

Rational Choice Theory in Psychiatry

Psikiyatride Rasyonel Seçim Teorisi

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Öz

Rasyonel seçim yaklaşımı son yıllarda pek çok disiplinde yaygın olarak kullanılmaya başlanmıştır. Nevrozların rasyonel seçim teorisi, hastaların dayanılmaz stres seviyeleri ile karşı karşıya kaldıklarında bilinçli ve kasıtlı olarak nevrotik bozuklukları ortaya çıkardığını savunur. Çarpıcı farklılıklara rağmen, nevrozların rasyonel-seçim teorisi, yeni bir represyon kavramı kullanmakla birlikte Freud'un düşünce çerçevesini sürdürür. Bu yeni teoriye göre, tüm terapiler etkilerini ya hastaların farkındalık yokluğunu ortadan kaldırmak, belirtilerin maliyetini arttırmak, hastanın duygusal sıkıntısını azaltmak ya da stres faktörünü ortadan kaldırmak suretiyle gösterirler. Bu teoride birey strese ilgili düşünceleri dikkat çekmeden ortadan kaldırmak için bilinçli olarak dikkat dağıtıcı önlemler kullanır ve represyon bilinçli bir başa çıkma mekanizması olarak tanımlanır. Bu makalede rasyonel seçim teorisinin psikiyatride tanımı, bütüncül yaklaşımı, en sık uygulama alanları ve tedavide kullanımını gözden geçirmek amaçlanmıştır.

Anahtar sözcükler: Nevroz, rasyonellik, stres, seçim, terapi.

Abstract

The rational choice approach has become more prevalent in many disciplines in recent years. The rational choice theory of neurosis maintains that patients consciously and deliberately adopt neurotic disorders when confronted with intolerable levels of stress. Despite the striking differences, rational choice theory of neurosis continues Freud's framework of thinking as it employs a new concept of repression. According to this new theory, all therapies exert their effect either by disrupting patients' ability to preserve unawareness, increasing the cost of the symptom, decreasing the patient's emotional distress, or eliminating the stressor. Repression is defined as a conscious coping mechanism by which the individual deliberately employs distractive measures to eliminate stress-related thoughts from attention in this theory. This article aims to review the definition of rational choice theory and its integrative therapeutic approach in psychiatry.

Key words: Neurosis, rationality, stress, choice, therapy.

RATIONAL CHOICE THEORY (RCT) is an important approach used by social scientists to understand human behaviour. Although this approach has transformed into a basic paradigm in economics for a long time, it has also started to be used in other disciplines including sociology, political science and anthropology in the last decade (Green 2002).

RCT examines the social phenomenon arising from interactions between individuals (Krstić 2014). Cognitive psychologist and Nobel prize economist Herbert Simson (1978), formulated the concept of rationality that defines decision making and claimed indirectly that neurotic disorders are actually rational behaviour. Rational choice theory

has changed the rationality paradigm fundamentally. Advocates of the rational choice theory reject the "limitation" between rational and irrational which is effective in behaviour and decision making and focus on subjective determination of rationality. This article aims to review the the integrative therapeutic approach and RST's definition and practice in psychiatry.

Rational-Choice Theory of Neurosis

Many basic problems related to the development and treatment of neurosis have undermined the validity of traditional theories such as behavioral, cognitive and biological in psychopathology. Depending on the neurosis development, these theories are incapable of explaining the factors affecting the prevalence of neurotic disorders, such as gender and sociocultural differences, and for fluctuations across different time periods. For example, the reason why women have a higher prevalence for neurotic disorders is not entirely clear. Similarly, the reason why the prevalence of neurotic disorders is affected by socio-cultural factors (for example, conversion disorder is mostly seen in low socio-economic classes) has not been yet clarified (Kuloglu et al. 2003). Similarly, traditional theories have difficulty in explaining diagnostic fluctuations on different time periods in neurotic disorders. As a result of the theoretical deadlock that has been going on for a long time in psychopathology, a new theory about neurosis development and treatment was developed based on this theory which has been accepted for a long time in social sciences (Rofé 2010).

