# Public Health intervention (template)

(3,500 words +/-10%)

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# Title

**Public Health Intervention**

# 1. Background and Aims

Public health stands for the science of preserving and developing the well-being of people and their nations. It can be attained by encouraging a healthy lifestyle, examining injury and disease prohibition and prohibiting, detecting and responding to contagious diseases. In simple words, public health is connected with the well-being of the complete population of a nation. It is an important factor for the nation as it encourages healthcare accessibility, equity and quality. Public health assists in ascertaining health diseases on an early basis to prevent any improvement of the disease and ensure the healthy well-being of an individual (Bcu.ac.uk., 2023). It is affecting all over the world with the modern lifestyle of people and unhealthy patterns of meals. The decreasing rate of public well-being is causing several diseases such as HIV, diabetes and mental health challenges among the population of a nation. The increasing health problems are also creating major problems such as cancer in many countries. There are many difficulties available in the accessibility of the healthcare centers in different areas of a country. The underdeveloped areas are majorly having several diseases for the lack of healthy lifestyles and sanitization in that particular area. As per the research of Cdcfoundation.org. (2023) Women who are residents in the slum areas of India are majorly having cervical cancer due to their inaccessibility to healthcare.

A public health intervention is a policy or effort that takes place to develop the physical and mental health of the entire population. It plays a significant role in the complete productivity, health and longevity of an entire nation for the development of their quality of life by decreasing human suffering, saving money and helping children thrive. A public health intervention is required for the evaluation and examination purpose of the health factor of a nation. It helps the community or the organisation to analyse the behaviour of people in the nation towards a healthy lifestyle. It is also very effective in designing an implementation plan for the healthy development of the country. A public health intervention aims to develop the healthy well-being of the people of any nation. It precisely focuses on the healthy habit and behaviour of an individual to help them in adopting a healthy lifestyle and preventing critical diseases. The major problem in this modern era that is affecting the health of the population can be outlined as the outcome of the unhealthy living of the population. The target behaviour of the intervention is based on reducing salt and sugar in dietary intake and decreasing highly processed food consumption. It is very important to look into the unhealthy behaviours of the population in order to generate a healthy lifestyle among people. The government as well as the population itself should take responsibility to create healthy habits and push the entire population towards a healthy nation.

# 2. Theoretical Framework

As per the opinion of Dwyer et al. (2022), too much sugar consumption causes the human body in developing severe diseases such as obesity, inflammation, high blood pressure, atherosclerosis and high blood sugar. Heart problems can be another reason which is concern with sugar. A healthy heart helps an individual to increase the life span as well as helps to lead a healthy life. Too much sugar consumption can create a barrier towards a healthy lifestyle for an individual. Food is the source of energy in the body of an individual. However different food has different level of consumption for a healthy body. As per the article of Shi et al. (2021), The body reacts to its energy level of itself and delivers a signal to the brain whenever the energy level decreases. It generates energy with the consumption of food by an individual and reacts as per the consumption. Meals with high sugar have low energy and it causes the body in having different problems which can lead to damage in the body. The body creates some sources of cravings with the low energy level in the body and people opt for the cravings to take more sugar in their daily meals. High sugar in the body creates difficulties for the body to work properly as generates a barrier in delivery signals between the body and the brain. Too much sugar intake also causes difficulty in sleeping which eventually affects the health of an individual. Sleep is one of the most important necessities in the body and sugar targets that important necessity to cause the body in different health problems. The barriers to low sugar consumption on a daily basis can be defined as a lack of knowledge about the hidden sugar level in the human body. The barriers to the correct sugar level in the human body can be relieved with the proper knowledge of the level of sugar contained in food.

As opined by Agócs et al. (2020), eating too much salt in daily meals can cause hazardous health problems which include stroke, high blood pressure and heart problems. Salt is the main source of the sodium level in the body and it also helps in maintaining the pressure level of the body. However, the human body requires a minimum amount of sodium to operate different functions in the body such as relaxing and contracting muscles, managing the correct amount of minerals and water and functioning nerve impulses. As per the study of Szabó et al. (2020), the human body requires 500 milligrams of sodium on a daily basis to operate the important functions of the body. However, eating too much salt can affect the body with hazardous diseases that include heart problems and disorder in blood pressure. Too much salt consumption can also lead to loss of calcium in the body which can generate different issues with bones. It can also reduce the bone density in the body which eventually affects the health of the human body. A study on most Americans shows that the daily salt consumption level of people in America is estimated at 3,400 milligrams or 1.5 teaspoons which describes the high salt consumption level among the people in America (Gupta et al., 2022). The problem with too much salt consumption increases with the incapability of people about in defining the correct salt level in their daily meals. Lack of knowledge about the salt levels in food is one of the major reasons behind the increasing salt levels in the human body. On the other hand, the hidden salt level in different processed food also becomes a big reason for the increasing salt level in the human body. Necessary measurements such as knowledge about the hidden salt levels and proper cooking skills can become helpful for the development of healthy habits among the population of a nation.

