



Rewiring Behaviour: Introduction to Controlled Pattern Transformation

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ABSTRACT

The theory constitutes a holistic approach towards behavior change by integrating both conscious and unconscious processes. CPT distinguishes itself from traditional behaviorist models by integrating both conscious and unconscious processes into a single framework. Its core components include cognitive alignment, subconscious anchoring, and behavioral transformation, which are brought into real-life scenarios through a systematic eight-step process. The process begins by identifying the maladaptive behavioral patterns, including their psychological root causes; anchoring the positive alternatives; and practicing the alternatives initially in a controlled environment and later in the real-world situation, and concludes in monitoring and evaluating to ensure maintenance. The theory is grounded in well-established psychological theories such as classical conditioning, dual process theory, the transtheoretical model, expectancy value theory, and the theory of planned behavior.

INTRODUCTION

We determine growth by the difference of change they have in their life. From the moment of birth to the person they become in life, humans require change on a constant basis. For some people, change happens due to external situations, and they experience change overnight. But for others, change happens due to the internal shift that gradually takes place in them. But is it actually that simple to change, though? People try day and night to change their undesirable traits and still can't achieve their desired transformation. Why would that be if changes are happening overnight to others. Bringing about change is not an easy process, if it is so, there would not be a significant number of people wanting to get out of their bad habits, such as smoking, drug abuse, procrastination, unproductive thought cycles, and maladaptive thought processes. A study conducted by Allemand et al. (2024) suggests that more than 50 percent of people are motivated to change and are already working towards it. While the definition of change differs among disciplines, we are mostly focusing on its behavioral components here. We witness people struggling to make changes in their lives by breaking the negative pattern, and even after several tries, they are unable to succeed in it. This can be due to several reasons, which can vary from interpersonal conflicts to external circumstances. These have been studied by numerous scholars, who have developed a number of theories and findings, and the stages of their occurrences.

Here we suggest one such theory that helps in bringing change through action and complex mental processes. The theory works by creating a change through anchoring it in the subconscious mind and implementing changes in the behavioral aspects. This is effective as it induces change in a holistic approach, including not only the behavioral aspects but also the conscious and unconscious parts of it.

LITERATURE REVIEW

The Controlled Pattern Transformation Theory proposes that individuals' motivation, effort, and success are the result of their ability to consciously control and align their cognitive patterns, beliefs, and values with their goals and aspirations. This theory comprises distinctive components within a framework that holds behavioral transformation.

METHODOLOGY

The process begins by identifying the maladaptive behavioral patterns, including their psychological root causes; anchoring the positive alternatives; and practicing the alternatives initially in a controlled environment and later in the real-world situation, and concludes in monitoring and evaluating to ensure maintenance.

RESEARCH RESULT AND DISCUSSION

Cognitive Pattern Assessments

This part of the theory highlights the importance of assessing individuals' cognitive patterns that are created throughout their lives. This involves cognitive alignment, such as how one consciously regulates and harmonizes beliefs, values, and behavior to ensure consistency and coherence. This knowledge of conscious consistency and coherence is important, as any confusion in those creates cognitive dissonance in the individual, motivating them to align their behavior with their values and beliefs (Festinger, 1957). Accessing these cognitive patterns helps in finding the biased thought process, values, and belief system that motivate them to do specific behaviors subconsciously. This helps in identifying the habits created without consciousness and bringing them into the conscious state of awareness, forming better habits and behavioral patterns.

Subconscious Anchoring

Anchoring here works with the principle of classical conditioning, where it works as an association of stimulus and response (Turkkan, 1989). In this theory, we use it as a cue that connects the consciousness with the subconscious part of the mind. The brain has the tendency to pair a specific action or trigger with an emotional state or behavior and links both of these over time. By this, the trigger automatically brings the emotional state or behavioral change, allowing it to be accessed whenever needed. Tversky and Kahneman (1974) state that anchoring is a powerful tool that helps in forming associations naturally in the brain, making it a valuable tool.

Behavioral Transformation: The next component is behavioral transformation, or particularly the action phase. It is linked with the effort an individual places on the transformation process. According to the expectancy value theory, the effort is linked with the belief and value they place on the action, such as the value of the outcome and the belief in achieving the task (Shang et al., 2022). Once the individual accesses their cognitive patterns formed as a result of previous associations, bringing them back into the consciousness and altering them through anchoring, transformation becomes much easier and effortless for the individual.

