

REVIEW

Roy Adaptation Model-Based Nursing Approach for the Individual with Emotional Eating Behavior: Example of Care Plan

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Abstract

This review was made to explain the nursing approach based on the Roy compliance model for the individual with adaptive eating behavior. The Roy Adaptation Model aims to provide holistic care by evaluating the individual in the physiological domain, self-concept domain, role function domain, and interdependence. Emotional eating behavior, which occurs as a response to the emotion felt in a certain life situation, affects the individual in bio-psycho-social areas and may cause maladaptive behaviors. In this article, the Roy Adaptation Model is exemplified in the care of an individual with emotional eating behavior.

Keywords: Care planning, emotional eating, nursing approach, nursing model, Roy Adaptation Model

Introduction

Emotional eating behavior emerges as a response to the feeling of hunger or the feeling that is independent of meal time (Serin & Şanlıer, 2018). It is the desire to overeat, especially against negative stimuli (İnalkaç & Arslantaş, 2018; Işık & Cengiz, 2021; Sevinçer & Konuk, 2013; Ünal, 2018). Emotional eating occurs when individuals who have difficulty coping with emotions such as anxiety, emptiness, loneliness, and stress use foods to relax (Işık & Cengiz, 2021; Ünal, 2018). It is stated that positive emotions, like negative emotions, are also associated with eating behavior, and specific emotions such as anger, fear, sadness, and joy also affect eating behavior (Arslantaş et al., 2021; Economy, 2013; Yönder Ertem & Karakaş, 2020). While stress and negative emotions cause loss of appetite in some individuals, it causes an increase in the desire for sweet and fatty foods and emotional eating behavior may occur in some individuals (Habhab et al., 2009; Macht, 2008; Macht et al., 2002; Van Strien, 2018; Yau & Potenza, 2013). In a study, it was found that in bulimia nervosa, eating more than normal in response to negative emotions and eating less than normal in response to positive emotions is seen, while it is the opposite in anorexia nervosa (Meule et al., 2021).

Emotional eating behavior has been the subject of research in recent years and is an eating problem that is not included

in the Diagnostic and Statistical Manual of Mental Disorders - Fifth Edition (DSM-5) diagnostic classification system (APA, 2013; İnalkaç & Arslantaş, 2018). It has been proven that emotional eating is quite common, but the amount of food individuals consume to improve their mood varies significantly (Macht & Simons, 2011). Emotional eating behavior can occur in individuals on a diet, individuals with eating disorders, obese individuals, or individuals with normal weight (Economy, 2013; Sevinçer & Konuk, 2013; Yönder Ertem & Karakaş, 2020). At the same time, emotional eating can cause obesity, eating disorders, and depression (Konttinen et al., 2019; Ünal, 2018). In Özdemir's (2015) study comparing two groups with high and low emotional eating scores, it was found that the depression, anxiety, and stress mean scores of the group with high emotional eating scores were also significantly higher (Ozdemir, 2015). There are also different studies supporting that emotional eating increases as depressive symptoms increase (Goldschmidt et al., 2014; Konttinen et al., 2010; Ouwens et al., 2009). It has been stated that there is a positive and significant relationship between emotional eating and feeling (Braden, 2018).

In summary, emotional eating is an eating behavior that has negative physical and psychological consequences by affecting food consumption in response to emotional stimuli (Economy, 2013). Therefore, nurses' need for care for individuals with emotional eating behavior emerges. Using theory

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while giving care gives information to the nurse in order to systematically make the most accurate application specific to the individual (Koç et al., 2017). The Roy Adaptation Model provides the opportunity to evaluate the individual as a bio-psycho-social whole (Tuna et al., 2017). Considering the effect of emotional eating behavior, which emerges as a response to the emotion felt in a certain life situation, on the body, self, roles, and relationships, it is thought that providing nursing care based on the Roy Adaptation Model will be effective in emotional eating behavior. In this article, the Roy Adaptation Model is exemplified in the care of an individual with emotional eating behavior. Nursing care of the individual with emotional eating behavior is planned to be presented according to the Roy Adaptation Model.

Roy Adaptation Model

Nursing models systematize nursing knowledge and practices and guide the nurse (Karacaoğlu Vicdan & Gülseven, 2014; Younas & Quennell, 2019). Roy Adaptation Model is based on humanistic values and holistic approach (Babacan Gümüş, 2014). The four basic concepts of the Roy Adaptation Model are human, environment, health, and nursing. The individual is in constant interaction with his environment. Stimuli can come from the internal or external environment. The internal and external environment consists of phenomena that affect human behavior and affect the adaptation system. The environment is the source of stimuli that contribute to or threaten a person's existence. Roy classifies stimuli as focal, contextual, and residual stimulus (Çatal & Dicle, 2014; Harris & Philips, 2014; Uzun, 2017).

