

## Non-Drug Behavioral Interventions for the Side Effects of Cancer Treatment in Children

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### Abstract

Over the course of the past 20 years, cancer therapies have become increasingly aggressive, and it has become abundantly evident that pain, nausea, and other unpleasant side effects require new approaches to management. When there is no viable treatment for their substance abuse problem, people can find hope in behavioral research and theory. Giving cancer patients psychological therapy as part of a larger movement known as "behavioral medicine," which focuses on how people behave, has been favourably welcomed by both doctors and patients. Behavioral medicine is concerned with how people behave. At large cancer hospitals, one of the most in-demand mental health services are behavior modification, which aims to change patients' behaviors.

**Keywords:** *Treatment, Side effects, Therapy, Non-pharmacologic intervention, Behavioral interventions*

### Introduction

The "World Health Organization's (WHO)" consensus conference on paediatric cancer pain agreed that behavioral therapy is the best way to treat side effects in children who have had different diagnostic and treatment procedures. Similar ideas came from the Agency for Healthcare Research and Quality. Patients often choose therapeutic treatments when they are at their weakest because they relieve pain and suffering right away, are easy to do, and make them feel in control.

Behavior modification strategies are being used more and more in the medical and educational fields to solve problems that are getting more complicated. Interventions in how people act have affected almost every part of our lives. The approach has been used a lot, which has led to an important side effect: we now know more about how cognitive processes work in action. People use terms like "cognitive-behavioral therapy," "cognitive-behavioral approach," and "behavioral medical intervention" to talk about how the ideas behind behavioral intervention are changing. "Behavioral intervention" is a term that will be used in this study.

In the early period 1970s, the therapeutic approach to preventing and the treating disease initially implemented. Research on biofeedback has helped find new ways to treat headaches, asthma, and seizures. Non-voluntary processes, such as heart rate, body temperature, and electromyographic feedback, can be continuously monitored with biofeedback. When receiving biofeedback, a patient frequently lies down on a table and attempts to monitor numerous essential functions while remaining still. People with asthma, epilepsy, and migraine headaches have been helped a lot by this kind of training. This has been noticed by both academics and the general public. The Yale Conference on Behavioral Medicine was made because biofeedback is so important.

1. This subject can also be used for preventive care and care that helps people get better.

2. It goes beyond psychosomatic medicine.

Psychosomatic medicine, on the other hand, is based on the social and behavioral sciences, while behavioral medicine is based on the social and behavioral sciences. In the early 1980s, researchers began to look into how behavioral medicine could be used to treat cancer. Early research showed that relaxation, hypnosis, and distraction could help lessen the bad side effects of cancer chemotherapy and additional scientific and clinical research will be required to determine whether autophagy is a mechanism of resistance to cancer therapy. [8]

It is safe to state that NIH researchers are now interested in studying behavioral medicine. Organizations and individuals that concentrate on cancer are also become more and more interested in behavioral medicine. The "American Cancer Society and the National Cancer Institute" fund behavioral research conducted both side of laboratories as part of their attempts to halt and control the proliferation of cancer cells.

In behavioral therapy, there is a lot of focus on how to act and pay attention in the real world. There are many things that can affect how a person acts, and the clinician wants to know how those things can be changed to help the person deal with things better. On the other hand, cancer makes it hard to change the physical reasons behind behavior. It wouldn't be wise to change these factors in order to lessen the negative effects of aversion, despite the fact that we are aware of what causes side effects (such as how chemotherapy medications cause individuals to vomit) (e.g., reduce treatment harshness). " Clinicians have therefore concentrated on showing patients how to handle their difficulties through their actions. The accompanying anxiety, nauseousness, discomfort, and melancholy can all be helped by training." Most of the time, the patient and the doctor collaborate and share the workload. [1,2] In addition to anticancer drugs or ionising radiation therapy in cancer cells, autophagy usually has two effects.[8]

### **Types Of Behavioural Therapy**

It's crucial to stress that behavioral approaches need to be examined before I discuss specific approaches to lessen the negative "side effects of cancer treatment." In contrast to more conventional psychodynamic treatments, behavioral intervention places a strong emphasis on ongoing assessment. Every phase of the intervention needs this assessment.

1. Figure out what needs to be changed in the patient's environment and how much help the patient has before you start the intervention.
2. Give feedback on the methods used during the intervention so that they can be changed to better meet the needs of the patient.

Providing directions for post-intervention care once the intervention has concluded. During an evaluation, every patient's conduct must be recorded in terms of frequency, severity, and location.

"Behavioral intervention" has been demonstrated to reduce the negative side effects of cancer treatment by employing the 8 approaches listed below:-

1. "Conceptual distraction,
2. Contingency management,
3. Intellectual distraction,
4. Hypnotherapy imagery,
5. Systematic desensitization,
6. Emotive visuals,
7. Relaxing training,
8. Cognitive restructuring,

## 9. Modeling."

Below, we will discuss each technique briefly. Behavioral studies in education and psychology, along with pragmatic considerations and clinical judgment, led to the application of these behavioral strategies in cancer treatment.

### **1.Contingency management**

Through the use of the contingency management, in the patients can be motivated to adhere to their medication regimens by offering rewards (prizes, therapies, or special events). To get children with cancer to cooperate, it is most frequently applied to them. Parents could set up a system where their child gets stars for staying still during hard diagnostic and treatment procedures in exchange for a certain product or treatment. Contingency management is frequently used as a component of a wider therapeutic program that includes a range of behavioral modalities.