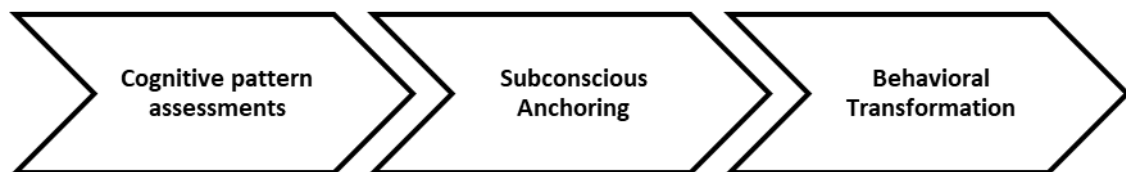


Figure 1. Components of Controlled Pattern Transformation Theory

This theory highlights the interplay between cognitive alignment, motivation, and effort in achieving success. It helps in understanding the importance of aligning one's values and objectives in order to enhance motivation and increase the likelihood of success and rewards. This can be a potent tool for applying in various domains, including in behavioral change and decision-making approaches.

As now we are familiar with the Controlled Pattern Transformation framework, and how it works, this is incorporated into our daily life using 8 steps for practical and effective results.

Step 1: *Identify the Negative Pattern or Behaviour that You Want to Change.*

This could be a habit, thought pattern, or emotional response that is causing problems or holding you back in some way.

To understand this deeply, Let's see how a habit is formed and why it becomes difficult to break a negative pattern. "Habits are learned impulses to perform a particular behaviour, triggered outside of conscious awareness by a particular context (Pinder et al., 2018). It is something we do with little or no conscious effort. Such as biting our nails when we are anxious or reaching out for the phone when we have a free moment. Pinder et al. (2018) determine habit as a link in the associative memory between a certain context and a specific response, where the occurrence of any context automatically triggers the response impulse. Thus, forming any behavior. As this takes place non-consciously, we tend to be unaware of the underlying internal mechanism that is happening. The links between the context-response mechanism induce a need for behavior and form a behavioral pattern without the awareness of the individual. When the individual is not aware of the actual formation of the pattern, it becomes difficult for them to break the pattern.

While talking about Behaviour and pattern formation, the major approach that pops into our mind is Behaviourism. In the behaviorist approach, the main focus is on the external stimuli rather than the cognitive part, which is not observable. Their key consideration lies only in directly observable actions. According to their theory, behavior is the result of a stimulus-response pair that develops without conscious thought through two mechanisms of associative learning, which are classical conditioning and operant conditioning (West, 2013). Classical conditioning, in simpler terms, is the pairing of stimuli with response, and operant conditioning is the pairing of stimulus-response with a positive or negative outcome, thereby providing reward for the positive outcome and punishment for the negative outcome.

Let's dive into the formation of patterns, in this case, the pairing of stimulus and response. The accidental discovery of classical conditioning by Ivan Pavlov led to a groundbreaking discovery in the field of psychology. While researching the dog's digestive system, he notices that the dog started salivating at the sound of the food cart prior to showing food. Later on, he experimented by ringing a bell before presenting the food to the dog. The dog did not react to the sound of the bell at first, nor did it start to salivate, but eventually, after it was repeatedly associated with food, it started salivating. In this experiment, the food acted as the unconditioned stimulus, which is something that naturally triggers an

automatic response, and the unconditioned response is the automatic reaction to that stimulus, which is the dog salivating in response to food. A neutral stimulus is something that does not elicit any response; here, the bell was initially a neutral stimulus, and gradually over time, the bell (neutral stimulus) can become the conditioned stimulus, which elicits a conditioned response (salivation). Pavlov found several phenomena regarding the classical conditioning experiment. He notices that if the conditioned stimulus (bell) is continuously supplied without the unconditional stimulus (food), then the conditioned response (salivation) weakens and disappears. He also notices that spontaneous recovery can occur.

This experiment by Pavlov shows a relevant example of how a pattern is formed without conscious effort. In CPT, this is the foremost step to bring about a change in a behavior; we analyze and understand the behavioral patterns that are formed consciously or unconsciously and identify them. By identifying these patterns, we can then work towards altering them and creating new, healthier habits.

