), Environmental re-evaluation (Notice your effect on others), Social liberation (Notice public support) — realizing that society is more supportive of the healthy behaviour, Self-liberation (Make a commitment), Helping relationships (Get support), Counterconditioning (Use substitutes), Reinforcement management (Use rewards) and Stimulus control (Manage your environment).

As per findings from basic research, any population at risk of a disease may be categorized into the following stages: 40% in pre-contemplation, 40% in contemplation, and 20% in preparation (Prochaska & Velicer, 1997). This approach highlights the need for targeted interventions based on the stage a particular population may be in. Therefore, this model suggests a more personalized approach to designing behaviour change intervention to help populations to reach the next stage of the desired behaviour change.

Case Study: Fifty-hundred-and-seventy-seven overweight or moderately obese adults (BMI 25-39.9) were recruited from large employers to be randomly assigned to receive stage-matched interventions as per the TTM Model (Johnson et al, 2008) or be in the control group that did not receive the TTM-based intervention. Those randomly assigned to the treatment group received a stage-matched multiple behaviour change guide and a series of tailored, individualized interventions for three health behaviours that are crucial to effective weight management: healthy eating (i.e., reducing calorie and dietary fat intake), moderate exercise, and managing emotional distress without eating. Assessments were conducted at four time points: baseline, 3, 6, and 9 months. All participants were followed up at 6, 12, and 24 months. The study revealed that at the end of the intervention, after 24 months, those participants who were classified to be in the pre-action stage for healthy eating at baseline and received treatment were significantly more likely to have reached

Protons or Maintenance stage than the comparison group. The intervention showed similar effects on managing emotional distress without eating, and consumption of fruits and vegetables. Those who were in a pre-action stage for both healthy eating and exercise at baseline and received the TTM-based treatment -30% lost 5% or more of their body weight vs.18.6% in the comparison group. This study demonstrates the ability of TTM-based tailored feedback to improve healthy eating, exercise, managing emotional distress, and weight on a population basis. The treatment produced the highest population impact to date on multiple health risk behaviours (Johnson et al, 2008). What does this study mean for designing population-based interventions? This underscores the importance of first identifying the readiness of a population to make a desired behaviour change such as exercising, healthy eating, stress-management and then designing targeted interventions based on their respective stages. This would generate the maximum likelihood to move them to the maintenance stage where the desired positive behaviour has been achieved and only needs to be maintained.

Social Learning Theory proposes that new behaviours can be acquired by observing and imitating others. This theory emphasizes that learning takes place in a social context and is a cognitive not a purely behavioural process (Bandura, 1977). The recent discovery of "mirror neurons" in primates provide support for a neurological basis for imitation. These are neurons which fire both if the animal does something itself, and if it observes the action being done by another (Rizzolatti et al, 2004). According to this theory, learning can take place even when there is no reproduction of the action or reinforcement of the behaviour, although learning may occur through observation of rewards and punishments. The learner is not a passive recipient of information. Cognitive processes, behaviour and environment all influence each other (Bandura, 1977). This theory has useful applications in bringing about large-scale behaviour change, particularly through the influence of media, celebrities or heroes that people are likely to emulate.

Case studies: Representations in the media are influential because people construct their views of society and desired behaviours based on what they see. If efforts to change beliefs are directed towards the sociocultural norms and practices at the social system level of a particular population, they can be highly effective in bringing about change in behaviour (Singhal et al, 1993). This lends credence to the entertainment-education approach or the infotainment approach to social and behavioural change.