Rational-Choice Theory of Neurosis (RCTN) continues the thought framework of Freud in some main subjects however it completely differs from psychoanalysis. The most important similarity between these two theories that directly deal with the diagnostic category of neurosis is that both theories claim that neurotic disorders have similar etiology and repression is the common characteristics of all these disorders. According to the basic assumptions of this theory, when individuals are confronted with intolerable levels of stress, response options become limited. The main choices include suicide, substance abuse, aggressive measures to eliminate the stressor. However, some people may develop neurotic disorders such as panic disorder, agoraphobia, obsessive compulsive disorder (OCD), and conversion disorder that primarily enable them to actively suppress their thoughts about stress and thus, relieving emotional distress. Thus, contrary to psychoanalytic doctrine, original thoughts of S.Freud and majority of experimental studies in this area emphasize that repression is conscious and deliberate (Erdelyi 2001, Erdelyi 2006). However, if neurosis is accepted deliberately and consciously, why is the patient not aware of his/her deliberate involvement in this process? The main ideas of this theory are summarized below.

New Conceptualization of Repression

RCTN, along with psychoanalysis considers the concept of neurosis as the basis to understand the development and treatment of mental disorders. Based on this approach, this theory opposes to the decision of DSM-III to remove neurosis concept (APA 1980). Pilecki et al. (2011) stated that the desire to remove this concept from the diagnostic terminology and replace it with definitions of severe pathology that were justifiable in terms reimbursement are some of the reasons why neurosis was removed.

The long-term progress of the mental health field surely depends on knowledge of etiology and on theoretically defined categories. Therefore, a theory with measurable criteria, which can account for the development and treatment of a certain diagnostic category and at the same time distinguish this category from other behaviours seems to be accepted unanimously as the best diagnostic approach (Rofe 2016).

Many research and clinical data define neurosis as a multidimensional concept (Rofé 2000). Accordingly, five criteria that are explained below are very important to classify a certain behaviour as neurosis.

1. Impact on attention and daily functioning: Studies have shown that neurotic symptoms have a remarkable value due to its time consuming and disruptive effects on daily activities and functions and quality of life. For example, 49% of people with eating disorders spend more than three hours every day on their eating disorder rituals and 16% spend more than 8 hours (Sunday et al. 1995). Similarly, panic disorder also affects daily life and activities, and ultimately reduces the quality of life significantly (Welkowitz et al. 2004). These symptoms occupy the person's attention in a way that stress related thoughts become inaccessible and severely disrupt daily activities.
2. Spontaneous onset: Clinical evidence shows that neurosis can develop or occur in the absence of a contingency associated with deviant behavior (Rofe 2000). For example, conversion disorder and various compulsive rituals can develop in the absence of an event that can be associated with and can account for such changes in behaviour (Jones 1980, Samuels et al. 2002). Although stress seems as a precondition for the development of neurotic disorders and for such behaviour changes, this factor only cannot be expected to explain the development of a certain neurotic symptom. Because stress is not associated only with a certain type of neurosis; it can cause various types of neurotic disorders. For example, intolerable level of stress caused by marital problems or other domestic conflicts can lead to the development of obsessive ruminations, dissociative fugue and conversion disorder (Masserman 1946, Blanchard and Hersen 1976, Rofé and Rofé 2015).
3. Unawareness: Patients with neurotic behavior are not aware of the underlying causes of the dramatic changes in their behaviour. Otherwise, these symptoms would not have a distractive value for the patient. Although patients may provide rational explanations for their symptoms, such as anorexics attributing their behavior to being overweight and compulsive cleaners to biological vulnerability to infection these do not reflect genuine awareness, as they are incompatible with reality. This criterion undoubtedly is one of the basic characteristics of all neurotic disorders. Unawareness can be seen in almost all neurotic disorders including hysterical blindness, obsessive compulsive disorder, anorexia nervosa and panic disorder (Horowitz 2004, Rofé and Rofé 2015). Unawareness caused by normal process of forgetting does not meet this criterion.
4. Rarity: The prevalence of neurotic disorders is often lower than 3% as specified in the DSM (APA 2000).
5. Social stigma: Neurotic behaviour can cause social stigma for a person as it is seen as a reflection of physical or mental diseases. However, abnormal behavi-

our is by definition bizarre and unintelligible behaviour for majority of observers (Carson et al. 1988). As Bandura (1969) states, "The designation of behaviour as pathological, in addition to other factors, involves social judgments based on the normative standards of the people who criticize". Psychopathology is understood characteristically from the degree of deviation from social norms which define how people behave at different times and in different situations. Therefore the appropriateness of symbolic, affective and social responses to situations constitutes an important criterion to define symptomatic behavior (APA 2013).

