



# **Cognitive Dissonance, Attitude Change and Ways to Reduce Cognitive Dissonance: A Review Study**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Author Annu designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author BD managed the analyses of the study. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

Cognitive dissonance is the state of psychological discomfort or tension that knowledgeable by the people who have more than two conflicting attitude, values and belief happen at same period of time. Its conception associated with self-doubt at the time of making decision. The aim of this review study is to emphasize on cognitive dissonance, reasons to cause the cognitive dissonance, cognitive dissonance theory with revisions, association between cognitive dissonance and the strategies to elimination of cognitive dissonance. The cognitive dissonance is most impactful in the social psychology in past time. The revisions of the cognitive dissonance theory emphasizes on that the cognitive dissonance arises by the function of self-concept. The cognitive dissonance caused by many reasons namely: force compliance behaviour, gain new information, during decision making and effort made by the person. The existence of cognitive dissonance increases the state of motivation in person to change the attitude. The cognitive dissonance is strongly associated with changes in attitude. The changes in behavioural, social cognitive elements, addition of new elements and avoidance of dissonance are the strategies to lessen cognitive dissonance.

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## 1. INTRODUCTION

The word cognition is evolved from the Latin word, Cognoscere, meaning to know. Cognition is consisting of all the mental processes through which person become aware and understands about the world. Cognition is that kind of process through which transformed, summarised, elaborate, stored, recovered and used the sensory input. It is the mental processing that comprised of attention, thinking, comprehension, calculating, reasoning, problem solving and decision making.

Dissonance is the discomfort or tension. First the term dissonance used by Festinger, dissonance may be defined as mental discomfort and people have inconsistency between their cognitions. These are two theoretically distinct thoughts namely; cognitive disagreement and dissonance discomfort [1].

Cognitive Dissonance may be defined as circumstance which involves differing attitude, beliefs or behaviours. It engenders the feelings of psychological embarrassment leads to modification in attitude and behaviour to overcome the discomfort. For instance, when person smoke and this is the behaviour of person and he know that cancer is caused by smoking so that knowledge of the person is cognition, then the person in a condition of cognitive dissonance. Another example of cognitive dissonance, person purchase high-priced car and person find for long way this car is not comfortable. In this situation, the dissonance present in the attitude of person that he has purchased a good care and it is obliged to at ease for driving [2].

## 2. CAUSES OF COGNITIVE DISSONANCE

McLeod [2] suggested that cognitive dissonance takes place when an individual in that situation where the individual has inconsistency between their values, belief, attitude and actions and such situations may be brought about by:

**Forced Compliance Behaviour:** It may be defined as where an individual in a forced situation to perform inconsistency actions with their values, beliefs or behaviours. Consider an accountant who is told to cover up an instance of financial misappropriation by his or her boss. In that situation the accountant believes this is

wrong, in order to retain his or her job he or she might be forced to do it. That situation leads to cognitive dissonance.

**Decision Making:** Decision plays an important role in life of every people. To solve any problem, there are two or more alternatives to accomplish the problem. Each alternative has its pros and cons. All decision include choose the best alternatives from the available alternatives which is best to solve the problem. That leads to dissonance. The cognitive dissonance increases as increase of number of alternatives. For instance, a person has to choose between two jobs. One job will provide quite good salary but is located in other country and in that job the person cannot live with his or her family members or friends but the person might fulfil the dreams. The other job will provide poor salary but it is in home town of person. This selection between two jobs creates cognitive dissonance.

**Effort:** Human have tendency for the achievement of values through efforts. The person feels cognitive dissonance when he does many efforts for minor achievements. The person put lots of efforts only to get a dismal outcome. This results in cognitive dissonance. The dissonance is caused when a person perform great efforts to achieve something that has negative outcomes.

**Gaining New Information:** This is another major cause of cognitive dissonance is approaching across information that is not in favour of beliefs. Example of Festinger's cultists from the 1950s, the group of people believe that there would be a flood and that a flying saucer would come to their rescue. Come the morning, there was no flood, that new information against the beliefs. That result in cognitive dissonance.