Focal Stimulus: A focal stimulus is an internal or external stimulus that directly affects the individual. In order to determine the focal stimulus, the situation that triggers the behavior should be evaluated (Çatal & Dicle, 2014; Harris & Philips, 2014; Uzun, 2017).

Contextual Stimulus: Contextual stimulus is all internal and external stimuli that contribute positively or negatively to the effect of the focal stimulus on behavior. It is a conditional stimulus caused by an event (Çatal & Dicle, 2014; Harris & Philips, 2014; Uzun, 2017).

Residual Stimulus: Possible stimuli are related to the beliefs and attitudes of the individual depending on his past experiences and are the stimuli whose effect on the formation of the individual's behavior cannot be determined. When its effect is determined, it should be considered as a focal or situational stimulus according to its effect on behavior (Çatal & Dicle, 2014; Harris & Philips, 2014; Uzun, 2017).

The individual uses coping mechanisms to adapt to these stimuli. Coping skills can be innate or acquired processes. Coping mechanisms are categorized in two subsystems, regulatory and cognitive. In the regulatory subsystem, neural, chemical, and endocrine responses occur. In the cognitive subsystem, cognitive-emotional responses occur (Çatal & Dicle, 2014; Harris & Philips, 2014; Pektekin, 2013). The level of adjustment is related to the individual's ability to respond positively to stimuli. In the model, it is handled at three levels as accommodating, compensatory, and perfect harmony. Effective adaptation behaviors are associated with the ability to respond positively to stimuli (Çatal & Dicle, 2014). The individual tries to cope with the stimuli, and if he cannot cope, he gives a maladaptive response (Harris & Philips, 2014; Pektekin, 2013).

The main concept of the Roy Adaptation Model is harmony. It focuses on human harmony, which is defined as an adaptive system (Çatal & Dicle, 2014; Karacaoğlu Vicdan & Gülseven, 2014; Tuna et al., 2017). In the model, four areas of harmony are defined, namely physiological, self-concept, role function, and interdependence (Karacaoğlu Vicdan & Gülseven, 2014). These areas are as follows:

- **Physiological field:** It is related to the individual's bodily responses to stimuli originating from the environment. The basic requirement is physiological integrity.
- **Self-concept field:** It is related to the expectations arising from the position of the individual in society. The basic requirement is social cohesion.
- **Role function field:** It is related to the expectations arising from the position of the individual in society. The basic requirement is social cohesion.
- **Interdependence field:** The area of interdependence encompasses the individual's relationships with the privileged person and support systems. The basic requirement is social cohesion (Karacaoğlu Vicdan & Gülseven, 2014; Ursavaş et al., 2014).

The areas of harmony that the individual is in affect the individual in every way (Harris & Philips, 2014; Karacaoğlu Vicdan & Gülseven, 2014). According to Roy, although these areas are independent from each other, they affect each other and integrate the individual (Tuna et al., 2017).

Use of Roy Adaptation Model in Nursing Care of Individuals with Emotional Eating Behavior

Nursing practices aim to facilitate compliance. According to Roy's Adaptation Model, the steps of the nursing process are evaluation of behaviors, evaluation of stimuli, nursing diagnoses, goal setting, nursing interventions, and evaluation (Naga & Al-Atiyyat, 2013).

Evaluation of Behaviors

This step covers the evaluation of behaviors in four adaptive areas. The nurse evaluates the behavior of the individual

Main Points

- It is thought that with the Roy Adaptation Model-based nursing approach, emotional eating behavior will decrease.
- The individual will gain effective coping skills with Roy Adaptation Model-based nursing approach.
- Nursing process is explained with sample care plan.

in order to maintain and improve adaptive behaviors and transform non-adaptive behaviors into adaptive behaviors.

Evaluation of Stimuli

It includes determining the cause of an individual's behavior and classifying stimuli. Stimuli that affect behavior are identified and classified as focal stimulus, situational stimulus, and probable stimulus.

Nursing Diagnoses

Nursing activities focus on changing situational and potential stimuli. At this stage of the nursing process, a nursing diagnosis is made.

