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# Beck's Theory of Modes: a scoping review

## *Teoria dos Modos de Beck: uma revisão de escopo*

## Abstract

This study reviewed and synthesized the national and international literature on the main aspects of the Theory of Modes related to Becks Cognitive Model. For this, searches in Scielo, PubMed, Scopus and PsychINFO databases were performed. Of the 1437 productions found, 11 studies were included in the scoping review. The results revealed important aspects about the theory, covering the definition and structure of the mode, its activation process, its adaptability and specificity, as well as clinical interventions directed to the mode and indications for new studies and/or theoretical advances. Finally, a new graphic representation of mode activation was proposed. These findings support the understanding that mode adaptation is influenced by adjustments between the self and external situational demands, sociocultural expectations, and the presence of persistent cognitive biases, which explains personality oscillations involving psychopathologies and adaptive behavior. Gaps in the literature have been identified, especially in the national literature, about the insufficiency of conducting empirical studies aimed at the effectiveness of the Theory of Modes and its particularities. Understanding globally the adaptive and non-adaptive processes of human personality reveals to be essential in the clinical practice of therapists.

**Keywords:** Theory of modes, Cognitive Behavioral Therapy, Psychopathology.

## Resumo

Este estudo revisou e sintetizou a literatura nacional e internacional sobre os principais aspectos da teoria dos modos, relacionada ao modelo cognitivo de Beck. Para isso, foram realizadas buscas nas bases de dados Scielo, PubMed, Scopus e PsychINFO. Das 1.437 produções encontradas, 11 estudos foram incluídos na revisão de escopo. Os resultados revelaram aspectos importantes acerca da teoria, abrangendo a definição e a estrutura do modo, seu processo de ativação, sua adaptabilidade e sua especificidade, bem como intervenções clínicas direcionadas ao modo e indicações de novos estudos e/ou avanços teóricos. Por fim, uma nova representação gráfica da ativação do modo foi proposta. Esses achados apoiam a compreensão de que a adaptação do modo sofre influência dos ajustes entre o self e as demandas situacionais externas, das expectativas socioculturais e da presença de vieses cognitivos persistentes, o que explica oscilações da personalidade envolvendo psicopatologias e comportamento adaptativo. Lacunas na literatura foram identificadas, sobretudo na nacional, com insuficientes estudos empíricos sobre a eficácia da teoria dos modos e suas particularidades. Compreender globalmente os processos adaptativos e desadaptativos da personalidade humana revela ser essencial na prática clínica dos terapeutas.

**Palavras-chave:** Teoria dos modos, Terapia Cognitivo-Comportamental, Psicopatologia.

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## INTRODUCTION

Cognitive Therapy, commonly known as Cognitive Behavioral Therapy (CBT), can be understood as an «active, problem-focused, and time-sensitive psychotherapeutic approach that focuses on cognitive and behavioral change and acceptance» (Wenzel, 2021, p. 16). CBT was developed by Aaron T. Beck (ATB) in the early 1960s based on a theoretical system, which was evaluated and refined over time. Likewise, the effectiveness of a set of therapeutic techniques and interventions for the treatment of mental disorders was tested (J. S. Beck, 2021).

Initially, Cognitive Theory and Therapy were developed for depression. Later, they were systematically applied to various psychopathological conditions, such as suicide, anxiety disorders, personality disorders, substance abuse (Beck & Dozois, 2014), and in recent years, schizophrenia (Beck et al., 2020). Therefore, CBT has emerged as one of the most widely used theoretical-practical approaches for the treatment of a wide range of psychiatric disorders, psychological problems, and clinical issues with psychological elements (J. S. Beck, 2021; Hofmann, 2021), becoming a reference in the fields of psychology, psychiatry, medicine, social work, nursing, among other health areas that advocate evidence-based practices (Beck & Dozois, 2011).