## 3. COGNITIVE DISSONANCE THEORY

Cognitive dissonance theory has been a important theory in social psychology and has been studies for more than sixty years and hold honorable position [3]. The theory has provided many learning about determinants of attitudes, values, belief and the consequences of decisions through hundreds of studies. Two cognitions can be significant or un-significant with each other has been the postulating of the beginning dissonance theory. The two cognitions are either consonant or dissonant if they are relevant to

one another. If two cognitions follows from other then they are consonant and two cognitions are opposite of one another, they are dissonant. In the occurrence of dissonant the individual feel psychologically uncomfortable, it enhance the motivation tendency of an individual to overcome dissonant, in order to evasion of that information which is more expected to enhance the dissonance. The dissonance degree rely on value of elements i.e. knowledge, belief and attitude that are dissonant. The degree of dissonance association among essentials would be superior, if person give more weight to these essentials. Consequently, the demand to overcome the dissonance is influenced by the dissonance magnitude. The magnitude of dissonance increases as increase in the demand to diminish the dissonance [4].

Moreover, individuals reduce the dissonance through might change in the elements of behavioural cognitive, ecological cognitive or addition of new elements of cognitive. For instance, a cigarette smoker person who has knowledge that habit of smoking is not good for healthy life might changing patterns of behaviour by smoking prevention, he make changes in his learnt ability regarding the influence of smoking or might addition of some new consonant essentials of cognitive [5].

The cognitive dissonance theory formulated rely on belief that person endeavour towards uniformity. Individual try to downsize the inconsistencies to reduce the psychological

discomfort which are generated from inconsistencies. Consistency apply for consonance whereas inconsistency for dissonance. There are some factors that enhance the dissonance namely; prior experiences, cultural more and inconsistency among cognitions. In behavioural elements, there is occurrence of at least one cognitive element. In the occurrence of dissonance, individual make strategies to overcome the dissonance through their motivation to reduce it. For the dissonant act the peripheral rationalization can be attain through greater rewards and consequently in order to diminish dissonance, whereas peripheral rationalization cannot be attain through smaller reward and hence creates more dissonance. People have propensity to changing patterns of opinion that decrease dissonance [6].

Festinger [1] suggested that the occurrence of dissonance increase after selection has been completed. The degree of post decision dissonance relies on significance of judgment on alternatives which are unchosen and amount of cognitive relative attractiveness of unchosen alternative and degree of cognitive have common characteristics of the alternatives. The importance of decision, attractiveness of unchosen alternatives and low amount of cognitive overlap through all these points for decision makes the post decision dissonance is stronger An individual might make changes in decision, attractiveness of alternatives and establish cognitive overlap to reduce the post decision dissonance.