This principle of stimulus-response association has been used not only in the psychotherapeutic technique but also in the advertising field. Advertisers attempt to associate their products with specific emotions or reactions. We see them associating their product with music or mouthwatering pictures, thus creating a conditioned response to the product. So, whenever we come in contact with the pictures or the music, it triggers the conditioned response, which is to buy that product or have cravings for that product. If you attempt to assess any of your past or present behaviors, you will be able to recognize the impact of classical conditioning on those actions and come to the realization that a variety of behavioral patterns have developed without our conscious awareness. As this is the first step in CPT, this can help us in understanding the unconscious triggers that have formed as an association in our habit pattern and can break those patterns with conscious effort. At the same time, it can also help in creating associations consciously, which can gradually fall into the unconscious realm and help in doing the behavior or habit without our conscious effort.

As CPT emphasizes the conscious awareness and control of mental processes, classical conditioning only stresses on the automatic, unconscious associations. Moreover, while classical conditioning describes how habits develop subconsciously, forming associations, CPT offers a framework for purposefully breaking and altering those associations, making a better understanding of the patterns formed and associated. Here, an individual has control over what is going on inside the conscious realm, rather than being solely fed by any external stimuli. Additionally, in classical conditioning, extinction (i.e., frequently presenting the conditioned stimulus without presenting the unconditioned stimulus) and counterconditioning are used to achieve behavioral change. However, CPT uses a proactive approach by identifying negative patterns, exploring their root causes, and anchoring appropriate alternatives through associations. Classical conditioning can provide a valuable understanding of simple and reflexive behavior, without capturing the complexity of human cognition, which includes deliberation, values, objectives,

and self-reflections. CPT fills this gap by integrating conscious cognitive control into the process of behavioral change.

Step 2: Identify the Root Cause of the Negative Pattern

What triggers this pattern or behavior? What are the underlying thoughts and emotions that contribute to it?

Now that we understand the pattern formation and the unconscious associations happening, the next step is to find what exactly is causing the behavior to happen and why we engage in certain behavior. One example of this can be seen in the people who procrastinate; as we only see that they are delaying their work or actions, we certainly do not look into the root cause of the delayed behavior. Research has shown that low self-esteem is one of the causes of procrastination (Ellis & Knaus, 1977). When people believe that they are not good enough or they can't do the task, they withdraw from the task to protect their self-esteem. Steel et al. (2001) simply state that "people suffering from feelings of inferiority may believe that any failure to perform to standard suggests inadequacy as a person". Moreover, in a study conducted by Ferrari (1991), it was found that procrastinators were shown more self-handicapping behavior than non-procrastinators, where they provide a justification or excuse to get an 'out' if they fail, in an attempt to protect their self-esteem. This all can be traced down to the root cause of the problem, which hinders the performance or action in the task. This does not signify that all people who procrastinate have lower self-esteem; there can be other reasons as well. In our CPT programming, one of the important steps is finding out the root cause of the negative pattern and analyzing if any psychological hindrance is present that is preventing the person from doing the task at hand. So, along with identifying the negative behavioral pattern, CPT also focuses on the root cause of it. Which is unnoticed mostly in any other behavioral programming. Through this, it gives a holistic idea about the observable pattern and also about the non-observable cause of the negative pattern.

Step 3: Create a Positive Alternative to the Negative Pattern

What would you prefer to do or think instead of the negative pattern?
How can you reframe your thoughts and responses to be more positive and productive?

After understanding the negative behavioral pattern and the root cause of it, our next step is to create a positive alternative to the negative pattern. As we have already understood the problem and the cause of the problem, adding a positive alternative will not be that difficult, if and only if we have a big enough 'WHY'. As having a big enough Why is a core concept of CPT, this step mainly focuses on it. To create a positive alternative to the negative pattern, we have to have a strong intention to perform or change the behaviour. This has been vividly shown in the theory of planned behavior, which focuses on the intention of the behavior, rather than solely focusing on its observable outcomes. The theory was developed by Ajzen (1991), with its primary focus on intention. The theory suggests that intentions are the motivational factors that influence behavior, and in relation to that, people dedicate their effort in order to perform the behavior.