A Case with Agoraphobia

This case involves an autobiographical account of William Ellery Leonard, a poet, writer and a professor who developed agoraphobia at the age of 36 (Leonard 1927). This disorder occurred a few weeks after his wife committed suicide who belonged to a highly respected family. Almost all of his friends and family who had thought Leonard as a demanding and self-centered person blamed him for the death of his wife. After a short while, he had a sudden panic attack when he was by a lakeside thinking. Since there was no triggering factor in the environment, even himself found this attack irrational. Leonard's symptoms significantly preoccupied his attention and disrupted his daily activities. The onset of symptoms was sudden as there was nothing to account for the change in his behaviour. The patient was not aware of the cause of this dramatic change in behaviour and his symptoms caused him to be socially stigmatized (Leonard 1927).

New Concept of Repression

RCTN maintains that a new repression concept and an alternative model for unawareness can explain the development of neurosis more consistently and integrate treatments of these disorders into a theoretical framework (Rofe 2013).

Although RCTN is in agreement with Freud (1914) that repression is key to understand neurosis, there are some basic differences between two theories in terms of the relation of this concept with neurotic disorders (Rofé 2008). RCTN suggests keeping the essence of repression concept, the part which was described by Freud in these words, "turn something away and keep it at a distance, from the conscious". In the earliest writings of Freud, repression was considered a potentially conscious mechanism. It was expressed as 'at least sometimes deliberate, intentional action' (Erdelyi 2006). RCTN considers repression a conscious coping mechanism by which the individual removes stimuli which are threat risks, using distractive measures. This new conceptualization is consistent with empirical research exploring the fact that repression is nothing but a conscious distraction (Holmes 1990). The understanding that repression is consciousness and deliberate distraction is consistent with the bulk of experimental studies that examine the nature of the repression in the laboratory environment (Holmes 1974, Holmes 1990).

This new definition eliminates the other three components of psychoanalytic concept of repression (forgetting trauma, unconsciousness, temporary relationship between forgotten trauma and neurotic disorders) as they do not have any empirical support

(Rofé 2008). Another important change made by RCTN is that it distinguishes between normal repression and pathological repression. The repression becomes pathological to the extent that it becomes inadequate to keep stress-related thoughts out of mind, or when a person confronts stress that exceeds his/her coping skills. Under these circumstances, some individuals tend to intentionally and rationally prefer neurotic behaviors which keep them occupied until they become unaware of the stress factor. Thus, unlike psychoanalysis, neurosis occurs in response to current stress factors, not childhood trauma, and most importantly, repression is the outcome, not the cause of neurosis (Rofé 2010).

According to this theory; irrespective of the source of the stress, the behavioral options are restricted when the individual is exposed to extreme stress levels. In an environment of uncertainty and risk, they may intuitively select some non-rational behaviors as coping methods including aggression, substance abuse, suicide attempt to remove stressors. From RCTN's standpoint; people are assumed to have more or less knowledge of their state of action and chose the best action or tools to achieve their goals. As a result, people think that when they are confronted with stress that exceeds their normal coping ability, a certain neurotic behavior is the best and the least costly reaction (Rofé 2010).

Choice of Symptoms

RCTN claims neurotic behaviors as conscious choices. The main goal of these choices is to try to distract the person from stress stimuli that disturb the person. The choice of a particular symptom is determined by the cost benefit and profit-loss analysis (Rofé 2010), the need to control the individual's stressor and whether this behavior is available through various channels of information (e.g. peer and family). A case which involved panic attack symptoms can be used to explain the above. A young male patient was afraid to lose his mother who suffers from high blood pressure after his grandmother who also suffered from high blood pressure died suddenly. He had some typical behaviours which he had developed rationally as a result of this fear. This person refuses to sleep when her mother is asleep. He could sleep only when his mother was awake. He started to observe symptoms that he had developed due to insomnia. When this pressure and stress inducing thoughts start to become impossible to cope with, panic attack symptoms occur.

Unawareness: A Self-Deception Process

RCTN agrees with psychoanalysis, that the fact that patients are not aware of the underlying cause of their deviant behaviour is the key to understand neurosis (Shevrin and Dickman 1980). However, contrary to psychoanalysis, RCTN explains the lack of awareness in conscious and rational terms and attributes this effect to two psychological mechanisms. A mechanism elaborated by Rofé in previous studies is associated with repressive processes produced by the strong distractive value of the symptom. This enables the patient to focus on the symptom and keep stress related thoughts away from his/her mind. As a result, the patient is not aware of the original stressor that causes symptoms to occur. The second mechanism concerns relate to the psychological processes by which patients become unaware of their conscious and deliberate involvement in

the adoption and maintenance of the symptom. This psychological process by which patients create unawareness of the knowledge of self-involvement is essential for maintaining the repressive value of the symptom. If patients became aware of their involvement, the symptom would lose its distracting value. Accordingly, any therapeutic intervention that disrupts unawareness of knowledge of self-involvement would damage the repressive value of the symptom and thus increase the patient's tendency to abandon this behavior (Rofé 2010).