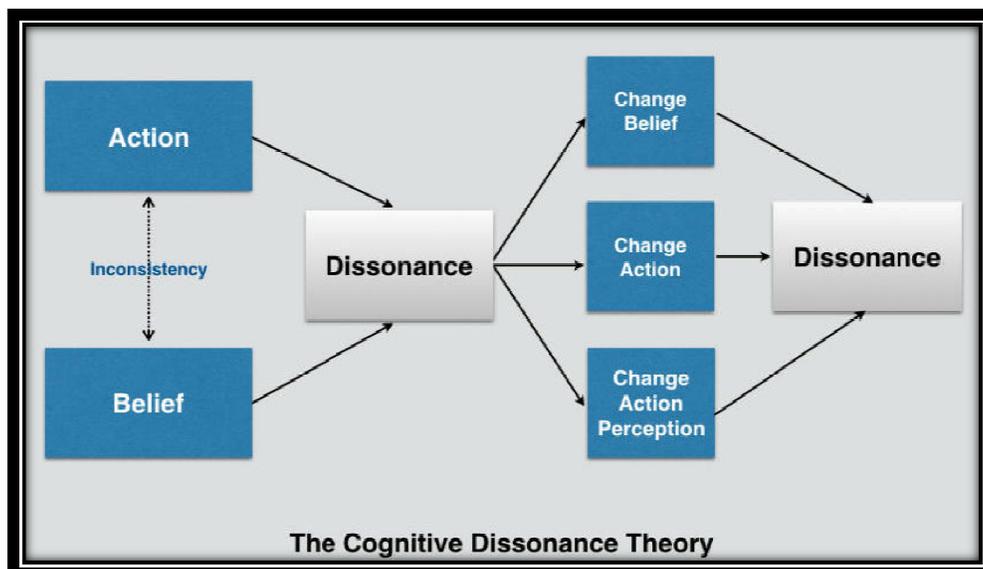


Fig. 1. The cognitive dissonance theory

#### **4. AMENDMENTS IN COGNITIVE DISSONANCE THEORY**

Many dissonance researchers revised the theory from time to time but one of the most valuable revisions made by Aronson in 1960 [7,8] by focusing on expectation about the self. An individual perform inconsistent behavior with their self that would be aroused the dissonance in an individual. The person adopts self-justification process to reduce dissonance. People preserve constant, expected, proficient and ethically good self-concept through self-justification process. For instance, in the study researchers altered the performance and expectancies of participants with reference to their performance. It was expected that the expectations would be consonant through consistent performance, whereas dissonance enhanced by inconsistent performance. The participants had made high changes in their responses whose expectancies performance was inconsistent as compared to consistent expectancies performance. It was astonishing that when person projected to poor performance then person gone for reiterates his or her expectancies of negative performance but he or she carried out sound knowledgeable dissonance. The people steer to achieve self-relevant performance expectancy through soreness with unpredictable accomplishment whether the performance is good or bad. This argument may be supported on self-judgment model which stated that individual through judicious selection of judicious strengthening possibilities made observations of their behavior and infers their real attitudes Aronson and Carlsmith [9].

#### **5. COGNITIVE DISSONANCE: ATTITUDE CHANGE**

Attitude may be defined as that kind of psychological position that makes the person ready. Attitude reflects positive and negative feelings of an individual towards any objective. It describes the feelings, thoughts and predilection of an individual to act to achieve the goal Allport [10].

Acharya et al. [11] revealed that the attitude affect by actions through a view that social psychologists call that phenomenon cognitive dissonance. As per the perspective of the cognitive dissonance theory, after taking an action individual face the occurrence of psychological discomfort that seems to be conflict with his or her preliminary attitude. In the

direction of conform more closely to their action individual then change their attitude in order to an important source of attitude change or formation. Individual make choices of actions and then later change their attitude to be consistent with those choices. The person form stronger commitments once they have selected from several choices and their change their attitude which is psychologically discomfort [12].

Gosling et al. [13] revealed that in place to resume the sense of consistency, the people change their attitude when they took decision to write the contradictory easy was liberally selected. Another dissonance reduction strategy involves the value of the contradictory attitudinal behavior. Cancino-Montecinos et al. [14] suggested that the dissonance researches has devoted numerous perceptive findings focusing on changes in attitude associated with cognitive dissonance and observe a significantly affirmative bond among occurrence of psychological discomfort and attitude change. Martinie et al. [15] reported that an individual experienced dissonance i.e. feeling of anxiety, tension, psychological discomfort then individual exhibit attitude change. A more recent study found that the state of tension in an individual associated with the change in the attitude of an individual. The occurrence of cognitive inconsistency generates motivational situation that encourages regulation which approaches only through change in behavior or opinion. Many researches has been conducted on cognitive dissonance theory have depended upon inconsistency between attitude and behavior and found that with the help of behavior an attitude shift toward more consistency [16].

#### **6. COGNITIVE DISSONANCE AS MOTIVATION FOR CHANGE IN ATTITUDE**

Gruber [17] revealed that cognitive dissonance is a potent motivational factor for change in attitude. Motivation is play vital role for change in attitude permanently and successfully. The people feel comfortable in consistency and the consistency in terms of attitude, values, belief, thought. People feel uncomfortable or dissonance in the occurrence of inconsistency. Inconsistency motivates the people for change in attitude. For the reduction of feeling of uncomfortable that comes out from motivation, people might change their attitude, belief and values to reclaim feeling of consistency. The person for accomplishment of consistent state they change their attitude, values and belief.

Devine, [18] indicated that cognitive dissonance is basically motivational in nature. The existence of inconsistency in the cognition of an individual creates the dissonance. The cognitive dissonance motivates an individual to reduce the same by seeking out and implementing that kind of strategies which overcome the cognitive dissonance. He explained the dissonance motivation as the psychological discomfort that motivates the process of attitude change. The motivation is quick implementation of strategies for reduction of dissonance.

## **7. HOW COGNITIVE DISSONANCE INFLUENCE ATTITUDINAL CHANGE**

Festinger, [1] suggested that individual have an inner drive to change in attitude and stay away from dissonance and this phenomenon is known as principle of cognitive consistency. When existence of inconsistency between attitude that necessary to change and to remove the dissonance.

