

# การรับรู้สมรรถนะของตนเอง : การวิเคราะห์มโนคติ

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*Self-Efficacy : A Concept Analysis*

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**บทคัดย่อ :** บทความนี้มีวัตถุประสงค์เพื่อวิเคราะห์มโนคติของการรับรู้สมรรถนะของตนเอง และความสัมพันธ์ของการรับรู้สมรรถนะของตนเองกับภาวะสุขภาพ โดยใช้วิธีของวอล์คเกอร์และเอแวนเป็นแนวทางในการวิเคราะห์ จากการศึกษาที่ผ่านมา พบว่าการรับรู้สมรรถนะของตนเองมีใช้แต่เพียงสามารถเพิ่มสมรรถนะของตนเอง แต่ยังไม่ช่วยให้บุคคลนั้นคงไว้ซึ่งการมีพฤติกรรมสุขภาพที่ดีตลอดไปได้ ดังนั้นพยาบาลควรมีความเข้าใจถึงความหมายของการรับรู้สมรรถนะของตนเองอย่างถ่องแท้ เพื่อนำไปใช้ในการปฏิบัติพยาบาล การพัฒนาทฤษฎี และการวิจัยทางการพยาบาลได้ ในบทความนี้กล่าวถึง 1) ความหมายของการรับรู้สมรรถนะของตนเอง 2) การแยกแยะถึงคุณสมบัติของการรับรู้สมรรถนะของตนเอง 3) กรณีตัวอย่างของการใช้การรับรู้สมรรถนะของตนเอง 4) ประวัติของมโนคติการรับรู้สมรรถนะของตนเอง 5) ผลจากการใช้การรับรู้สมรรถนะของตนเอง 6) หลักเกณฑ์ที่กำหนดไว้เกี่ยวกับการรับรู้สมรรถนะของตนเอง

**คำสำคัญ** การวิเคราะห์มโนคติ / การรับรู้สมรรถนะของตนเอง / วิธีวิเคราะห์ของวอล์คเกอร์และเอแวน

**Abstract :** The purpose of this paper is to analyze the concept of self-efficacy and its relationship to health care using Walker and Avant 's concept analysis methodology. The development of self-efficacy has been shown to be effective not only in increasing self-efficacy but also in subsequently encouraging adoption of positive health behaviors. Thus, nurses have to clearly understand the meaning of self-efficacy, and its critical attributes in order to provide appropriate nursing intervention. Concept analysis is the first step to help nurses understand the underlying attributes of the concept as well as examine information in preparation for doing research or theory construction. This paper consists of these following topics: 1) definitions of self-efficacy, 2) defining attributes, 3) case illustrations, 4) antecedents, 5) consequences, and 6) empirical referents.

**Keywords:** self-efficacy / concept analysis / Walker and Avant 's method

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## The Significance of Concept

Self-efficacy is a pivotal construct in social cognitive theory in that it mediates the application of knowledge and skills in the pursuit of behavior attainments. Self-efficacy refers to people's belief in their capability to organize and execute the course of action required to deal with prospective situations.<sup>1,2</sup> Bandura<sup>2</sup> has recently expanded the domains of self-efficacy functioning to include confidence in capability to regulate one's motivation, thought processes, emotional states, and the social environment as well as levels of behavioral attainment. Success in most areas of human endeavor requires commitment, resourcefulness, and perseverance. These are precisely the qualities addressed by self-efficacy. An expression of personal efficacy is an assertion of confidence in one's capability to overcome the difficulties inherent in achieving a specified level of behavioral attainment.

In social cognitive theory, self-efficacy plays a central role in behavioral interventions for two reasons. The first is that diverse behavioral influences (e.g. social, normative, educational, motivational) operate, at least in part, by bolstering beliefs in personal efficacy. As a result, self-efficacy functions as a mechanism of action common to many forms of behavior change intervention. The second reason is that efficacy beliefs are dynamic and subject to influence; they are a

product of on-going cognitive, behavioral, and communication processes. Beliefs of personal efficacy are changeable by different modes of influence. Enhancement of efficacy beliefs, in turn, leads to increases in motivation for and success with behavioral efforts.