The stronger the intention to engage in behavior, the more likely it is to be performed (Ajzen, 1991). According to him, the intention is formed by three independent determinants of variables, of which the first is the attitude towards the behavior. It depends upon the degree to which the person has a favorable or unfavorable appraisal of the behavior. The likelihood that someone will adopt the behavior increases if they believe it will positively affect change. The second is the subjective norm, which refers to the perceived social pressure to perform or not to perform, such as if the person is in an environment that promotes healthier behavior or the desired change, then it is more probable that the person engages in the same, and the third is the perceived behavioral control towards the behavior, which refers to the ease or difficulty of performing the action. If they believe that the behavior is within their control and attainable when they are in charge of it, and it is not influenced by outside forces, they are more inclined to behave towards the change. By incorporating all of these points, if the person creates a positive alternative to the negative pattern, it is easy for them to achieve it. In the CPT programming, the person is asked three important questions that help in replacing the negative behavioral pattern with the positive one. What would you prefer to do or think instead of the negative pattern? How can you reframe your thoughts and responses to be more positive and productive? And the big enough WHY for the change. This helps them to remember why they needed change and what they gain out of it.

Step 4: *Anchor the Positive Alternative*

Use techniques such as visualization, association, and anchoring to create a strong connection between the positive alternative and a specific trigger or cue.

Anchoring, as explored by Tversky and Kahneman (1974), is a cognitive bias where individuals rely heavily on an initial piece of information known as the anchor when making judgments or decisions. This has been used in different settings, such as in economics, law, marketing, and psychology. In simpler terms, we could say that anchoring is a cognitive bias where people rely too heavily on the first piece of information they receive the "anchor" when making decisions. Despite the fact that it is regarded as a cognitive bias, we use it as an active tool for behavioral modifications. In CPT, anchoring has been used as a technique that deliberately changes negative patterns with positive alternatives. As it taps into the brain's natural ability to create associations, it can be a powerful tool for behaviour change. The brain has the capacity to link behaviours or emotions when consistently paired together, such as tapping your fingers together to achieve calmness or confidence. Gradually the paired behaviour is performed automatically when it is triggered and brings about the emotional or behavioural change that it was linked to.

Anchoring gives us control over the mental and emotional states even if it's a high-stakes client meeting, job interview, or hospital room with a loved one. Once the brain is paired and trained, it responds quickly to the cues, changing the situation from negative to positive almost instantly. Anchoring works incredibly well, as it uses the innate property of the brain to link and form patterns. It is possible to teach and train us to associate certain actions with certain emotions, just as Pavlov did with his dog. This helps us to access specific behavior or emotions instantly through the conditioning process over time.

As anchoring the positive alternative is the fourth step of CPT, it provides a strong foundation for the positive behavior, by inducing it into our subconscious process through associations. With little or no effort, the person is able to change their behavioral pattern and accommodate new healthy behaviors in life.

Step 5: Practice the Positive Alternative in A Safe and Controlled Environment.

Repeat the positive alternative behavior or thought pattern in a low-stakes situation, reinforcing the anchor and build confidence and competence.

After anchoring the positive alternative, the next step is the crucial one, which is to practice the positive alternative in a safe and controlled environment. In this step, the behavior or the desired change is brought into action, but in a controlled setup. Here, the overt changes are seen and practiced. After analyzing the negative pattern, finding the root cause, creating alternative patterns, and anchoring, now is the time to put it all into action. In this stage, the person is clear that they have to change their behavior and accommodate new behavior so that they can replace the problematic behavior with the healthy one. It is not very easy to bring changes, as it is a gradual process that has to occur. The main factor of solidifying a behavior is the repetition in a low-stakes setting, where we can build confidence without feeling rushed. By practicing the positive alternative consistently, you move the behavior from deliberate, conscious effort to automatic, unconscious action. This can be explained through dual process theory. Dual process theory divides the mental processes into two general categories depending on how they operate, whether automatically or in a controlled fashion. By means of particular conditions, they are distinguished as to whether processing is automatic (system 1) or controlled (system 2). Automatic processes are differentiated through four conditions, which include: they are elicited unintentionally; they require a small amount of cognitive resources; they cannot be stopped voluntarily; and they occur outside of conscious awareness. While controlled processes are determined mainly through four characteristics, which include: being initiated intentionally, requiring a considerable amount of cognitive resources, being stopped voluntarily, and operating within conscious awareness (Gawronski et al., 2013). This allows us to designate a process as automatic or controlled if it exhibits any one of the four process characteristics. In the beginning, when practicing the positive alternative (such as reframing negative thoughts or engaging in a new habit like exercise), the person relies heavily on System 2 to monitor and control the behavior. Practicing in a safe,

controlled environment helps reduce pressure, allowing you to focus more easily and make fewer mistakes. Over time, with enough repetition, the behavior shifts to System 1, becoming more automatic and requiring less conscious effort.