As per the opinion of Messerli et al. (2019), Processed food causes diabetics, obesity and heart diseases in the human body. Processed food contains a lot of salt and sugar which goes inside of the human body with the food. Too much consumption of processed food in the human body also leads to obesity as it contains too much fat within it. On the other hand, processes food contains a large amount of salt and sugar within it which can also cause heart damage and severe diseases such as diabetes. The hidden amount of salt and sugar are not easily accessible by any individual which leads to insecurity about the correct amount of sugar and salt within the food. As per the research of Ghimire et al. (2019), the hidden number of salt and sugar in processed food is a big reason for the human body to contact with obesity as it has high calories within the food. The research shows that people who consume too much-processed food tend to become fat and contact with diseases more than healthy people. Processed foods are made with different unhealthy ingredients to make them tasty for the tongue of an individual. However, these unhealthy ingredients damage the human body and affect the healthy habits of the human body with hazardous diseases. The barrier to having healthy foods in order to avoid too much consumption of processed food comes with the lack of cooking skills to prepare a healthy meal. It is important to improve the cooking skills of an individual to avoid eating too much-processed food.

### Table 1: Matrix of change for intervention objectives

| ***Needs assessment*** | ***Change objectives***  ***Determinants of behaviour*** | | |
| --- | --- | --- | --- |
| ***Programme Objective*** | ***COM-B Behavioural Diagnosis*** | | |
| ***Capability*** | ***Opportunity*** | ***Motivation*** |
| *Target behaviour:* reduce sugar in daily meals  *Target population:* Adults with diabetics and obesity  *Objective and specified behaviour:* To reduce consumption of food with high sugar as measured by the body's glucose | * Unsure about the level of sugar found in different foods * Lack of motivation to avoid the desert | * Collect the information about the sugar level in different foods | * Maintaining the sugar level of the human body |
| *Target behaviour:* reduce salt in daily meals  *Target population:* Adults with high blood pressure and heart diseases  *Objective and specified behaviour:* To reduce consumption of food with high salt as measured by the salt level of the body | * Lack of knowledge about the correct salt level in the food | * Improvement in the cooking skills to know about the correct sugar level in daily meals | * Maintaining the sodium level in the human body |
| *Target behaviour:* reduce consumption of highly processed food  *Target population:* Young and adults with obesity, heart diseases and diabetics  *Objective and specified behaviour:* To reduce consumption of highly processed food to decrease the level of chronic diseases | * Lack of skills in how to prepare healthy meals | * Development in the knowledge of different healthy meals to avoid the processed food. | * Healthy meals with better taste to avoid processed food |

# 3. Intervention development

The intervention plan is going to depend on the enablers or barriers that have been detected from the theoretical examination of the requirements of the public health intervention. The barriers are depended on the intervention targets which have been set as per the goals of the intervention. The barriers to the healthy lifestyle of the population in a nation indicate the lack of knowledge and lack of skills of an individual in order to live a healthy lifestyle. The barrier to too much sugar consumption addresses the lack of knowledge about the hidden sugar levels in different foods. It is completely based on the knowledge domain in terms of a theoretical manner. The knowledge barrier for too much sugar consumption can be overcome by providing proper knowledge among the people as well as by creating a healthy environment with healthy gossip among the participants of the facilitate knowledgeable workshop.

The barrier to high levels of salt consumption indicates the lack of knowledge as well as a lack of skills among the people about the correct salt level in different meals. It is depended on the skill and knowledge domain in terms of the theoretical manner. The knowledge barrier for too much salt consumption can be overcome by distributing proper knowledge about the hidden salt levels in different types of food, Again, the skill barrier for too much salt consumption can be overcome by different small activities held by the facilitate workers to provide proper rehearsal about the matter. The barrier to the increase in processed food consumption addressed the lack of skill among the population of the nation. The barrier is depended on the skill domain in terms of theoretical manner. The skill barrier for too much consumption of processed foods can be overcome by different activities from the community workers for the rehearsal purpose for the development of cooking skills. The feedback from facilitate workers can also help the population with creative knowledge about different healthy foods.

### Table 2: Theory informed intervention programme using the Theoretical Domains Framework

| ***Which barriers and enablers need to be addressed?*** | ***Within which theoretical domain do the barriers and enablers operate?*** | ***Which intervention components (BCT’s and mode of delivery could overcome the modifiable barriers and enhance the enablers? (Techniques; mode; content)*** |
| --- | --- | --- |
| Lack of knowledge about the hidden sugar level in different food items | Knowledge | **Technique:** Search for the information  **Mode:** Facilitate workshops as well as healthy gossip programs  **Content:** Pieces of information are provided by the community workers to distribute knowledge about the hidden sugar levels in different foods as well as a small group activity has been presented by the group to make people identify which food is high in sugar. |
| Lack of surety about the necessary salt level in different foods | Knowledge and skills | **Technique:** Search for the information as well as proper rehearsal  **Mode:** Facilitate workshops as well as healthy gossip programs  **Content:** Community workers have shared necessary important pieces of information about the correct salt level in the body and in different meals. A small activity has been conducted by the community workers to make people identify which food is high in salt by tasting it. |
| Lack of cooking skills in preparation of healthy meals | Skills | **Technique:** Proper rehearsal with creative changes in the food  **Mode:** Facilitate cooking workshops  **Content:** A small group activity has been provided by the community workers where participants are given a set of ingredients to prepare a healthy meal from it. A participant can create different meals as many numbers as they can within the time. The participants have been asked to taste each other’s prepared food and discuss it after getting proper feedback from the community facilitates. |

# 4. Method & Ethics

## 4.1 Design

The implementation plan of the intervention program has been designed as per the requirements of changing habits in order to create a healthy lifestyle. The program has been designed on the basis of a lack of different skills to create a proper implementation plan for the development of a healthy lifestyle both mentally and physically. The implementation plan of the invention program has been designed to provide the necessary knowledge and skills among the huge population of the nation.