Since its inception over a decade and a half ago, Bandura's social cognitive theory has increasingly gained acceptance both as an explanatory model of health behavior and a guide for developing effective health promotion interventions.<sup>1, 2, 3</sup> Self-efficacy, an underlying causal mechanism in social cognitive theory, has also assumed an increasingly important role in health promotion practice and research, independent of its original theoretical context.<sup>4, 5, 6</sup> Self-efficacy has been shown to be a causal mechanism in a wide range of health behaviors including smoking cessation, weight control, exercise, nutrition, alcohol use, contraception and AIDS prevention.<sup>2, 3, 4, 7</sup> Health promotion interventions that enhance self-efficacy, in turn, foster health behavior itself.<sup>8, 9, 10.</sup>

## Aim of Analysis

We know that the development of self-efficacy has been shown to be effective not only in increasing self-efficacy but also in subsequently encouraging adoption of positive health behaviors.<sup>4</sup> If nurses are aware of patient perceptions which reflect self-

efficacy, that is, the patient's belief in his or her ability to accomplish the agreed upon / identified health behavior, health promotion programs can be enhanced. Then, interventions that have an impact on self-efficacy expectation can assist individuals with risk-reducing behavioral choices. Therefore, nurses have to clearly understand the meaning of self-efficacy, and its critical attributes in order to provide appropriate nursing interventions. I am interested in studying how self-efficacy affects all aspects of behavior, including the acquisition of new behaviors, and inhibition of existing negative behaviors in cardiac patients. Concept analysis of self-efficacy is the first step to help me understand the underlying attributes of the concept as well as examine information in preparation for doing research or theory construction. <sup>11</sup>

The purpose of this paper is to analyze the concept of self-efficacy and its relationship to health care using Walker & Avant's<sup>11</sup> concept analysis methodology. The paper consists of these following topics:

- 1) Definitions of self-efficacy,
- 2) Defining attributes,
- 3) Case illustrations,
  - 3.1 A model case,
  - 3.2 A contrary case,
  - 3.3 A borderline case,
  - 3.4 A related case,
  - 3.5 An invented case,

- 3.6 An illegitimate case,
- 4) Antecedents,
- 5) Consequences,
- 6) Empirical referents.

### Definitions of Self-Efficacy

Although the word self-efficacy is not present in most dictionaries, several definitions of self-efficacy are as follows:

1. Bandura,<sup>2</sup> a psychologist, defines self-efficacy as a person's belief in his or her capability to perform specific behaviors in particular situations.

2. Guralnik<sup>12</sup> stated that self-efficacy is an individual's perception of his/her personal efficacy. Efficacy, as applied to the human case, has been defined as the power to produce effects or intended results and to accomplish, bring to pass.

3. Klein<sup>13</sup> viewed self-efficacy as having its origin in the Latin word *efficacitas*, meaning power.

4. Urdang and Swallow<sup>14</sup> stated that efficacy, as applied to the non-human case, refers to the maximum ability of a drug or treatment to produce a result, regardless of dosage.

5. Allee<sup>15</sup> defined self-efficacy, as having the qualities of strength, competence, power, energy, and goodness in common.

### Defining Attributes

In considering the definition of the

word self-efficacy, the defining attributes of this concept become evident. Defining attributes are consistently occurring characteristics of a concept that help to distinguish it from other concepts.<sup>11</sup> Human beings with high self-efficacy have the following characteristics in common: (a) a firm personal belief that they can master a particular task; (b) the ability to actually carry out the required behavior; (c) the ability to maintain the required behavior over-time; and (d) the ability to cope effectively with stress and other phenomena requiring great personal effort. These descriptions of the defining attributes of self-efficacy may be summarized as: (a) confidence, (b) capability, (c) persistence, and (d) strength.