Step 6: Practice the Positive Alternative in Real-World Situations

Gradually expose yourself to more challenging situations where the negative pattern is likely to occur, and use the positive alternative and anchor to replace the negative pattern.

After practicing the positive alternative in a safe and controlled environment, the next step is to practice it in real-world situations. When the person is comfortable enough to practice it in a controlled or low-stakes setting, they then gradually can perform it in a real-world situation, where the negative behavior typically occurs. Dual process theory can be taken as an example in this step as well. Where the positive behavior is controlled by System 2, meaning it requires conscious effort and intentional thinking to override the negative pattern. However, through repeated exposure and practice, the goal is to shift the new behavior into System 1, where it becomes an automatic response. When the person is exposed in natural settings, it is quite likely that the person starts to struggle to get away from the positive behavior and fall back into the same old pattern. So, till the behavior gets as easy as automatic, it is their conscious choice to keep the behavior in place and make conscious decisions every time.

Step 7: Monitor and Evaluate Your Progress

Keep track of your progress and celebrate your successes. If you encounter setbacks or struggles, use this as an opportunity to learn and grow, rather than giving up on the positive alternative.

In any change, monitoring and evaluating the progress is a key process. After our behavior is introduced into the system 1 process, where it happens without conscious effort, it gradually sinks into our daily lives. But after some time, it may have the chance of relapsing. So, it is crucial to monitor and analyze the progress to keep a check on the induced behavior and turn back whenever there is a deviation from that behavior. This can help in identifying any potential triggers or obstacles that may lead to a relapse. By staying vigilant and regularly assessing our progress, we can make necessary adjustments to ensure long-term success in maintaining the desired behavior. The Transtheoretical model by Prochaska (2020) also signifies the importance of monitoring and evaluating the progress in its final steps. This model has been widely used and recognized in the field of health behavioral changes. According to Prochaska (2020), "change implies phenomena occurring over time." The model focuses on intentional change and people changing a problem behavior and acquiring a positive behavior. The initial study of this model was conducted in a group of smokers who were trying to quit smoking, and gradually it was used for investigation and application for treating a broad range of health and mental health behaviors. The transtheoretical model views change as a progression through a series of six stages (Prochaska & Velicer, 1997).

The first stage is the precontemplation stage, in which people are not ready to change or have not yet decided to change. At this stage, they are not planning to take any action for their problematic behavior, and they are not intending to change it in the foreseeable future. People don't think of the consequences of the behavior, or they have tried and previously failed to change their behavior. The second stage is the contemplation stage, where they plan to make changes during the next 6 months. In this stage, they are well aware of the pros of the behavior and the challenges that accompany it, and are meddling between those. They also experience feeling stuck for a long period of time due to this, and have behavioral procrastination. The third stage is the Preparation stage, where people are intending to take action in the immediate future. At this point, most people have already made up an action plan, such as signing up for a program to stop smoking or going to the gym to lose weight. Action-oriented initiatives are concentrated on individuals at this stage of change. The fourth stage is the Action stage. Here, there is a visible change in actions. Since action can be observed, it is typically assumed to be the only way to alter behavior; however, the Transtheoretical model recognizes that action is only one stage of change. The fifth stage is called the Maintenance stage, during which individuals attempt to maintain their modified or new behavior over time without relapsing in response to stressful circumstances or triggers. In this stage, they are less tempted to relapse and are optimistic about their adapted behavior. The final stage is the Termination stage, where the individual has zero temptation and 100 percent self-efficacy. In this stage, the individual will never go back to the previous maladaptive behavior, no matter what the trigger is. This is the desired result of the change needed. This model clearly shows how change occurs and includes emotional, cognitive, and behavioral changes (Velicer et al., 1998).

Step 8: Consolidate and Maintain Your Progress.

As you become more confident and competent in using the positive alternative, make it a habit by reinforcing the anchor, and practicing regularly.

