

Concept of Social cognitive theory and its application in the field of Medical and Nursing education: framework to guide Research

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Abstract

To bridge the gap between classroom teaching and clinical practice, educators must be innovative. In medical and nursing research, the Social Cognitive Theory has been employed extensively. Albert Bandura, a prominent Stanford psychology professor, devised this learning theory. The idea provides a framework for analyzing how people shape and are shaped by their surroundings. The theory delves into the processes of observational learning and modelling, as well as the role of self-efficacy in behaviour creation. According to the concept, people are considered as active participants who both influence and are impacted by their surroundings. Type of learning is a crucial element of the theory: it is the process of learning desirable and unpleasant actions by seeing others and then imitating those behaviours to maximize rewards. Individuals' self-efficacy views have an impact on whether or not they will repeat an observed activity. In the design of some research methodologies, a theoretical framework is not explicitly used. The purpose of this paper is to focus on Bandura's social cognitive theory's contribution to the field of education, as well as to assist researchers in understanding the nature of theoretical and conceptual frameworks, and how they can be used to help steer research or be recognized as a result.

Keywords: Behavior Change, Cognition Self Concept, Bandura's social learning theory, Social cognitive theory, video modeling, Observational learning, Theoretical framework.

INTRODUCTION

The act of generating ideas, designs, and plans is known as conceptualization. A framework is a collection of concepts that have been grouped together due to its relevance to research concerns, and it serves as a reference point for clinical practice, research, and teaching. Theoretical and conceptual frameworks, in general, give a grasp of the phenomenon of interest and represent the models' assumptions and philosophies.¹ The model provides guidance for research design, data gathering, and conclusion evaluation. The social learning theory describes how people learn through watching others. Students copying the teacher is an example of social learning theory. This is disappointing because the major purpose of

public healthcare is to preserve rather than initiate good habits in terms of peripheral association of environmental stimuli to responses, was founded in a context where "the dominant learning theory relied almost entirely on learning through the impact of one's activities as measured by the marginal relationship of external changes with responses."²

Albert Bandura developed Social Cognitive Theory as the Social Learning Theory in the 1960s. It was renamed the Social Cognitive Theory in 1986, and it proposes that learning takes place in a social setting, with a dynamic and reciprocal interaction between the person, their environment, and their behaviour. The emphasis on social influence and external

and internal social reinforcement are distinctive features of Social Cognitive Theory. 3

The distinctive way in which individuals acquire and sustain behaviour is considered in Social Cognitive Theory, as well as the social setting in which individuals do the behaviour. The idea considers a person's past experiences, which influence whether or not they will engage in behavioural action. These prior experiences have an impact on reinforcements, expectations, and expectancies, all of which influence whether or not a person will engage in a particular action and why they do so.^{3,4}

Many behaviour theories employed in health promotion do not examine habit maintenance, instead focusing on behaviour initiation. This is unfortunate because the primary goal of public healthcare is to maintain rather than begin behaviour. The purpose of Social Cognitive Theory is to explain how people manage and reinforce their behaviour in order to produce goal-directed conduct that can be sustained over time. The first five constructs were developed as part of the Social Learning Theory, and when the theory evolved into Social Cognitive Theory, the construct of self-efficacy was included.⁵

1. Reciprocal Determinism - Reciprocal determinism is the central principle of Social Cognitive Theory. This is defined as the dynamic and reciprocal interaction between a person (individual with a set of learned behaviors), their environment (outside social circumstances), and their behaviour (responses to stimuli to achieve goals).

2. Behavioral capability - This relates to an individual's ability to carry out a task utilizing the appropriate knowledge and abilities. In order to complete a task successfully, a person must know what to do and how to execute it. Learners understand by the consequences of their activities, which affect their surroundings.

3. Observational Learning - According to this hypothesis, humans may witness and observe the actions of others before imitating them. "Modeling" behaviours is a common way to demonstrate this. Individuals can complete an activity successfully if they witness a presentation of the behaviour.

4. Reinforcements - These are the internal or external reactions to a person's behaviour that influence whether or not the activity is sustained. Reinforcements can be positive or negative, and they can come from within or outside of the person. This is the social cognitive theory construct that most closely resembles the reciprocal interplay of behaviour and environment.

5. Expectations - This refers to what a person anticipates to occur as a result of their actions. Expectations for results can be either health-related or not. People evaluate the consequences of their actions before participating in a behaviour, and these thoughts can affect whether the behaviour is done successfully. The majority of expectations are based on previous experiences. Expectancies are subjective to the person and focus on the importance placed on the outcome, even though they are founded on prior experience.