In reference to the non-human case (e.g. drugs/treatments), efficacy pertains only to the attributes of capability (e.g. a drug's ability to work effectively to combat illness) and strength (e.g. potency of dose). The concept of self-efficacy is thus distinguished by the cognitive component of the concept, implying the notion of human control or choice.

### Case Illustrations

Case illustrations are developed to demonstrate various uses of a concept, and to provide examples of what the concept is and what it is not.<sup>11</sup>

#### Model Case

A model case is an illustration that

includes all of the defining attributes of the concept and no additional attributes pertaining to other concepts. It provides the best example to the reader of the use of the concept in a realistic situation.<sup>11</sup> The following is an example of such a case.

Mr. K. is a 38-year-old man who has been smoking for 18 years. He acts as a manager in a big company. Although he deals with many problems in his job, he can manage them quite well. He thinks smoking helps him to release tension, feel comfortable, and relax. Therefore, to quit smoking has not occurred to him.

One day, Mr. K. attends a class "Take care your life"; this class sparks his mind to quit smoking. He thinks that he is successful in his job so he should take care himself to be healthy too. Then, he gets rid of his cigarettes, lighters, and ashtrays from his house, joins the Oregon Smoking Control Program, and fills his mind with the intention to quit smoking absolutely. Every day he puts his money that used to buy cigarettes in a box. He feels terrible when giving up smoking because of his nicotine addiction. He says to himself "I'll be the next one who can quit smoking. Never too hard to try." Finally, Mr. K. quits smoking absolutely. He finds that he is more healthy, comfortable, and relaxed without smoking. He also saves more money to buy other things instead of cigarettes.

Conclusion: This case reflects that self-efficacy is an important determinant of health behavior, of future health behavior, and of health behavior change. Mr. K. used his self-efficacy to quit his smoking even though he had addicted to nicotine for nearly 20 years. The strong impact of an individual's personal view of the situation is clearly evident in this case.

### **Contrary Case**

A contrary case is an illustration that does not demonstrate the defining attributes of the concept in question. This assists the reader to observe the ways in which the concept being analyzed is different from the contrary case, and aids in the definition of the true critical attributes of the concept.<sup>11</sup> The following is an example of a contrary case.

Mrs. B. is a 55-year-old woman. Her husband died in 1995. She has stayed with her daughter, Miss C., who is a 30-year-old. Mrs. B. is so healthy. She loves her daughter so much she does everything for her (e.g. cooking food, washing clothes and cleaning house).

One day, Miss C finds Mrs. B. unconscious in the kitchen. She calls her mother at once and, when Mrs. B. does not awaken Miss C. is screaming and crying loudly, but not doing anything. Her neighborhood has heard her voice and comes

to see her. Then, he calls 911 to help Mrs. B. and tells Miss C. to stop her screaming and help him to give CPR to her mother, but Miss C. does not cooperate with him, she continues to cry and scream.

Conclusion: In this case Miss C. does not exhibit the defining attributes of self-efficacy. Because of a lack of experience with illness, she does not appear to be capable of handling stressful situations. Her lack of confidence in her own abilities is reflected in her screaming and crying without first attempting to manage her mother's unconsciousness. She also demonstrated a lack of emotional strength in screaming and crying, and a perceived lack of physical strength in not attempting to help her neighbor to give CPR to her mother.

### **Borderline Case**

A borderline case is one that illustrates some but not all of the defining attributes of the concept. Its inconsistency with the model case helps distinguish relevant from irrelevant defining characteristics of the concept.<sup>11</sup> The following is an example of a borderline case.