Goal Setting

It includes the behaviors that ensure compliance, and the goals that are desired to be achieved are created.

Nursing Interventions

The results of the behaviors in four adaptation areas are determined for the stimuli that affect the behavior. Interventions are implemented so that the individual can cope effectively in line with the goals determined together with the patient.

Evaluation and Conclusion

At the end of the nursing process, the effectiveness of nursing interventions is evaluated. If the individual develops

adaptive behavior, the nursing interventions are effective, and if the individual develops maladaptive behaviors, the intervention is considered ineffective and new interventions are planned (Pektekin, 2013; Uzun, 2017).

According to Pehlivan and Güner, Shives stated that Roy's Adaptation Theory, which is related to psychiatric nursing, defines the human being as an entity that uses coping mechanisms to adapt to internal and external stimuli. He stated that by using the coping mechanisms and adaptation areas in Roy's theory, the nurse in psychiatry services can evaluate the patient's behaviors and develop the care plan for the patient's adaptation to these four areas (Pehlivan & Güner, 2016). In the nursing care given to the individual with emotional eating behavior based on the Roy Adaptation Model, an example of the nursing process is presented in the field of physiology (Table 1), the field of self-concept (Table 2), the field of role function (Table 3), and the field of interdependence (Table 4). The nursing process specific to the behavior of the individual being cared for can be planned by using the relevant tables (Bulechec et al., 2017; Carpenito, 2021; Moorhead et al., 2008).

The individual encounters many physiological, psychological, and social stimuli (Karacaoğlu Vicdan & Gülseven, 2014). Emotional eating is a behavior that can occur in response to these stimuli. It can lead to the emergence of incompatible behaviors in the four areas of adaptation of the individual specified in the Roy Adaptation model. Roy Adaptation

Table 1.
Findings Related to Physiological Field in Roy Adaptation Model-Based Nursing Approach of Individuals with Emotional Eating Behavior (Carpenito, 2021; Bulechec et al., 2017; Moorhead et al., 2008)

Behavior	Stimulus	North America Nursing Diagnosis Association (NANDA)	Nursing Interventions Classification (NIC)
Eating without getting hungry Eating unhealthy food Choosing foods high in calories	Feeling negative emotions Loss of control Ineffective coping	Unbalanced diet: more nutrition than the body needs	Nutrition management
Skipping meals Waking up hungry at night	Fear of gaining weight Unwillingness Anorexia	Unbalanced diet: less than the body needs	Nutrition management
Compliance with the meal pattern	Expressing that the diet is good	Readiness to strengthen in nutrition	Support decision-making
Change in sleep pattern Sleeping a little or a lot Feeling tired and sluggish, sleep dissatisfaction, feeling not rested Difficulty falling asleep Division of sleep	Mentally busy with life events Anxiety Hopelessness Caffeine consumption Daytime sleep Not being hungry	Disruption in sleep pattern	Strengthening sleep Reducing anxiety Energy management Strengthening coping Instilling hope Nutrition management
Difficulty in defecation and bloating	Inactivity Insufficient fluid intake Not enough feeding	Constipation	Constipation management Nutrition management
Tiredness Weakness Avoiding activity Spending time in bed	Overweight Sleep problems	Fatigue	Energy management Strengthening sleep Nutrition management

Table 2.
Findings Related to Self Concept Field in Roy Adaptation Model-Based Nursing Approach of Individuals with Emotional Eating Behavior (Carpenito, 2021; Bulechec et al., 2017; Moorhead et al., 2008)

Behavior	Stimulus	Nursing Diagnosis (NANDA)	Nursing Interventions (NIC)
Being uncomfortable with their physical appearance Wanting to change their physical appearance Expressing worthlessness Getting angry because of their weight Looking in the mirror often Not wanting to look in the mirror	Change in self-perception Low self-esteem Getting fat	Body image deterioration	Strengthening body image Strengthening self-esteem Developing family involvement Emotional support Active listening
Making negative feedback about themselves Expressing that they are an inadequate person and that they are useless Belittling themselves and finding themselves worthless Seeing themselves fail Blaming themselves Social retreat	Ineffective coping skills Weakness Lack of social support Body image deterioration	Low self-esteem	Strengthening self-esteem Strengthening coping Strengthening self-efficacy Developing family involvement Strengthening socialization emotional support Strengthening support systems Strengthening body image
Expressing inability to cope Eating due to feelings that she/he cannot handle Too despair Not fulfilling their roles Exhibiting ineffective coping behaviors Crying Inability to decide and indecision	Ineffective coping skills Anxiety Low self-esteem Weakness Lack of social support Family problems Loneliness Developmental crisis	Ineffective coping	Mood management Strengthening self-awareness Strengthening coping Progressive relaxation of muscles Reducing anxiety Strengthening self-esteem Strengthening self efficacy Strengthening support systems Strengthening socialization Role reinforcement Support decision making
Anxiety Change in sleep pattern Anxiety about him/herself and his/her future Restlessness and tension Mental overexertion Difficulty concentrating	Ineffective coping skills Hopelessness Family problems Low self-esteem Loneliness	Anxiety	Reducing anxiety Strengthening coping Instilling hope Progressive relaxation of muscles Strengthening self-esteem Strengthening support systems Strengthening socialization