When a neurotic symptom is adopted, various factors weaken the person's knowledge of self-involvement. Then a number of mechanisms further reduce the knowledge of self-involvement, leading to the inability to retrieve the initial information. The phenomenological result of these processes is a temporary lack of awareness regarding the patient's active and conscious involvement in producing the deviant behavior. When a patient develops a neurotic symptom, knowledge of self-involvement can be weakened by any of the following four factors.

1. Impaired cognitive functioning: Numerous studies have shown that adverse emotional states such as anxiety and depression can lead to cognitive impairments such as attentional deficits (Mialet et al. 1996, Erickson et al. 2005). Findings also show that the emotional distress in people distracts them and interferes with their encoding process, resulting in poor learning and memory (Christopher and Mac Donald 2005, Rose and Ebmeier 2006). Accordingly, given RCTN hypothesis on the development of neurotic diseases, when patients are confronted with intolerable stress, their awareness of self-involvement will be disrupted at the decision making at the onset stage (Rofé 2010).
2. Directed forgetting: The studies in which people are instructed to forget the information they are provided, have shown that people have the ability to forget any information by deliberately disrupting the encoding process (Anderson 2005, Hourihan et al. 2006, Gottlob et al. 2006). Therefore, given patients' interest in being unaware of their self-involvement, the patients can direct their attention away intentionally, hindering the encoding of knowledge of self-involvement (Rofé 2010).
3. Symptom distractibility: Research has shown that encoding can be disrupted by distractive factors (Wolach and Pratt 2001, Tremblay et al. 2005). In this regard, the behavioral change becomes so dramatic and unusual that it is likely to consume the patient's entire attention. Since attention is so intensely focused on these extremely powerful and distractive stimuli that the encoding of knowledge of self-involvement is seriously disrupted. DID (Dissociative identity disorder) can be given as a clinical example which shows the effect of neurotic symptoms on the attention of a person. As noted by Bliss (1980), a DID patient "creates personalities by blocking everything from her head, mentally relaxes, concentrates very hard. She clears her mind but she is not aware of what she's doing".
4. Brief encoding period: Clinical evidence indicates that the ultimate decision regarding the choice of a specific neurotic disorder is made spontaneously, in the absence of prior planning. For example, Malamud (1944) describes the case of an unhappy, married man whose wife became pregnant, despite an agreement that they would not have children. On the way to the hospital to visit

his wife and newborn child, the man was slightly injured in a car accident and immediately developed hysterical blindness. Obviously, as the symptom developed spontaneously, the patient did not even have an opportunity to contemplate the knowledge of self-involvement.

In summary, the above four factors should substantially weaken the encoding of knowledge of self-involvement and may even cause the patient to be totally unaware of this knowledge. It is difficult to say that all these factors have an effect on every case, but only one factor can be quite influential.

Retrieval Inhibiting Mechanisms

State Dependent Memory and Environmental Context

Numerous studies on state-dependent memory indicate that retrieval becomes even more difficult when the individuals' conditions during retrieval differs from that of the original learning situations (Blaney 1986, Lang et al. 2001). Similarly, altering the individual's emotional state facilitates forgetting (Pearce et al. 1990, Eich 1995). Since symptom adoption relieves emotional distress, altered emotional state after symptom adoption hinders the retrieval of knowledge of self-involvement. State dependent memory is especially effective in inhibiting knowledge of self-involvement in DID patients because the alternate personalities tend to be extremely different in terms of tastes, preferences, emotion, behavior, gender, and age (Putnam et al. 1986). Changes in the environmental context have also been shown to reduce the recall and recognition performance (Smith and Vela 2001). Several symptoms, such as agoraphobia, dissociative fugue, and compulsive cleaning, generate significantly different environments from those prior to symptom adoption and thus also inhibit the retrieval of knowledge of self-involvement (Rofe 2010).

Suppression

Experimental evidence indicates that people can recruit a cognitive-neuropsychological mechanism by which awareness is prevented for unwanted memories (Anderson and Green 2001, Geraerts and McNally 2008, Levy and Anderson 2008). These studies have demonstrated that when participants were instructed to intentionally forget earlier learned items, subsequent memory performance was impaired. Therefore, patients weaken the retrieval of knowledge of self-involvement by intentionally suppressing thoughts about this anxiety-provoking knowledge and by avoiding situations that may remind them of it. This theoretical approach is consistent with the psychoanalytic definition of suppression, which was seen as conscious efforts to forget undesirable material (Freud 1936).