Mr. J. is a 44-year-old man who was diagnosed as coronary heart disease. Coronary angioplasty was done yesterday for the arterial occlusion. A cardiovascular clinical nurse specialist provided an assessment and recommendations for

intervention in Mr. J's coronary artery disease risk management. Her assessment made at 24 hours post-angioplasty showed the following: coronary artery disease risk factors included a positive family history, abnormal lipids, sedentary lifestyle, 30 pounds excess body weight, and a 100 pack per year smoking history. He reported no orthopedic limitations to exercise. He had no home exercise. He ate fried foods, red meat, and cheese almost daily. Due to his job, he ate one to two meals in a restaurant daily. Mr. J. had very little knowledge of coronary artery disease risk management and was requesting information on changing lifestyles.

The cardiac rehabilitation team lead by the clinical nurse specialist, met to develop strategies for achievement of the goals developed with Mr. J. The dietician provided nutrition class where information was given on following a low cholesterol, low saturated fat diet while eating in restaurant; the physical therapist assisted with the exercise program and the nurse specialist intervened for the smoking cessation.

Mr. J. had cooperated the entire program effectively for 2 months. He quit smoking, his body weight was decreased 10 pounds and dietary restrictions were performed. In addition, he was walking 1-mile everyday. However, he returned to smoking and had no time for physical exercise when he came back to do his job. He said

"My job is so busy and I always have more tension from my job. Smoking helps me feel relaxed. On the other hand, I have no time to exercise."

**Conclusion:** This case illustrates all of the attributes of the concept of self-efficacy except one. Mr. J's confidence in his ability to cooperate in the cardiovascular rehabilitation program was quite strong. His physical strength is evident in his walking 1 mile everyday and the fact that he can return to do his job again. He showed the capability to learn the correct step in the rehabilitation program, but he lacked persistence in his attempts to continue his health program. Because this case lacks the defining attribute of persistence, it is a borderline case.

### **Invented Case**

An invented case is a case illustration that is not constructed using real life experience. It resembles a fantasy or fairy tale, but aids in clarifying the concept by removing it from its ordinary context.<sup>11</sup> The following is an example of an invented case.

At Amazon Rivers, one rat has been a champion of swimming for 3 years. He is very strong and gained more experience in swimming. He is not only to be a swimming teacher but also to be a lifeguard for all rats who want to swim across this river.

One day during his swimming class, his student calls him with an excited voice,

"Professor, I've seen a groundhog at the middle of the river. I think he is nearly drowning. What should we do, sir?" Without any hesitation, the professor says to his student, "I have to help him before he dies, even though that groundhog is bigger than me. I will try.". His students are very worried because that groundhog has more weight than their teacher. They may die together. Finally, the professor saves the groundhog's life. Everybody feels glad and they really appreciate their teacher's ability.

Conclusion: This invented case illustrates all the defining attributes of the concept of self-efficacy. The professor rat demonstrated greater confidence in his ability to save the groundhog's life from drowning in Amazon River. He showed strength in swimming even though he was a small rat. He was persistent to help everybody not only the rats but also the groundhog and did not give up, even though groundhog had more weight than he did. His capabilities were evident in his ability to complete saving groundhog's life. It showed that he had more experience in his job.

### Related Case

Related cases are those that are comparable to the concept being studied, but do not contain all of the defining attributes. They are connected to the main concept and related to other, similar concepts. It is often

only through close examination that related cases may be differentiated from the main concept.<sup>11</sup> The following is an example of a related case.

Miss S. is a 27-year-old beautiful woman with diagnosis of left breast cancer who has been hospitalized for a mastectomy. Mr. K. is her sweetheart. She plans to marry him next year. She did not know that she had breast cancer until last month. Miss S. feels upset after mastectomy was done. She thinks, "The most important organ that represents for female was gone by the mastectomy." She refuses to see Mr. K. and does not want to continue her relationship with Mr. K. because she feels loss of self-worth. However, Miss S. cooperates well with breast examination program and rehabilitation program. She hopes that she'll go home as soon as possible.

Conclusion: The concept most commonly confused with self-efficacy is self-esteem. Self-esteem refers to judgments of self-worth or the degree to which people like or dislike themselves.<sup>16</sup> Thus, self-esteem is concerned with variations of self-worth, while self-efficacy relates to an evaluation of specific capabilities in specific situations. This case pointed out that Miss S had low self-esteem after her operation. On the other hand, she had high self-efficacy by cooperating well with breast examination program and rehabilitation program.