## 4.2 Target population

## The population for the intervention plan has been indicated as per the diseases caused by high consumption of different unhealthy foods. The target population for the intervention program can be defined as people who have obesity, heart disease, diabetes, strokes and high pressure. The people have been set as people with high consumption of sugar, salt and processed foods tend to have such diseases. The target people can be defined under the category of young people and adults of different ages.

## 4.3 Intervention

## The intervention program is going to happen by the community workers with proper guidance and knowledge about the target people as well as the requirements of the intervention plan. The proper knowledge of the correct sugar and salt level in different foods is going to be provided by the Department of Health and the skill programs are going to organise by the workshop facilitate workers.

## 4.4 Assessments and outcome measurements

Primary pieces of information are going to be collected by the community workers to assess the number of people with a lack of knowledge and skills. The assessment is going to happen as per the salt level and sugar level in the human body and the detection of different hazardous diseases.

## 4.5 Ethical considerations

Ethical consideration is considered to be an important factor while undergoing any type of treatment process. This process emphasises providing the best quality service to their patients. The adoption of ethical considerations helps in bringing credibility to the healthcare process.

As per the guidelines of the British Psychological Society (BPS), the key ethical considerations which are to be considered while carrying out medical research intervention are Respect, Competence, responsibility and integrity.

**Respect:** This ethical consideration aims at providing respect to patients irrespective of their social status and class. Providing them with their due respect will help in building trust and faith within the healthcare sector.

**Competence:** Competence aims at providing the best quality treatment to the patients. It also aims at coordinating with doctors and allied health workers to ensure timely and effective service to the patients.

**Responsibility:** Responsibility in ethical consideration aims at performing a review of the patient's progress or recovery. It also ensures taking into account the other affected person in the locality and providing them with appropriate treatment.

**Integrity:** Integrity aims at charging the patient fairly. This also aims at providing quality medicines and facilities which are required in undertaking the treatment.

# 5. Evaluation

Intervention emphasises offering quality and effective services to the patients. This is an important factor which is adopted to bring efficiency and effectiveness to the healthcare sector. The intervention aims at bringing down the pressure on the healthcare system. The RE-AIM framework is generally used in health research which aims at planning and evaluating health-related events in a clinical atmosphere. RE AIM objectives focus on bringing and adapting changes in the system which will help to ensure quality services to the patients. RE Aim helps in providing an out-of-context analysis of the existing project. Re-aim can be adopted in order to identify alternate opportunities besides the context of research.

The various functions which are associated with the adoption of RE AIM are discussed below:

Reach aims to increase its accessibility among its targets. It aims at offering quality and affordable healthcare services to the targeted community. As the project emphasises providing healthcare facilities to women residing in slums so hospitals and health centres must be set up in their aligned areas which will help them in meeting their requirements in the time of crisis.

Effectiveness aims at providing appropriate services to the patients as per their treatment needs. The intervention of efficacy in the healthcare system will help in building customers' trust towards the healthcare industry. The inclusion of efficiency brings efficiency to the healthcare process. Interventions of this function in the health care system improve the success rate in the treatment process. This will help in ensuring quality services to slum people who are the main targeted customers of this project.

Adoption refers to the adoption of new efficient and effective techniques to offer quality treatment to its targeted patients. Through the adoption of eco-friendly processes, the hospital can use low radiating machines which are effective from the consumers' point of view. The adoption of new and effective tools in the treatment process brings operational efficiency to the healthcare process.

Implementation in the intervention process helps to implement innovative treatment procedures which will remove the hassles of patients. Implementation of a better treatment process improves patients' faith and trust towards the healthcare industry. Implementation and invention of new drugs and medicines will treat patients in a shorter span of time. Maintenance aims at reviewing the systems and processes. This focuses on viewing whether the new systems implemented are up to the mark or not. Healthcare professionals can make a thorough review of their machines if they are working properly or not. Intervening maintenance will help in the proper and smooth functioning of healthcare processes in the long run. This process involves the introduction of new and effective equipment to the patients. Through the adoption of new technology, it will help in ensuring quality services to its patients.

***Limitations of intervention and future research***

The adoption of advanced technology is not effective in treating deadly diseases. In Spite of various technological developments, people are unaware of new diseases. Frameworks and policies must be developed to counteract these deadly diseases. Healthcare professionals can collaborate with research professionals to invent new and effective medicines. This will help in treating the cervical cancer of slum dwellers in a more moderate way.

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