In 2012, a comprehensive review of meta-analyses was conducted (Hofmann et al., 2012) which reported the effectiveness of CBT for most psychopathological conditions. Recently, Fordham et al. (2021) examined the consistency of the effect of CBT across different conditions, populations, and contexts. The data revealed that CBT not only has significant effectiveness but also results in improvements in the quality of life of individuals with various physical and mental problems for a period exceeding 12 months after the completion of treatment, regardless of whether it is high or low-intensity CBT. Furthermore, there is sufficient evidence indicating positive effects in adults and children. However, there is little available evidence for children under 6 years old and for adults over 65 years old. There is also no significant evidence on whether ethnicity or country of residence moderate the effectiveness of CBT, as few studies have been conducted in countries in Africa, Asia, or South America, for example (Fordham et al., 2021).

Despite the reliant and encouraging data regarding the effectiveness of CBT, inconsistencies and gaps have been identified in Cognitive Theory, revealing the need for reformulations or greater detailing of existing concepts and models (Beck, 1996; Beck & Haigh, 2014). An example of theoretical advancement that had an impact on therapists' practice was the development of the Theory of Modes (TM) (Beck, 1996). According to Beck et al. (2020), the concept of mode has existed since ATB worked with depressed patients in the 1960s. The author noted not only an alternation of the presence of distinct behaviors in individuals during and after the depressive episode but also cognitive changes. When not depressed, patients did not exhibit maladaptive beliefs such as "life is hopeless" or "nothing will ever get better" that were common in the presence of the psychopathological condition. However, these cognitions resurfaced in the presence of depressive symptoms. Similarly, this process was identified in people suffering from social anxiety. The presence of anxiety was dependent on the situation, which could or could not involve the potential evaluation of patients by others, meaning an anxious mode was activated by stimuli consistent with it, which would imply the possibility of experiencing anxiety (Beck et al., 2020).

However, due to the limitation of the original linear cognitive model emphasizing the function of cognitive schemas as activators of emotional, motivational, and behavioral reactions in individuals, providing explanations for psychopathological or non-psychopathological personality phenomena became essential (Beck, 1996; Beck & Haigh, 2014). Consequently, in the 1990s, a preliminary theory of the TM (Beck, 1996) was developed to explain, among other aspects: a) the various symptoms associated with psychopathological disorders; b) the schematic organization related to intense psychological reactions; c) a vulnerability of certain individuals to specific stimuli that are congruent with certain mental disorders; d) "normal" psychological reactions; e) the relationship between the function, structure, and content of personality; f) symptom remission; g) information processing; and h) the influence of sociocultural aspects on cognitions.

Initially, Beck (1996) proposed that significant changes in patient functioning were due to the activation or deactivation of modes, leading to a series of existing reactions with mutual influences. Therefore, modes were defined as suborganizations within the personality to deal with specific demands, integrated by a web of cognitive, emotional, motivational, and behavioral components. In addition to these elements, the orienting schema, which assigns an initial meaning to environmental stimuli, and the physiological system are associated with the mode activation process (Beck, 1996). In this sense, it can also be described as a network of interconnected contents in an idiosyncratic logic.

Despite the significant contribution of the detailed and initial description of the TM (Beck, 1996), refinements have been made, such as the detailing of the cognitive model of depression (Clark & Beck, 1999) and the description of the Generic Cognitive Model (Beck & Haigh, 2014). Furthermore, the use of the TM in the literature to elaborate on the depressive (Beck, 2008) and anxious (Clark & Beck, 2010) modes is relevant both theoretically and clinically. These productions indicate that over the years, the expansion of the TM has provided an update to the cognitive model of CBT, increasing understanding and innovations in the continuum between adaptation and maladaptation, information processing, schema activation mechanisms, among others.