Bandura<sup>17</sup> highlights the distinction between the two concepts by pointing out that people can have high self-efficacy for a task from which they derive no self-pride (e.g. being able to brush one's teeth well.) or have low self-efficacy for a task but have no loss of self-worth (e.g. not being able to ride a unicycle).

### **Illegitimate Case**

An illegitimate case gives an example of the concept term used improperly or out of context.<sup>11</sup> The following is an example of an illegitimate case.

Mr. A. reads the newspaper this morning and he tells this news to his wife, "The scientist discovered a new drug to use for patient with AIDS name XYZ that is more efficacious than AZD."

Conclusion: In this case efficacy refers the maximum ability of a drug name XYZ to produce more effect than another one.

### **Antecedents**

The next step in the analysis of a concept is to identify its antecedents. Antecedents are those factors that must take place prior to the occurrence of the concept.<sup>11</sup> The following antecedents for the concept of self-efficacy have been derived from the case examples and from the literature, and appear to occur prior to acquiring self-efficacy for a

given behavior: a) a situation occurs, b) individuals must be aware that a change has occurred, c) individuals must interpret the new situation in terms of the action that is required to effect an optimal outcome, and d) individuals form perceptions of their confidence in their ability to perform the required behavior. These perceptions vary from situation to situation because of the vastly different types of behaviors that may be required. However, there is no mention in the literature of when self-efficacy develops. Do some people have an inherent tendency to develop higher levels of perceived self-efficacy than others do? Does self-efficacy vary according to the challenge presented? Is this a characteristic that can be taught? If high levels of self-efficacy can be taught, this has implications for health teaching with individuals who have chronic illness (e.g. coronary artery disease).

### **Consequences**

Consequences are the incidents or events that result following the occurrence of a concept.<sup>11</sup> The importance of efficacy belief systems is best understood by examining the processes by which they exert their effects on human functioning. There are four broad processes through which efficacy beliefs operate: choice behavior, effort expenditure and persistence, thought patterns, and emotional reactions.

**Choice of Behavior:** People make choices every day about what activities to pursue or to avoid. Many of these decisions are undoubtedly inconsequential, but the cumulating effect of daily choices especially those related to health behaviors determines the direction of people's lives, including long-term health prognosis. Self-efficacy plays an influential role in this process in that people tend to avoid tasks they feel exceed their capabilities, while pursuing those they feel competent to perform. For example, smokers with low efficacy to control their smoking behavior attempt to quit less often than those who judge themselves more efficacious.<sup>18</sup> This effect of self-efficacy can help explain why sedentary individuals are reluctant to attempt exercise, why people with poor eating habits are less likely to attempt dietary modification, and why sexual risk takers may not adopt safer sex practices.

**Effort Expenditure and Persistence:** Mastering new activities requires both effort and persistence. A robust sense of efficacy motivates people to engage themselves fully in the tasks they undertake. For example, cardiac patients with high exercise self-efficacy can get themselves to exercise harder on a treadmill test than patients with weaker efficacy.<sup>19</sup> Individuals who feel highly efficacious regarding their capability are also more persistent in the face of difficulties than those persons with lower efficacy. For

example, efficacy to regulate eating behavior predicts decreased attrition from weight loss programs<sup>8</sup> and dietary efficacy predicts adherence to dietary treatments for elevated cholesterol.<sup>20</sup> When mastery attempts are thwarted, people of low efficacy tend to give up or reduce their effort, whereas those of high efficacy generally intensify their efforts until they succeed.<sup>21</sup>

**Thought Patterns:** Efficacy beliefs also affect thought patterns that can enhance or undermine performance. These cognitive processes take three forms: (1) Goals and aspirations: high efficacy supports high expectations, while low efficacy causes people to dwell on their perceived deficiencies. (2) Visualization of positive and negative performance scenarios: high efficacy encourages visualization of successful performances, which, in turn, provides positive guidance for mastery efforts. (3) Quality of inferential thinking: high efficacy encourages analytical thought processes in reaction to setbacks and difficulties.<sup>22</sup>

**Emotional Reactions:** Perceived self-efficacy also plays an influential role in the regulation of affective states. In coping with taxing situations, people who have a low sense of efficacy are more vulnerable to stress and depression.