This approach has been effectively used by Mexican creative writer-producer-director at Televisa, (the Mexican national television system). He has created a methodology to produce entertainment-education telenovelas. This methodology includes a formal, reproducible set of design and production techniques for the construction of persuasive mass media messages. It took Sabido eight years (from 1967 to 1975) to hone his methodology of producing entertainment-educational telenovelas. He created four historical-cultural soap operas for Televisa, each designed to promote and celebrate the rich cultural heritage of Mexico. The success of these historical-cultural soap operas convinced Sabido that telenovelas were ideally suited for educating Mexican viewers about various development topics since telenovelas were highly popular in Mexico. They achieved spectacular reach among the audience, ratings reaching millions of viewers for half-an-hour daily, five times a week, for about one year, representing massive exposure to an educational message. The melodrama in a telenovela represented a natural confrontation of 'good' role models against 'bad' ones, providing a unique opportunity to promote 'socially desirable' behaviours and dissuade 'socially undesirable' behaviours (Sabido, 1989). He subtly incorporated educational messages in entertainment content,

without making them too blatant, in order to produce a value-based, morally coherent, and a realistic telenovela, with believable characters and locales.

Based on Sabido's method, a television drama called Hum Log was launched in India. Hum Log ('We People'), a particularly popular television soap opera, was broadcast in India from 1984 to 1985. Hum Log featured educational messages about women's status, family harmony, and smaller family size norms. It attracted a very large-sized audience, setting a record for television ratings in India (up to 95 percent), and getting through to the mass population of India as no television series had ever done before. The Hum Log broadcasts had particularly important impacts on certain audience segments (Singhal et al 1993). For example, many young women in the audience identified with Badki, a positive role model for female equality, who modelled her rejection of the traditional role for Indian young women by seeking a professional job outside the home, selecting her own husband, etc. (Singhal et al 1993). However, Hum Log delivered mixed results in terms of influencing the audience as Sabido's methodology was not directly applied to this teleserial (Singhal et al 1993).

Nudge Theory has come into prominence, popularized by Richard Thaler and Cass Sunstein. Nudge is a concept in behavioral science, political theory and behavioral economics which proposes changing the 'choice architecture' to influence the behavior and decision making of groups or individuals in such a way that an individual or group is 'nudged' into performing the desired behaviour without taking away their freedom of choice (Thaler & Sunstein, 2009). A simple example of a nudge would be placing healthy foods in a school cafeteria at eye level while putting less-healthy junk food in harder-to-reach places. Individuals are not actually prevented from eating whatever they want but arranging the food choices that way causes people to eat less junk food and more healthy food (Thaler & Sunstein, 2009).

They argue that nudges can be used effectively to improve decisions about health, money and many other situations in life. They describe two systems of thinking, "The Reflective System" and the "Automatic System". These have been further elaborated by Daniel Kahneman (Kahneman, 2011), the Nobel Prize winning behavioural economist who, along with Amos Tversky, first introduced the idea that humans are not rational decision makers through their 'Prospect Theory' that posits that systematic cognitive biases influence decision-making. The Nudge Theory draws from this idea.

According to the Two Systems of Thinking idea, The Automatic or Fast System is rapid, feels instinctive and does not involve any kind of deliberation. The actions that result from it are automatic, such as ducking when a ball is thrown at you. The Reflective or Slow System is deliberate and self-conscious and is engaged when people decide which college to attend, where to go on trips etc. (Thaler & Sunstein, 2004; Kahneman, 2011). Since people often rely on the Automatic System for decision-making, their decisions are not always rational but are influenced by their cognitive biases. For example, the status quo bias can be seen when people are very likely to continue a course of action since it has been traditionally the one pursued, even though this course of action may clearly not be in their best interest. That is, people often lean towards the 'default option'. This can be effectively used to nudge people towards a desirable decision by making it the default option such as serving salad with a burger instead of fries at restaurants. Nudge Theory has been widely applied in policy recommendations across health, economics, finance, environment, schools etc.