Mcleod, [2] revealed that individual will take the step to reduce the cognitive dissonance only when they are in the state of cognitive dissonance. An individual face inconsistency among their cognitions and that leads to psychological discomfort. Then an individual take the strategies to reduce the dissonance to come out into the state of equilibrium. For example, in Induced Compliance Paradigm, in that paradigm participants are asked to write down an essay that contradicts their prior attitude. Then participants change their attitude to attain the consistency if they perceived that the decision to write essay was freely chosen and found that attitudinal changes associated with dissonance.

## **8. WAYS THAT REDUCE COGNITIVE DISSONANCE**

Kaaronen, [19] indicated that cognitive dissonance is a motivating factor and the occurrence of dissonance leads to psychologically uncomfortable and it motivates the person to make an effort a lot to condense the dissonance and attain consonance. The diminution of dissonance can be achieved by four following strategies.

### **8.1 Altering an Element of Behavioral Cognitive Element**

Altering an element of behavioral cognitive is a straightforward and easiest strategy to reduce

dissonance. For instance, if a person experiences dissonance when he or she is smoking and he or she knows that smoking is unhealthy for his or her life. That dissonance might be reduced by leaving the habit of smoking. There is another example to reduce the dissonance, on condition that individuals want to go for trip and they found that there has began to rain then they rotate themselves and depart home.

### **8.2 Altering an Element of an Environmental Cognitive**

This is another strategy to reduce the dissonance by modulating the environment or social world. For example, person invites the reader to envision a person pacing in his living room and the person without any reason horribly jumping over an exacting spot on the floor. That situation persuades cognitive dissonance, while the person very well conscious about that there is no any kind of valid reason to get panic for this exacting spot.

This situation represents that the person may perhaps decrease his dissonance through making a hole in floor. The person might reduce the cognitive dissonance through modifying his material environment. The accent of material environment is a moderately unusual occurrence, in view of the fact that the humankind is very vigorous in formulating their culture and material position.

The altering in social environment is very common. For example, person may surround himself with other person who provokes hostility because the person is habitually very hostile. To reduce the cognitive dissonance the person might actively moves about in the world by selecting that social world in which we interact with. So the reduction in dissonance can be achieve through changing environmental cognitive elements by shifting to different social or physical context or modifying the social environment.

### **8.3 Adding New Cognitive Elements**

The addition of new elements of cognitive is responsible for cognitive dissonance. There are three strategies to reduce the dissonance:

**(i). Focusing on Supportive Beliefs:** The highlighting on more sympathetic belief or eliminating the significance of differing beliefs

this is strategy to reduce the cognitive dissonance. To reduce the total dissonance people might actively find new information. For instance, a person who is smoking may seek out and read the research articles which indicate that the smoking is so bad for health of person.

**(ii). Adding Reconciliatory Cognitive Elements:** The dissonance might be overcome through addition of elements of cognitive which put to rights two cognitive elements of dissonant. For example, a smoker inquire about the rates of all accidents and death in automobiles that are responsible to reduce dissonance through discount it beside the high risk of driving, this is also called self-justification that helps in elimination of cognitive dissonance.

**(iii). Changing Conflictive Cognitive Elements:** The alternates in beliefs, attitudes are responsible for reduction in cognitive dissonance. Consequently, ultimately a smoker might again focus on their nature of behavior whether it is socially acceptable or not.

#### 8.4 Avoidance of Dissonance

This is the next strategy to reduce the cognitive dissonance and highlights that there are well-built affinity to keep away from the existence of dissonance. Occasionally, people will vigorously evade those circumstances which enhance dissonance. The person avoid the environment may be actively which cause cognitive dissonance by his or her past experiences.

### 9. CONCLUSION

The cognitive dissonance occurs when the people have two psychologically inconsistent cognitions that is ideas, beliefs, and dissonance take place. The cognitive dissonance theory is most impactful in the history of social psychology and new researches on cognitive dissonance suggested that self-concept plays an important role in enhancing the cognitive dissonance. The person experiences inconsistencies or dissonance in his or her attitude, values, belief and behaviour, this person will attempt to eliminate the unwanted and undesired psychological effect that leads to changes in attitude. The decision making power and person do many efforts to attain minor achievements that cause the cognitive dissonance in person. The cognitive dissonance is eliminated the some strategies such as changing behaviour,

cognitions or make addition of new elements of cognitive.

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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