Perceived self-efficacy facilitates behavioral attainment through these four processes. These effects are documented

with extensive evidence from divergent behavioral domains including academic performances,<sup>23</sup> career choice and development,<sup>24</sup> athletic prowess,<sup>25</sup> social performance,<sup>26</sup> as well as the enactment of a wide variety of disease prevention and health promoting behaviors.<sup>3, 4</sup>

### Empirical Referents

The final step in a concept analysis is to define empirical referents for the critical attributes of the concept. Empirical referents are useful when one is working with very abstract concepts because they provide a means of measuring the degree of existence of a concept that is not directly observable.<sup>11</sup>

Bandura<sup>1</sup> described the component of self-efficacy in terms of two types of expectations: efficacy expectations (perceived efficacy), which is the belief that one can successfully perform the expected outcome, and outcome expectations which is the belief that a given behavior is necessary to achieve a given outcome. Efficacy expectations are more likely to be enhanced if outcome expectations are positive. Bandura concluded that individuals appeared to be more influenced by how they perceived their performance of the behaviors than by their actual success itself. However, there is insufficient evidence showing a relationship between outcome expectation and behavioral choices, and Bandura has not studied

outcome expectation in his own work especially in exercise behavior in a cardiac population. Assessment of this construct in a cardiac population would be difficult. There are two reasons for this difficulty: fitness levels vary widely from individual to individual, making stringent outcome expectations nearly impossible to set, and the quality of life issue is extremely difficult to quantify and assess.<sup>27</sup>

Efficacy expectation has been the primary focus of self-efficacy research.<sup>28</sup> Bandura's<sup>1</sup> approach to measuring efficacy expectations influenced the subsequent development of confidence scales to measure an individual's perceived self-efficacy for a variety of behaviors. Specifically, individuals are presented with examples of progressively more difficult performance requirements within a certain behavioral domain and are asked to respond to the scales in two steps. First, they indicate whether they can or cannot perform each behavior and then rate, on a modified Likert-type scale, their perceived confidence in performing the behavior successfully. The number of yes responses to questions concerning the performance of the behavior are summed to represent the magnitude of the efficacy expectation. The scores related to the perceived confidence in performing the behavior are also summed and averaged to reflect strength.<sup>28</sup> Several scales have been developed for health behaviors such as diet, exercise, and smoking and

have been shown to have good reliability and validity.<sup>29, 30</sup> Because these scales are behavior-specific, they must be carefully constructed to ensure that they sample appropriate behavior characteristics. Also, because efficacy expectations are dynamic, it is recommended that self-efficacy be measured on more than one occasion.<sup>28</sup> This would also assist in determining the persistence of the individual's efficacy expectations.

In conclusion, knowledge of the self-efficacy mechanism may enable nurses to pay greater attention to the effect of individuals' personal appraisals of the meaning of a given situation on their resulting behaviors. Self-efficacy assessment measures could be applied routinely for all patients who need health promotion. Patients with low self-efficacy expectation scores may be at risk; their awkwardness regarding the prescribed health behavior change may lead to increased risk of future illness events. Interventions can be used to increase efficacy expectations in situations that patients are initially as low so that the likelihood of successful performance of health behaviors is also increased. In addition, another way that nurses can assist patients in meeting their goals is to identify areas of high efficacy expectation and redirect the focus of the education intervention accordingly so that teaching time is reduced in strong areas and more effort is directed

toward enhancing efficacy expectations in the weaker areas where expectation is low.

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