Case Study: The insights from behaviour economics and Nudge have been applied in the Indian setting (K. Subramanian, 2019). The Beti Bachao Beti Padhao (BBBP) scheme was launched on 22nd January 2015 to improve child sex ratio and empower girls and women. This campaign demonstrated the powerful use of the insight on 'social norm' in its 'Selfie with Daughter' initiative. Social norms dictate the way people behave. Changing people's behaviour means changing social norms. By introducing a new norm and making people believe that this is the social norm, people can be nudged to adopt it. One of the aims of BBBP scheme was to stop parents from viewing girls as a burden and start celebrating them instead. The selfie campaign showcased examples of parents celebrating their daughters and taking a selfie to demonstrate it. This campaign became viral on social media encouraging people to act according to this new norm (K. Subramanian, 2019). Thus, Nudge can be applied effectively to change attitudes and behaviours.

Community Level

Diffusion of Innovations Theory is a theory that seeks to explain how, why, and at what rate new ideas and technology spread. Proposed by Everett Rogers in 1962, it proposes that four main elements influence the spread of a new idea: the innovation itself, communication channels, time, and a social system. The innovation must be widely adopted in order to self-sustain. The categories of adopters are innovators, early adopters, early majority, late majority, and laggards. Within the rate of adoption, there is a point at which an innovation reaches critical mass (Rogers 1962).

Case Study: One of the most prominent examples of the application of this theory is the spread of social media social networks such as Facebook. At first, when Facebook was started in 2004, it was limited to first Harvard University and then universities in the US only. These were the early adopters. As Facebook expanded its capacity to include more and more people, its base grew until the vast majority of people with access to internet are on Facebook.

In **Community Mobilization** action is stimulated by a community itself, or by others, that is planned, carried out, and evaluated by the community's individuals, groups, and organizations on a participatory and sustained basis to improve the health, hygiene and education levels so as to enhance the overall standard of living in the community.

Case Study: A unique nine-year collaborative programme between Vietnamese and international medical scientists and an aid organization have established an innovative and successful community-based dengue vector control programme in Vietnam (Vu et al., 2004). The use of predacious copepods combined with new water management practices by nine communes in northern and central Vietnam helped eliminate the main dengue vector mosquito, *Aedes aegypti*. The model was enthusiastically taken up by communities with apparent ease and a high level of acceptability as demonstrated by post-project sustainability and expansion.

Systems Leadership Approach for sustainable development is an innovative and adaptive model that is a departure from the traditional hierarchical, top-down and linear approaches to implementing change. In this framework, complex systems such as environment, food and health are dealt with at three levels- Individual, Community and the

Systems Levels. The first focuses on collaborative leadership, the second on advocacy and collaboration and the third, on insights on the complex systems. It uses the CLEAR Framework leading change through five key elements of the systems change process. These are not necessarily sequential – they may overlap or repeat in cycles throughout the course of an initiative.

1. Convene and Commit - Key stakeholders engage in moderated dialogue to address a complex issue of mutual concern. They define shared interests and goals and commit to working together in new ways to create systemic change.
2. Look and Learn - Through system mapping, stakeholders jointly build a shared understanding of the components, actors, dynamics, and influences that create the system and its current outcomes, generating new insights and ideas.
3. Engage and Energize - Diverse stakeholders are engaged through continuous communication to build trust, commitment, innovation and collaboration. Inspiration, incentives and milestones help drive progress and maintain momentum.
4. Act with Accountability - Shared goals and principles set the direction of the initiative, while measurement frameworks help track progress. Coordination and governance structures can be developed as initiatives mature.
5. Review and Revise - Stakeholders review progress regularly and adapt the initiative strategy accordingly. Adopting an agile, flexible, innovative and learning-centered approach allows for evolution and experimentation.

Summary

- Social and Behavioural Change refers to bringing about a positive transformation with a social system that includes changing behaviour of individuals and the society or social environment as a whole.
- Individual behaviours are shaped and influenced by cultural practices, social norms and the economic and political landscape. Therefore, to bring about real and sustained change, it is important to consider the community as a whole.
- Bringing about social change is one of the most difficult tasks. Change is not only challenging at the individual level but also at the group and community level.
- Behaviour Change Communication (BCC) is a step forward from IEC towards enabling action from individuals, communities and societies. It entails providing a supportive environment that will enable people to initiate and sustain positive behaviour, in addition to spreading awareness.
- There are several theories of behavioural change to draw from to design a large-scale social and behavioural change movement.