6. Self-efficacy - This refers to a person's belief in his or her own ability to accomplish a task successfully. Self-efficacy is unique to social cognitive theory, while other theories, such as the Theory of Planned Behavior, have added it at a later period. Individual capacities and other personal characteristics, as well as environmental influences, all influence self-efficacy (barriers and facilitators).^{1,2,4,5}

The six components listed above all highlight the social cognitive theory most significant aspect, which is the mutual link between people and their surroundings. External or environmental elements that are directly related to social support are used to determine reciprocal determinism in this study. Behavioral competence and observational learning are terms used to describe the process of learning skills and knowledge from others through observation or participation in the society, which is also linked to social support.⁶

Reinforcement must come from the environment in which he or she lives, as well as from social support. People's expectations are linked to their beliefs. Self-efficacy is also linked to social support when the person's living environment is taken into account.⁶

Concept of Social Cognitive Theory:

Social cognitive theory is a learning theory based on the premise that people learn by seeing what others do and don't do, and that these processes are crucial to understanding personality. While social cognitivists acknowledge that acquired conduct demonstrated in one's environment has a significant impact on growth, they argue that the particular person (and thus cognition) is just as essential in determining moral development.⁷

People learn by watching others, with the environment, behaviour, and cognition all playing a role in shaping their growth. These three parts are not static or autonomous; rather, they interact with one another in a triadic reciprocal determinism process.⁷

The Bobo Doll Experiments-Origin of the social cognitive theory

Albert Bandura's first source of inspiration was his academic training, which he received at a school with few resources and ineffective teachers. In addition, following a strike at that institution, he had to take care of his own education. This is how Bandura described the learning process: "Learning on one's own was a practical tool for personal progress, not a theoretical abstraction. Instead of becoming an insurmountable defect, the lack of educational resources became an empowering aspect that has greatly aided me".⁸

Furthermore, Bandura states that he was influenced by behaviourists such as Watson and Thorndike and their work on learning by observation and its divergence, as well as Miller and Dollard's work on social modelling on social learning and imitation, with which he had discrepancies, prompting Bandura to conduct research on the subject. Bandura's theory arose from a study of the principles of learning in the human social setting, which led to his original formulation of the Theory of Social Learning. Later, Bandura incorporated cognitive psychology aspects to provide a broader understanding of human functioning from the standpoint of human thought and action's social origins.⁹

The process of knowledge acquisition or learning is directly linked to the observation

of models in social cognitive theory. Interpersonal imitation or media sources might be used as models. Modeling effectively teaches general norms and solutions for coping with a variety of scenarios. Albert Bandura and his colleagues developed a series of tests with a Bobo doll in 1960 to demonstrate that people learn by watching others. Children were exposed to either an aggressive or non-aggressive model of the same sex or opposite sex as the kid in the first trial.¹⁰

The model was vocally and physically violent towards an inflated Bobo doll in the presence of the child in the aggressive condition. The youngster was transported to another room after being exposed to the model to play with a variety of extremely appealing toys. The child's play was halted after roughly two minutes to annoy the participants. The youngster was then transported to a third room, which was stocked with various toys, including a Bobo doll, where they were allowed to play for the next 20 minutes.¹¹

The children in the aggressive condition were far more likely to demonstrate verbal and physical aggressiveness, including aggression against the Bobo doll and other forms of aggression, according to the researchers. Furthermore, males were more likely than girls to be aggressive, particularly if they had been exposed to an aggressive male model.¹²

A similar approach was used in a subsequent experiment, but this time the aggressive models were not just viewed in real life. A second group watched a film with an aggressive model, while a third group watched a cartoon figure with an aggressive personality. The model's gender was varied once again, and the youngsters were mildly frustrated before being brought to the experimental room to play. The children in the three aggressive conditions acted more aggressively than those in the control group, and boys in the aggressive condition acted more aggressively than girls, as in the prior trial.¹²

These investigations provided the foundation for notions about observational learning and modelling in the real world and in the media. It sparked a debate about how media models might negatively impact children, which is still going on today. Bandura

introduced Social Learning Theory in 1977, which expanded on his concepts of observational learning and modelling. Then, in 1986, Bandura renamed his theory Social Cognitive Theory to emphasize the cognitive aspects of observational learning as well as the interactions between behaviour, cognition, and the environment in shaping people.^{9,10}

Teachers serve as role models for children when it comes to learning. Both the material aims and the underlying curriculum of virtuous life are modelled by teachers. Teachers should also be committed to helping pupils develop high levels of self-efficacy by applauding their achievements.⁹

Observational learning models:

Observational learning is an important part of social cognitive theory. In contrast to behaviourists like B.F. Skinner, Bandura's beliefs regarding learning were radical. Only through taking individual action, according to Skinner, could learning be attained. Observational learning, on the other hand, allows people to acquire information considerably more quickly, according to Bandura, because it allows them to observe and mimic models they encounter in their surroundings.¹¹

Observational learning is accomplished through a series of four steps:

1. Attentional processes account for the information in the environment that is chosen for observation. People may choose to watch real-life models or models they see in the media.
2. Retention mechanisms entail memorizing what has been witnessed so that it can be recalled and recreated later.
3. Production processes reconstruct observation memories so that what has been learned can be applied in appropriate settings. In many circumstances, this does not mean that the observer will perfectly reproduce the seen action, but rather that they will alter the behaviour to produce a version that is appropriate for the situation.
4. Motivational processes determine whether or not an observed behaviour is carried out, based on whether the conduct is viewed to produce desired or undesirable results for the

model. If an observer is rewarded for observing a behaviour, he or she will be more encouraged to repeat it later. The spectator, on the other hand, would be less motivated to repeat a conduct if it was punished in some way. As a result, social cognition theory warns that people do not model every behaviour they learn.

Self-Efficacy

Albert Bandura also emphasized that the most straightforward way to demonstrate moral development is to evaluate a variety of circumstances, whether social, cognitive, or environmental. The link between the three variables above sheds even more light on the complicated topic of morality. Models can boost or reduce the observer's conviction in their self-efficacy to enact seen actions and bring about desired results from those activities, in addition to the knowledge they can impart during observational learning. People believe they can succeed if they see others who are similar to them succeed. As a consequence, models can be used to motivate and inspire people.¹²

Self-efficacy has also been used to predict behaviour in a variety of health-related scenarios, including weight reduction, smoking cessation, and heart attack recovery. In terms of exercise research, self-efficacy has provided some of the most consistent results, indicating that as self-efficacy rises, so does exercise participation.^{12,13}

Modeling Media

Serial dramas developed for developing communities on themes such as literacy, family planning, and women's status have proved the prosocial potential of media models. These dramas have been successful in promoting good social change while also illustrating the relevance and applicability of social cognitive theory to the media. In India, for example, a television show was created to elevate women's status and advocate smaller families by including these concepts into the show. The show promoted gender equality by featuring characters who exemplified female equality.¹³

There were other figures who emulated subservient women's roles, as well as some who changed from subservience to equality. The show was well-liked, and despite its

melodramatic plot, audiences understood the themes it was trying to convey. Women should have equal rights, the freedom to choose how they live their life, and the ability to control the size of their families, according to these viewers. The ideas of social cognition theory have been used in this and other examples to make a beneficial impact using fictional media models.^{11,12,13}

Vicarious Learning

The concept of vicarious learning, or learning from other people's actions, is important to social cognitive theory and self-efficacy. Individuals can witness observed activities of others and then replicate those actions, according to this theory. As a result, people are less likely to make mistakes and are more likely to conduct activities successfully if they watch others do so. Social modelling is one of the four ways to enhance self-efficacy, and it includes vicarious learning. Social modelling encompasses not only observing conduct but also obtaining advice and direction on how to carry out that action. ^{11,12,13}

Mastery experience, improving bodily and emotional conditions, and verbal persuasion are the other three techniques. The mastery experience is a method in which a therapist or interventionist helps an individual achieve accomplishment by setting small, incremental goals. ^{11,12,13}

Applications of Social Cognitive Theory:

In medical and nursing research, the Social Cognitive Theory has been employed extensively. Learning, according to the notion, occurs when there is a dynamic and reciprocal relationship between the individual, their environment, and their behaviour.

Social Cognitive Theory – Examples

Chattanooga CARES' Healthy Relationships programme is a small-group intervention for those living with HIV/AIDS. The programme is founded on the Social Cognitive Theory, and it employs skill-building exercises to help participants gain independence and cultivate healthy habits.¹⁴

Dewar et al. created and tested social cognition measures relating to adolescent eating habits. They discovered that the findings support the factorial validity and reliability of

social cognitive measures of healthy eating practises in adolescents. They suggested that the social cognitive theory could also be utilised to change health behaviour in the context of other health issues.¹⁵

Whittemore looked at metabolic control and self-management in women with Type 2 diabetes, as well as psychosocial adjustment. She discovered that social support and self-confidence in diabetes self-management in women with Type 2 Diabetes can assist people with the disease in determining and setting personalised goals as well as developing appropriate solutions. Persons with diabetes can improve their metabolic control, self-management achievement, and psychosocial adjustment to the disease with increased social support and self-confidence in diabetes self-management.¹⁶