Model-based intervention focuses not only on problematic behavior but also on healthy behaviors (Doğan & Çam, 2020). After identifying the compatible and incompatible behaviors of the individual who has been found to have emotional eating behavior, the focus, situational, and possible stimuli should be defined, then the diagnosis stage should be started. In the nursing care given to individuals with emotional eating behavior, the use of a nursing diagnosis manual can be a guide in determining the nursing diagnoses. In the next stage, after the nursing diagnoses

are determined, goals are determined in order to improve the adaptation in the individual. Goals can be determined according to the nursing outcome criteria classification (NOC). Nursing interventions are determined according to the limitation of nursing interventions in order to increase the adaptation of the individual toward the determined goal. While the goal is related to the behavior, the interventions are related to the stimulus influencing the behavior. Finally, the effect of nursing interventions on behavior and stimuli should be evaluated (Bulechec et al., 2017; Carpenito, 2021;

Table 3.
Findings Related to Role Function Field in Roy Adaptation Model-Based Nursing Approach of Individuals with Emotional Eating Behavior (Carpenito, 2021; Bulechec et al., 2017; Moorhead et al., 2008)

Behavior	Stimulus	Nursing Diagnosis (NANDA)	Nursing Interventions (NIC)
Having family conflicts Continuous increase in family conflicts Blame family members Separation and divorce Denying the problems Leaving home	Family problems Ineffective coping skills Lack of social support	Disruption in family processes	Strengthening coping Strengthening support systems Emotional support
Failure to fulfill family roles Change in family satisfaction Not participating in problem-solving Change in communication pattern Not participating in decision-making	Ineffective coping skills Family problems Lack of social support	Interruption of family processes	Strengthening coping Role reinforcement Emotional support
Weakness Tiredness Conflicts in the family Low self-esteem Unwillingness Lack of social support Failure Hopelessness	Change in maintaining their roles Expressing that you are not fulfilling Their roles do not feel bad Getting upset Feeling guilty Seeing oneself fail Thinking they have let their family down	Ineffectiveness in role performance	Role reinforcement Strengthening self-efficacy Energy management Strengthening self-esteem Strengthening support systems Supporting decision-making Instilling hope

Moorhead et al., 2008; Uzun, 2017). During the evaluation stage, the nurse should evaluate the state of reaching the goal, the individual's display of appropriate behaviors, and the individual's clearly positive reaction to stimuli. If the

goal has not been achieved, the nurse should reevaluate the process (Uzun, 2017). An evaluation is made out of five according to the NOC maintenance result. According to the change in the patient after receiving care, an evaluation note

Table 4.
Findings Related to Interdependence Field in Roy Adaptation Model-Based Nursing Approach of Individuals with Emotional Eating Behavior (Carpenito, 2021; Bulechec et al., 2017; Moorhead et al., 2008)

Behavior	Stimulus	Nursing Diagnosis (NANDA)	Nursing Interventions (NIC)
Inability to communicate with family members Not wanting to communicate with friends	Low self-esteem Lack of social support Inability to communicate Insecurity and not trusting anyone Computer game Social media	Disruption in social interaction	Strengthening socialization Behavior modification: Social skills Strengthening self-esteem Strengthening support systems
Not wanting to leave the house Wanting to be alone	Lack of social support Insecurity and cannot trust anyone Low self-esteem Fatigue and insomnia Unsuccessful social relationships	Social isolation	Strengthening socialization Behavior modification: Social skills Strengthening support systems Strengthening self-esteem support decision-making Strengthening sleep
-	Insecurity and not being able to trust anyone Lack of social support Low self-esteem Having no friends	Risk of loneliness	Strengthening socialization Behavior modification: Social skills Strengthening support systems Strengthening self-esteem Support decision-making Role reinforcement