- Some of these theories are at the individual level such as Health Belief Model, Social Learning Theory, Nudge Theory and, some are at the community level such as Diffusion of Innovation Theory, Community Mobilization and Systems Leadership Approach.

Key Words

Behaviour change - is an evidence-based process for changing knowledge, attitudes and practices of individuals or groups of individuals.

C4D - Communication for Development

SBCC - Social and Behaviour Change Communication

Exercises

1. What do you understand by the term SBCC? How is it different from IEC?
2. Briefly describe the 'Nudge theory' of behaviour change.
3. List some theories of behaviour change that can be applied at the individual level. Explain any one in detail.
4. Giving suitable examples explain any two theories of behaviour change which are applicable at the community level.
5. What are the five key elements of the systems change process? Elaborate.

References

1. Abood, D. A., Black, D. R., & Feral, D. (2003). Nutrition education worksite intervention for university staff: application of the health belief model. *Journal of nutrition education and behavior*, 35(5), 260-267.
2. Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191.
3. Bentler, Peter M.; Speckart, George (1981). "Attitudes "cause" behaviors: A structural equation analysis". *Journal of Personality and Social Psychology*. 40 (2): 226–238.
4. Community Mobilization and Participation". Women and Child Development Department, Govt. of Orrissa. pp. 197–205.
5. Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. Psychology press.
6. Johnson, S. S., Paiva, A. L., Cummins, C. O., Johnson, J. L., Dymont, S. J., Wright, J. A., Prochaska, J. O., Prochaska, J. M., & Sherman, K. (2008). Transtheoretical model-based

multiple behavior intervention for weight management: Effectiveness on a population basis. *Preventive Medicine*, 46, 238-246.

7. Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.
8. Mok WK, Lee AYK (2013) A Case Study on Application of the Theory of Planned Behaviour: Predicting Physical Activity of Adolescents in Hong Kong. *J Community Med Health Educ* 3:231.
9. Prochaska JO, DiClemente CC: Stages and processes of self-change in smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*. 1983,5:390–395.
10. Prochaska, J. O. (2013). Transtheoretical model of behavior change. *Encyclopedia of behavioral medicine, 1997-2000*.
11. Prochaska, J. O., & Velicer, W. F. (1997). The Transtheoretical Model of Health Behavior Change. *American Journal of Health Promotion*, 12(1), 38–48.
<https://doi.org/10.4278/0890-1171-12.1.38>
12. Rizzolatti, Giacomo; Craighero, Laila (2004). The mirror-neuron system. *Annual Review of Neuroscience*. 27 (1): 169–192.
13. Rogers, Everett (16 August 2003). *Diffusion of Innovations*, 5th Edition. Simon and Schuster.
14. Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health education monographs*, 2(4), 328-335.
15. Sabido, M. (1989, March-April) Soap operas in Mexico. Paper presented to the Entertainment for Social Change Conference, Los Angeles, University of Southern California, Annenberg School for Communication.
16. Singhal, A., Rogers, E. M., & Brown, W. J. (1993). Harnessing the potential of entertainment-education telenovelas [Journal article]. *Gazene*, 51, 1-18.
17. Subramanian, Krishnamurthy. Policy for Homo Sapiens, Not. Homo Economicus: Leveraging the Behavioural Economics of “Nudge”, Chapter 02, Vol 1 Economic Survey of India 2018-2019.
18. Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: improving decisions about health, wealth, and happiness*. Rev. and expanded ed. New York: Penguin Books.
19. Vu, Sinh & Nam, Vu & Kay, Brian & Thi Yen, Nguyen & Ryan, Peter & Bektaş, Ahmet. (2004). Case Study 12 Community Mobilization, Behaviour Change and Biological Control in the Prevention and Control of Dengue Fever in Viet Nam. *Dengue Bull.* 28.