Hypnotic Amnesia

Research on hypnotic amnesia has shown that this phenomenon is the consequence of active distractive maneuvers through which the person deliberately ignores relevant target cues and attends exclusively to other matters (Bowers 1996, Wagstaff and Frost 1996). Therefore even after the encoding stage, patients with neurotic disorder can induce an amnesic-hypnotic state by deliberately focusing on the neurotic behavior, thereby blocking the retrieval of knowledge of self-involvement.

Thus, all of the factors mentioned above cause a total state of unawareness immediately after the initial display of the symptom.

Self-Deceptive Belief

As mentioned earlier, most patients develop a self-deceptive belief of illness depending on the information they are exposed to. However, how can we explain the cases in which patients deny any possibility that there is something wrong with them? For example, a patient who is anorexic can insist that "she looks fine and that there is nothing wrong with her being so skinny" and state that "I enjoy having this disease and I want it. I can not convince myself that I am ill and that there is something from which I need to recover" (Bruch 1978). From RCTN's point of view, patients who deny that their behavior is deviant, who are mainly anorexics and certain patients with OCD are no less logical and reality-oriented than patients in the "illness" group (Kozak and Foa 1994). These patients deny their diseases based on the information they derive from external and internal evidence to which they are exposed and create an unawareness. Socially accepted behaviors are often observed (e.g. diet and cleanliness). The symptom is even praised before it increases to exaggerated, strange levels. Even after onset, the social reinforcement is likely to continue at least at the level observed in the initial stage. For example, Branch and Eurman (1980) found that at first, families and friends admire sufferers of anorexia for their appearance and self-control (Porzelius et al. 1999).

The second reason that motivates patients to deny that their behavior is deviant is an internal experience of sense of control. As noted by Bruch (1978) regarding anorexia, keeping weight and body size under control provides patients with a meaningful sense of achievement. It gives them a goal in life, which replaces the emptiness and the helplessness. Weight loss helps combat feelings of inadequacy and improves self-worth (Hollon 1990). A similar view was expressed by Edelstein (1989); he noted that anorexia satisfies patients' compulsive need to master their vital drive of hunger. The sense of control may also be important in OCD. In OCD too, the symptoms empower patients to overcome their fear of loss of control over their impulsive behaviors (Denys et al. 2004).

An additional internal factor that should intensify patients' tendency to deny that their behavior is deviant, to such an extent that they may even take pleasure in their behavioral change (see Bruch, 1978), is emotional relief resulting from the distractive value of the symptom. Because patients deny that their behavior is deviant, they invent self-deceptive explanations to rationalize their sudden behavioral change. For example, Garner (1986) noted that "Bizarre eating patterns and the resolute refusal of adequate nourishment become plausible given the anorexic patient's conviction that thinness is essential for her happiness or well-being."

Given RCTN's claim that self-deceptive belief of denial is not voluntary, but is based on adequate information, one would expect that people with anorexia will abandon this belief in favor of a self-deceptive belief of illness when bodily conditions are seriously deteriorated. Indeed, as supported by Greenfeld (1991) the tendency to adopt a belief of illness is greater among patients with increased weight loss and longest inpatient stays. Moreover, when bulimic symptoms accompany anorexic behavior, there is a greater tendency to choose the strategy of illness, rather than denial (Pryor et al. 1995). This seems to be so because binge eating is socially unacceptable and is associated with

the sense of loss of control (APA 2000). From the perspective of RCTN, however, the patients in "denial" are no less realistic or rational than the patients with "illnesses." Patients make logical inferences from the specific external and internal observations to which patients are exposed immediately after the creation of unawareness.

Rational Choice Theory in Sexual Abuse

Application of the rational choice theory to crime has emerged to explain offenses as a function of anticipated reward and punishment. Advocates of this theory investigate why some people refrain from committing sexual offenses, while others commit sexual offenses. According to this theory, the person calculates the benefits and losses that will be incurred in the criminal action that the person will commit and identifies positive and negative outcomes and commits the crime if it is a profitable choice. In this case, the person potentially has the idea of the crime and his tendency to commit a crime will increase if the benefit from that crime is greater than the crime's harm depending on his analysis. In the studies conducted in this field found that sex offenders both rationalize and calculate their behavior when committing a crime (Gönültaş et al. 2015).