<p>Behaviour He/She states that he/she eats when he/she is angry Stimuli Focal Stimulus: The emotion that triggers the emotional eating behaviour Contextual Stimulus: Thoughts that elicit emotion Possible Stimulus: Habit</p>	<p>Nursing Diagnosis: Ineffective coping Aim: Recognizing one's emotions Developing effective coping skills Outcome Criteria: (NOC) EMOTION BALANCING Expressing emotions appropriate to the situation 1 2 3 4 5 Expressing the volatility of emotions 1 2 3 4 5 Maintaining weight control 1 2 3 4 5 Have a normal appetite 1 2 3 4 5 COPING Reporting a decrease in stress level 1 2 3 4 5 Expressing acceptance of situations 1 2 3 4 5 Seeking help with problems 1 2 3 4 5 Organizing his lifestyle according to his needs in a way to reduce his stress 1 2 3 4 5 Adapting to life changes 1 2 3 4 5 To use existing social support 1 2 3 4 5 Developing behaviors to reduce stress 1 2 3 4 5 Avoidance of stressful situations 1 2 3 4 5 Be able to report that they need support 1 2 3 4 5 physical symptoms of stress report a decrease 1 2 3 4 5 Reporting that negative feelings are diminishing 1 2 3 4 5 Reporting an increase in psychological well-being 1 2 3 4 5</p>	<p>Nursing Interventions (NIC) Mood Management Assess mood (eg, symptoms, signs, personal history) regularly. Provide opportunities to express feelings at regular intervals. Help her to consciously monitor her mood (eg 1 to 10 rating, journaling). Help the patient to identify feelings and thoughts. Limit the time allowed to express negative feelings and/or come to terms with past mistakes. Help her to express her feelings in an appropriate way (eg punching bag, art therapy, physical activity). Teach new coping and problem solving methods. Encourage the patient to engage in social interactions and activities with other individuals as tolerated. Provide social skills and/or assertiveness training as needed. Provide the individual with feedback on the appropriateness of their social behavior. Provide guidance on developing and maintaining support systems (e.g. family, friends, spiritual resources, support groups and counselling). Provide opportunities for physical activity (eg walking, cycling). Monitor their cognitive functions (eg, concentration, attention, memory, information processing and decision-making ability). Strengthening Self-Awareness Encourage the individual to become aware of their feelings and thoughts and to discuss them. Help the individual realize that everyone is unique. Help the individual to identify/identify the values that contribute to the self-concept. Help the individual to recognize/identify his usual feelings about himself. Share your observations and thoughts about the individual's behavior or reactions. Help the individual identify his or her general reactions in various situations. Help the individual to identify/determine his/her priorities in life. Assist the patient to identify the impact of emotional eating on self-concept. Compare the individual's ambivalent (angry or depressed) emotions and confront the individual with them. Observe the individual's current emotional state. Help the individual to become aware of the situations in which he/she uses negative statements about himself/herself. Help the individual to be aware of/recognize the feelings of guilt. Help the individual to identify and identify situations that increase anxiety. Help the individual to identify/identify the positive characteristics about himself/herself. Assist the individual in recognizing/identifying causes for recovery.</p>	<p>Evaluation: Adaptation level:</p>
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Figure 1.
An Example of the Nursing Process in the Field of Self-Concept of an Individual with Emotional Eating Behavior in Roy Adaptation Model-Based Nursing Approach (Carpenito, 2021; Bulechec et al., 2017; Moorhead et al., 2008).

is written as "goal achieved," "goal not reached," and "aim partially achieved" in the evaluation column. In the light of this information, the example of the nursing process in the field of self-concept according to the Roy Adaptation Model-based nursing approach of the individual with emotional eating behavior can be planned as shown in Figure 1.

Conclusion

The Roy Adaptation Model provides the opportunity to evaluate the individual as a bio-psycho-social whole. Considering the effect of emotional eating behavior, which occurs in response to the emotion felt in a certain life situation, on the body, self, roles, and relationships, it can cause maladaptive behaviors in bio-psycho-social areas. In this article, an example of the nursing approach of an individual with emotional eating behavior is given using the Roy Adaptation Model.

Implications for Nursing Practice

It is thought that providing nursing care based on the Roy Adaptation Model to an individual with emotional eating behavior will contribute to the explanation of nursing care and increase the quality of care and that by reducing emotional eating behavior, the individual will gain effective coping skills.

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