As the habit takes place with little or no effort or system 1 process and doesn't relapse in stressful situations, the next step is to consolidate and maintain the progress by reinforcing the anchor and practicing it regularly. Pavlov's operant conditioning supports this, where it depicts that rewarding behavior strengthens the stimulus-response relationship and encourages the person or organism to repeat the behavior. The important feature of operant conditioning is its reinforcement schedule. Instead of being given out at random, the reward is given within a specific time frame or response rate to increase the behavior. For example, if the person has engaged in a desired behavior, the reinforcement should be given following the behavior rather than delaying it. Through this, the individual knows that specifically this particular behaviour is rewarded and engages in it further. This consistency in reinforcement helps solidify the connection between the behavior and the reward, making it more likely for the behavior to be repeated in the future. By understanding and utilizing

reinforcement schedules effectively, individuals can shape and modify behaviors in a deliberate and strategic manner.

All the eight steps consolidated is given in Figure 2 below.

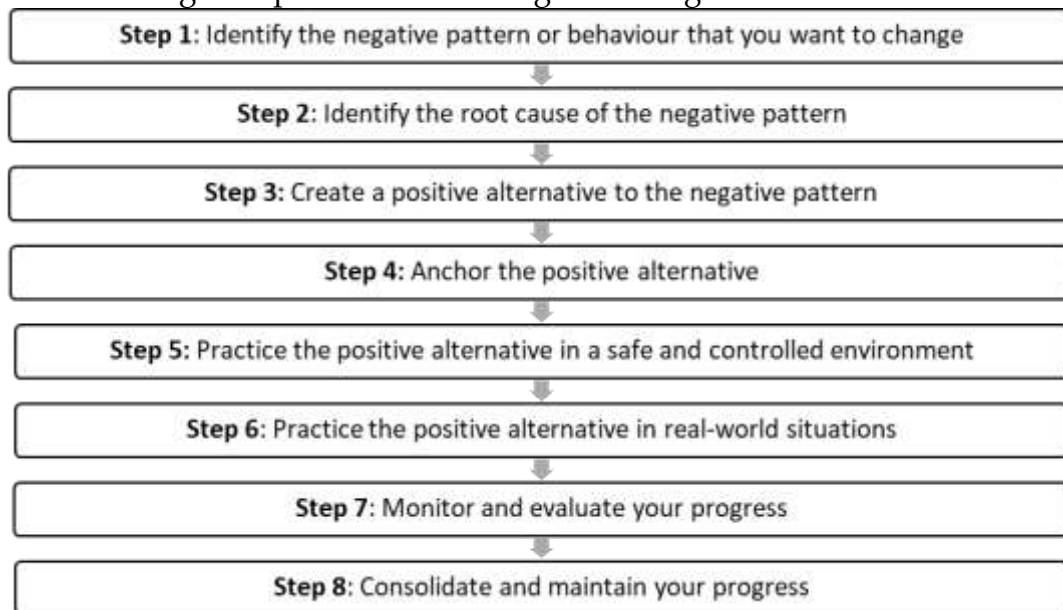


Figure 2. Steps in Controlled Pattern Transformation

CONCLUSIONS AND RECOMMENDATIONS

The Controlled Pattern Transformation theory comprises a holistic and comprehensive approach to behavior change that sets it apart from other traditional behavioral theories. While all the other theories, such as classical conditioning, behaviorism, and models like the transtheoretical model, contribute important insights into the specific behavioral aspects and change, CPT stands out by comprising both conscious and unconscious processes into an actionable framework.

Unlike the behaviorist models that solely focus on the observable stimuli and response, CPT also includes cognitive controls involving conscious awareness and recognizing previous cognitive patterns that lead to behavior. The steps in CPT not only identify the negative patterns but also explore their psychological roots through beliefs and values that allow for deeper and more sustainable transformation.

This theory is unique in its step-by-step methodology that helps individuals to purposefully rewire their cognitive and behavioral patterns. By consciously aligning one's behavior with their beliefs, motivation, and values with desired behavior, CPT allows for meaningful and lasting change. For individuals seeking behavioral change for overcoming bad habits, incepting good habits, and personal growth, CPT provides a valuable tool incorporating the theoretical and practical constructs to transform their lives.

ADVANCED RESEARCH

Further research on this proposition can be carried out to find the practical application of this hypothetical model. Further implications of this model would be to incorporate this stepwise framework into interventions that help individuals in behavioural changes.

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