Integrative Therapeutic Model

Based on the belief that neurotic disorders are the consequence of factors beyond a person's conscious control, traditional theories of psychopathology believed that, like the treatment of a physical illness, therapeutic intervention has a curative effect in the sense that it eradicates the underlying cause of disorder. Although different schools of psychopathology have not reached consensus on the direct cause of deviant behavior, all agree that patients have some constitutional psychophysiological deficits which are curable. Given RCTN's claim that the neurotic symptom is a pathological coping mechanism that people consciously and deliberately adopt when stress exceeds their normal coping abilities, the goal of therapy is to produce appropriate psychological conditions that will motivate patients to abandon their symptoms. The optimal psychological state is the elimination of stress, either directly or indirectly, through the reinforcement of patients' coping skills.

In conclusion, according to this theory, all therapies exert their effects by removing patients' absence of awareness, increasing the cost of symptoms, reducing their emotional distress or eliminating stressors (Rofe 2010).

Conclusion

The rational choice theory presents a new perspective in psychopathology that is contrary to traditional theories. This theory claims that, contrary to the basic assumptions of other theories, patients consciously and rationally choose a neurotic symptom as a pathological coping mechanism when confronted with intolerable levels of stress. This radical change in traditional thinking enables the theory to use numerous studies of informational processing to account for patients' unawareness of the underlying cause of their neurotic symptoms. Additionally, the re-conceptualization of neurosis constitutes a milestone in understanding the mechanisms of therapeutic change. Although investigators are increasingly pessimistic about the possibility of integrating research and clinical evidence about the efficacy of various therapeutic interventions, this theory is

able to account for the efficacy of various interventions by a single set of theoretical concepts.

RCTN shares Freud's (1915) clinical intuition that the key to understanding neurosis is clarifying the mechanism that controls the process of unawareness and the manifestation of the symptom. Both theories believe that all neurotic disorders have the same etiology and that patients become unaware of a particular stressor, trauma, or complaint through the repression mechanism. Freud believed that unawareness is important for understanding the phenomenon of neurosis through his work with neurotic patients. Consistent with the cognitive theory, RCTN claims that patients' beliefs play an important role in the development and treatment of anxiety disorders (Clark 1986, Beck 1988).

Following many years of intensive research, along with the ongoing controversy regarding the mechanism that controls the development and treatment of psychological disorders, the central task of a new theory in psychopathology is to resolve the difficulties in the field and integrate the findings that have accumulated throughout the years into a single theoretical framework. Thus, although apart from case studies, this theory does not present new data of its own, it provides a theoretical framework by which unaccountable difficulties in both psychotherapy and psychopathology can be addressed. For this reason, although more research is needed to reach the ultimate understanding of mental disorders, it is thought that to achieve this goal rational choice theory must be included in available theoretical approaches.

References

- Anderson MC (2005) The role of inhibitory control in forgetting unwanted memories: A consideration of three methods. In *Dynamic Cognitive Processes* (Eds N Ohta, C MacLeod, B Uttl):159–189. Tokyo, Japan, Springer-Verlag.
- Anderson MC, Green C (2001) Suppressing unwanted memories by executive control. *Nature*, 410:366–369.
- APA (1980) *Diagnostic and Statistical Manual of Mental Disorders, Third edition (DSM-III)*. Washington, DC, American Psychiatric Association.
- APA (2000) *Diagnostic and Statistical Manual of Mental Disorders, Fourth edition text revision (DSM-IV-TR)*. Washington, DC, American Psychiatric Association.
- APA (2013) *Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5)*. Washington, DC, American Psychiatric Association.
- Bandura A (1969) *Principles of Behavior Modification*. New York, Holt, Rinehart & Winston.
- Beck AT (1988) Cognitive approaches to panic disorder: theory and therapy. In *Panic: Psychological Perspectives* (Eds S Rachman, JD Maser). Hillsdale, NJ: Erlbaum.
- Blanchard EB, Hersen M (1976) Behavioral treatment of hysterical neurosis: symptom substitution and symptom return reconsidered. *Psychiatry*, 39:118–129.
- Blaney PH (1986) Affect and memory: a review. *Psychol Bull*, 99:229–246.
- Bliss EL (1980) Multiple personalities. *Arch Gen Psychiatry*, 37:1388–1397.
- Bowers KS, Woody EZ (1996) Hypnotic amnesia and the paradox of intentional forgetting. *J Abnorm Psychol*, 105:381–390.
- Branch H, Eurlman LJ (1980) Social attitudes toward patients with anorexia nervosa. *Am J Psychiatry*, 37:631–632.
- Bruch H (1978) *The Golden Cage: The Enigma of Anorexia Nervosa*. Cambridge, MA, Harvard University Press.
- Carson RC, Butcher JN, Coleman JC (1988) *Abnormal Psychology and Modern Life*, 8th ed. New York, Harper Collins.
- Christopher G, MacDonald J (2005) The impact of clinical depression on working memory. *Cogn Neuropsychiatry*, 10:379–399.
- Clark DM (1986) A cognitive approach to panic. *Behav Res Ther*, 24: 461–470.
- Denys D, de Geus F, van Meegen H, Westenberg HGM (2004) Symptom dimensions in obsessive-compulsive disorder: factor analysis on a clinician-rated scale and a self-report measure. *Psychopathology*, 37:181–189.
- Eich E (1995) Mood as a mediator of place dependent memory. *J Exp Psychol Anim Learn Cogn*, 124:293–308.
- Eich E, Macaulay D, Ryan L (1994) Mood dependent memory for events of the personal past. *J Exp Psychol Anim Learn Cogn*,