### **2. Attentional/cognitive diversion**

This form of diversion is employed in the treatment of nausea as well as the management of severe pain, misery, and distress. Patients exhibit behaviors that are both fascinating and engrossing while undergoing invasive procedures. Although it is hypothesized, the idea that the patient's engagement in the mission diverts his or her focus away from (or alters how they perceive) unpleasant feelings has not been scientifically proved. You may avoid unpleasant side effects by diverting your attention with pleasurable activities like narrating, engaging in video games. Clinical issues are uncommon because venipuncture and other painful treatments are simple to provide. Long-term treatments should include teaching patients how to focus for longer periods of time. When symptoms return, distraction exercises are employed to restore control over the patient. [2]

### **3. Hypnosis/distracting imagery**

Recent conceptualizations have placed hypnosis specifically in the behavioral domain, despite the fact that it has long been used in psychotherapy as a psychoanalytic tool. According to this theory, hypnosis employs techniques that are currently regarded as "conventional" approaches of behavior modification (e.g., distraction and relaxation). Modern hypnosis experts, on the other hand, agree that hypnosis is more of a behavioral therapy technique than a psychological therapy method in and of itself. To remove the notion that hypnosis is an ethereal experience, it should be recognized as a valid therapeutic practice.

The patient is instructed to concentrate on ideas and images unrelated to the cause of their suffering in order to cope with a mental health issue. When such patient is calm, the doctor uses trips to interesting places and activities that are similar to meditation. Children can be more involved in the creative process when they hear stories. Based on what we know so far, hypnosis and attention/cognitive distraction seem to require the same skills. Most of the time, hypnotherapy for cancer patients makes them feel anxious and sick.

### **4.Going in the direction of tempering an excessive reaction**

This method can be used to alter patients' adverse responses to stimuli linked to their treatments. The most feared stimuli and events are added last in a hierarchical order, beginning with the least feared. Throughout each session, the patient keeps a calm and relaxed demeanor. In addition to in-vivo re-exposure, it is also possible to utilize imagined or actual re-exposure to the feared stimuli or events. Studies have demonstrated that repeated exposure can help people feel less anxious. Following successful gastrointestinal surgery, a cancer patient with a life-threatening eating disorder is treated with in vitro systemic desensitization. [3,4]

### **5.Emotive imagery**

Using a child's natural interest in imagination and stories is an interesting idea. They have the child's trust and are able to tell them stories about themselves and the child's favorite character types from their favorite book. When a child may perceive themselves as being aided by someone else, such as the hero, heroism can continue. In each following narrative, the hero and the youngster come ever-closer to the terrifying event or procedure. By

mentally imagining unpleasant sights or procedures in vivid, frighten-inspiring detail, you can lessen anxiety. Invasive diagnostic and therapeutic procedures frequently involve parents.

## **6. Training for Relaxation**

With the help of relaxation training, patients can learn to calm their racing minds and take their minds off of whatever is causing them distress. Patients can benefit from a therapist or audiotape that teaches them relaxation techniques such as progressive muscle relaxation, deep breathing exercises, and other forms of muscle tension and release. After a few practice sessions, the patient will be able to track their state of relaxation with ease. There are many closely related techniques that can be used to relax and reduce melancholy and anxiety. Relaxation is something they all have in common. Patients can select from a range of relaxing methods, including focused imaging, releasing tension from specific muscle regions, and lowering breathing rate. Hypnosis has been used for a long time to teach people how to relax using techniques like deep breathing and detailed visualization. Therefore, hypnosis and other relaxation methods are often misunderstood when used in the workplace.

## **7. Cognitive reform**

Through relaxation training, people can learn how to be completely calm and take their minds off of their pain or stress. Through the use of an audiotape or a therapist, the patient can learn how to relax their muscles and how to breathe deeply. After a few practice sessions, the patient will be able to track their state of relaxation with ease. There are many closely related techniques that can be used to relax and reduce melancholy and anxiety. Relaxation is something they all have in common. Patients can select from a range of relaxing methods, including focused imaging, releasing tension from specific muscle regions, and lowering breathing rate. Long-established relaxation techniques like deep breathing and vivid visualization are taught through hypnosis. As a result, hypnotherapy and relaxation methods are frequently misunderstood in business settings.

## **8. Modelling**

Through in-vivo or videotaped examples of effective coping, intrusive diagnostic and treatment techniques can be taught. It is the most common approach when dealing with children. In a movie, for example, a child who wants to be a bone marrow donor often talks about the thoughts and feelings he or she often has before acted out ways to deal with pain and fear. [5,6,7]

## **Biobehavioural Processes:**

### **Implications for Understanding**

“Behavioral medicine” is very important when it comes to cancer, but it's also important to remember that behavioral science is a much bigger field. Behavior studies in "cancer prevention and control" are a great way to improve behavioral psychology.

## **Conclusion**

Research in behavioral medicine is important if you want to know how to change people's behaviors. Researchers paid special attention to what patients thought about the side effects of chemotherapy. The side effects of chemotherapy depend on how sure the patient is that the treatment will work. Using a good behavioral intervention in healthcare institutions to streamline and improve these processes has a lot of benefits.

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