From January to March 2005, Bai et al. conducted a correlational study at three hospitals in southern Taiwan to look at the factors that influence self-care behaviour in 165 type 2 diabetic patients over the age of 65. The Personal Resource Questionnaire 2000 (PRQ 2000), Diabetes Self-Care Scale, and Taiwan Geriatric Depression Scale were used to interview the subjects (TGDS). The study found a significant correlation between social support and self-care behaviours, implying that social support has a favorable impact on self-care behaviour.¹⁷

Barrera et al findings demonstrated the necessity of social support in both theory and practise. The research added to the growing body of data indicating social support has a direct impact on a person's health behaviours. Through pathways including immune system reactions, social ties appear to contribute to a person's health. Social services can help people maintain a healthy diet and engage in physical activity. For a long time, it has been suspected that the link between social support and mortality could be explained in part by healthful behaviours. People who have positive social ties are more likely to look after themselves. This mechanism might be used in interventions like the one Barrera and colleagues evaluated in their study.¹⁸

Khuwatsamrit et al. evaluated the benefits of social support in Thai adults with cardiovascular disease and discovered that

support from family and friends significantly improved adherence to self-care behaviours. Social support has a substantial positive impact on self-care practise confidence.¹⁹

Mohammadreza et al. conducted a quasi-experimental study with 189 high-school male students to establish the variables underlying Waterpipe use and to construct an intervention programme based on social cognition theory to diminish the desire for Waterpipe smoking. Data was collected using a validated questionnaire based on SCT components. The most significant changes were found in the knowledge score, which increased from 10.70 4.38 to 16.52 3.89 ($P = 0.0001$), and the outcome values score, which increased from 12.40 3.81 to 13.53 4.23 ($P = 0.007$); however, no significant changes were identified in the control group's posttest results. As a result of the findings of this study, more effective educational interventions based on this theory were advised, with a higher emphasis on self-efficacy and contextual factors.²⁰

Fatemeh et al. undertook a quasi-experimental study in 2019 to see how an empowerment programme based on social cognition theory affected the daily activities of 70 COPD patients referred to Kashani and Hajar facilities. The samples were separated into two groups: experimental and control, at random. The study found that patient empowerment through treatments based on social cognition theory can boost COPD patients' daily activities.²¹

Tahereh et al. tested the effectiveness of a theory-based physical activity intervention for rural individuals with prediabetes in a cluster randomized controlled trial. In the rural area of Ahar, East Azerbaijan Province, Iran, it was expected that a physical activity intervention programme based on the social cognition theory will modify fasting blood sugar among rural persons with prediabetes, resulting in a decrease in diabetes incidence. Conclusion: Our findings suggest the usefulness of an SCT-based PA intervention in reducing the likelihood of prediabetes progressing to diabetes in rural prediabetic patients. The findings show that a social cognition theory-based physical activity intervention for a rural population at risk of diabetes could be beneficial.²²

Limitation of Social Cognitive Theory

- When applying social cognition theory to public health, it has a number of limitations that should be considered. Some of the model's limitations are as follows:
- The theory is disorganised, relying solely on the dynamic interaction of person, behaviour, and environment, which may not always be the case;
- The theory heavily focuses on learning processes and ignores biological and hormonal predispositions that may influence behaviours, regardless of past experience and expectations, so it's unclear how much each of these factors influences actual behaviour and if one is more influential than the other.
- Aside from referencing prior experience, the theory does not focus on emotion or motivation. These aspects receive very little attention.
- Because the idea is so broad, it can be difficult to fully operationalize.^{23,24}

Implication of social cognitive theory

The social cognitive theory can be used in a variety of settings and populations as a theoretical framework. It's routinely used to help people improve their habits. It can be particularly useful for examining how individuals engage with their environment in rural locations. The social cognitive theory can be used to better understand how social determinants of health and a person's previous experiences impact behaviour change.^{25,26}

Conclusion

Social cognitive theory is a competent psychological theory that has demonstrated consistency and clarity between ideas and propositions. As a result, its use in medical and nursing research has enabled the development of middle-range theories, idea derivation, and understanding of health phenomena, all of which have contributed to the advancement of medicine and nursing knowledge. In the design of some research methodologies, a theoretical or conceptual framework is not explicitly used. The purpose of this paper is to focus on Bandura's social cognitive theory's contribution

to the field of education, as well as to assist researchers in understanding the nature of theoretical and conceptual frameworks, and how they can be used to help steer a study or be identified as a result. In the field of education, social cognition theory has served as a theoretical foundation for the development of teaching/learning methodologies for nursing students. To summaries, social cognition theory provides a theoretical framework for understanding various health phenomena in research, designing interventions in practice, and implementing advances in medical and nursing education teaching processes.

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