- 123:201–215.
- Erdelyi MH (2001) Defense processes can be conscious or unconscious. *Am Psychol*, 56:761–762.
- Erdelyi MH (2006) The unified theory of repression. *Behav Brain Sci*, 29:499–551.
- Erickson K, Drevets WC, Clark L, Cannon DM, Bain EE et al. (2005) Mood-congruent bias in affective go/no-go performance of unmedicated patients with major depressive disorder. *Am J Psychiatry*, 162:2171–2173.
- Freud A (1936) *The Ego and the Mechanisms of Defense*. New York, NY, International Universities Press.
- Freud S (1914) On the history of the psychoanalytic movement. In *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (Ed J Strachey). London, Hogarth Press.
- Freud S (1915) Repression. In *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (Ed J Strachey):141–158. London, Hogarth Press.
- Garner DM (1986) Cognitive therapy for anorexia nervosa. In *Handbook of Eating Disorders: Physiology, Psychology and Treatment of Anorexia and Bulimia* (Ed KD Brownell, JP Foryet). New York, NY, Basic Books.
- Geraerts E, McNally RJ (2008) Forgetting unwanted memories: directed forgetting and thought suppression methods. *Acta Psychol*, 127: 614–622.
- Gottlob LR, Golding JM, Hauselt WJ (2006) Directed forgetting of a single item. *J Gen Psychol*, 133:67–80.
- Gönültaş B, Oral G, Beyaztas G (2015) Cinsel istisrarları açıklayan teorilerin suç soruşturmaları bağlamında irdelenmesi. *Türkiye Adalet Akademisi Dergisi*, 6(21):79-104.
- Green S (2002) *Rational Choice Theory: An Overview*. Baylor, US, Baylor University.
- Greenfeld DG, Anyan WR, Hobart M, Quinlan DM, Plantes M (1991) Insight into illness and outcome in anorexia nervosa. *Int J Eat Disord*, 10:101–109.
- Holmes DS (1974) Investigations of repression: differential recall of material experimentally or naturally associated with ego threat. *Psychol Bull*, 81:632–653.
- Holmes DS (1990) The evidence for repression: an examination of sixty years of research. In *Repression and Dissociation: Implications for personality theory, psychopathology, health* (Ed JL Singer). Chicago, University of Chicago Press.
- Horowitz LM (2004) *Interpersonal Foundations of Psychopathology*. Washington, DC, American Psychological Association.
- Hourihan, Gottlob KL, Taylor TL (2006) Cease remembering: control processes in directed forgetting. *J Exp Psychol: Hum Percept Perform*, 32:1354–1365.
- Jones MM (1980) Conversion reaction: anachronism or evolutionary form? a review of neurologic, behavioral and psychoanalytic literature. *Psychol Bull*, 87:427–441.
- Kozak MJ, Foa EB (1994) Obsessions, overvalued ideas, and delusions in obsessive compulsive disorder. *Behav Res Ther*, 32:345–353.
- Krstić M (2014) Rational choice theory and addiction behavior. *Trziste*, 24:163-177.
- Kuloglu M, Atmaca M, Tezcan E, Gecici O, Bulut S (2003) Sociodemographic and clinical characteristics of patients with conversion disorder in eastern Turkey. *Soc Psychiatry Psychiatr Epidemiol*, 38:88–93.
- Lang AJ, Craske MG, Brown M, Ghaneian A (2001) Fear-related state dependent memory. *Cogn Emot*, 15:695–703.
- Leonard WE (1927) *The Locomotive God*. New York, Appleton-Century.
- Levy BJ, Anderson MC (2008) Individual differences in the suppression of unwanted memories: the executive deficit hypothesis. *Acta Psychol*, 127:623–626.
- Malamud W (1944). *The psychoneuroses*. In *Personality and the Behavior Disorders: A Handbook Based on Experimental and Clinical Research* (Ed JM Hunt). New York, NY, Ronald.
- Masserman, JH (1946) *Principles of Dynamic Psychiatry*. Philadelphia, WB Saunders Company.
- Mialet JP, Pope HG, Yurgelun-Todd D (1996) Impaired attention in depressive state: a non-specific deficit? *Psychol Med*, 26: 1009–1020.
- Pearce SA, Isherwood S, Hrouda D, Richardson PH, Erskine A, Skinner J (1990) Memory and pain: tests of mood congruity and state dependent learning in experimentally induced and clinical pain. *Pain*, 43:187–193.
- Pilecki BC, Clegg JW, McKay D (2011) The influence of corporate and political interests on models of illness in the evolution of the DSM. *Eur Psychiatry*, 26:194–200.
- Porzelius LK, Berel S, Howard C (1999) Cognitive behavioral therapy. In *Handbook of Comparative Interventions for Adult Disorders* (Eds M Hersen, AS Bellack):491–512. New York, NY, Wiley.
- Pryor TL, Johnson T, Wiedman MW, Boswell DL (1995) The clinical significance of symptom denial among women with anorexia nervosa: another disposable myth? *Eat Disord*, 3:293–303.
- Putnam FW, Guroff JJ, Silberman EK, Barban L, Post RM (1986) The clinical phenomenology of multiple personality disorder: a review of 100 recent cases. *J Clin Psychiatry*, 47:285–293.

- Rofé Y (2000) *The Rationality of Psychological Disorders: Psychobizarreness Theory*. New York, NY, Kluwer Academic Publishers.
- Rofé Y (2008) Does repression exist? Memory, pathogenic, unconscious, and clinical evidence. *Rev Gen Psychol*, 12:63-85.
- Rofé Y (2010) The rational-choice theory of neurosis: Unawareness and an integrative therapeutic approach. *J Psychother Integr*, 20:152-202.
- Rofé Y (2016) Which diagnostic approach is more valid? the DSM or the rational-choice theory of neurosis. *Int J Psychol Stud*, 8:98-110.
- Rofé Y, Rofé Y (2013) Conversion disorder: a review through the prism of the rational-choice theory of neurosis. *Eur J Psychol*, 9:832-868.
- Rofé Y, Rofé Y (2015) Fear and phobia: a critical review and the rational-choice theory of neurosis. *Int J Psychol Stud*, 7:37-73.
- Rose EJ, Ebmeier KP (2006) Pattern of impaired working memory during major depression. *J Affect Disord*, 90:149-161.
- Samuels J, Bienvenu OJ, Riddle MA, Cullen BAM, Grados MA, Liang KY et al. (2002) Hoarding in obsessive-compulsive disorder: results from a case-control study. *Behav Res Ther*, 40:517-528.
- Shevrin H, Dickman S (1980) The psychology of unconscious: a necessary assumption for all psychological theory? *Am Psychol*, 35:421-434.
- Simon HA (1978) Rationality as process and as product of thought. *Am Econ Rev*, 68:1-16.
- Smith SM, Vela E (2001) Environmental context-dependent memory: a review and meta-analysis. *Psychon Bull Rev*, 8: 203-220.
- Sunday SR, Halmi KA, Einhorn A (1995) The Yale-Brown-Cornell eating disorder scale: A new scale to assess eating disorders symptomatology. *Int J Eat Disord*, 18:237-245.
- Tremblay S, Nicholls AP, Parmentier FBR, Jones DM (2005) Visual distraction and visual-spatial memory: a sandwich effect. *Memory*, 13:357-363.
- Vitousek KB, Hollon SD (1990) The investigation of schematic content and processing in eating disorders. *Cognit Ther Res*, 14:191-214.
- Wagstaff GF, Frost R (1996) Reversing and breaching posthypnotic amnesia and hypnotically created pseudomemories. *Contemp Hypn*, 13:191-197.
- Welkowitz J, Welkowitz LA, Struening E, Hellman F, Guardino M (2004) Panic and comorbid anxiety symptoms in a national anxiety screening sample: implications for clinical interventions. *Psychotherapy (Chic)*, 41:69-75.
- Wolach I, Pratt H (2001) The mode of short-term memory encoding as indicated by event-related potentials in a memory scanning task with distractions. *Clin Neurophysiol*, 112:186-197.

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