Although the TM has advanced, there are still few works that refer to it, whether with proposals to improve upon the theory

or to use it to better understand the adaptive and maladaptive functioning of individuals with or without psychopathological conditions (Beck et al., 2020). Although there are no concrete data, it is assumed that the majority of treatments for individuals with mental disorders or conditions relevant to CBT still use the original linear cognitive model as the sole theoretical reference, based on automatic thoughts, emotions, behaviors, and the central and intermediate belief system, without considering other essential aspects such as those related to information processing, sociocultural factors, memory, and the individual's adaptive functionality (Beck, 1996; Beck et al., 2020; Beck & Haigh, 2014). It is also worth noting that the revisions of cognitive models are not mutually exclusive types; in fact, we could say that the original linear cognitive model is contained within the mode model (Rudd, 2000).

An important distinction, often debated in the literature, lies in the concepts of mode within CBT and Schema Therapy (Beck et al., 2020). Specifically, the second therapeutic approach (Arntz et al., 2021) defines modes, commonly referred to as schema modes, as the individual's emotional-cognitive-behavioral state at a given moment, which result from coping responses to initial maladaptive schemas. This construct is understood as dysfunctional mental representations originating in childhood and stemming from the interaction between childhood temperament and adverse contextual factors to which the child was exposed (Arntz et al., 2021).

Recently, the TM has gained prominence in CBT for being significantly relevant to the implementation of Recovery-Oriented Cognitive Therapy (CT-R), developed for patients diagnosed with schizophrenia and severe psychopathological conditions (Beck et al., 2020). In summary, the focus of this therapeutic modality is not only to deactivate the maladaptive modes of the patient but also to promote the activation and maintenance of adaptive ones. It involves a humanistic approach to treatment, aiming to identify and reinforce the interests, abilities, and potentialities of individuals, ultimately building enriching and motivating experiences (Beck, Grant, et al., 2021). Therefore, research has contributed to demonstrating the effectiveness of this new therapeutic modality, such as a reduction in defeatist beliefs, increased reports of positive self-concept, and improvement in mood in patients with schizophrenia (Grant et al., 2018), as well as a decrease in positive and negative symptoms (Grant et al., 2017).

As one of the major updates to the cognitive model, its application is assumed to have significant implications for the future of Cognitive Theory and Therapy. This includes enabling the refinement of treatment for populations with specific psychopathological conditions, emphasizing not only maladaptive modes but also adaptive modes of individuals, and investing in a transdiagnostic cognitive conceptualization that addresses different populations (Beck et al., 2020). Consequently, as one of the clinical practices most based on evidence today, mapping and analyzing the use of the TM in the field of CBT is crucial. Therefore, the aim of this review article was to comprehensively identify, map, synthesize, and report the relevant literature available on the Theory of Modes related to Beck's Cognitive Model and answer the question "How has national and international literature in the field of Cognitive Behavioral Therapy utilized the Theory of Modes?". Specifically, it intends to address the following sub-questions: What empirical evidence is available about the TM? What is the synthesis of the cognitive model that includes the TM? What possible gaps in knowledge exist, and what are the needs for future research on the TM?

## METHOD

### Study type

A scoping review was conducted to achieve the stated objective. This is an approach that systematically maps a thematic area in the literature by identifying fundamental concepts, theories, sources of evidence, and gaps in the research field (Peters, Marnie, et al., 2020). Due to its exploratory and descriptive nature, a scoping study is indicated as a precursor to a systematic review, synthesizing available evidence in a specific field, locating and analyzing gaps in research, elucidating key existing concepts and related aspects, and examining the conduct of research (Peters, Marnie, et al., 2020). The methodological framework of scoping review from the Joanna Briggs Institute - JBI (Peters, Marnie, et al., 2020) was used, following these steps: 1) Definition and alignment of the objective(s) and question(s); 2) Development and alignment of inclusion criteria with the objective(s) and question(s); 3) Description of the planned approach for evidence search, selection, data extraction, and presentation of evidence; 4) Search for evidence; 5) Selection of evidence; 6) Extraction of evidence; 7) Analysis of evidence; 8) Presentation of results; 9) Summary of evidence in relation to the review's purpose, drawing conclusions, and noting any implications of the findings. Furthermore, this research was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018). It is worth noting that the protocol for this review was not published, and this research received financial support from the Brazilian National Council for Scientific and Technological Development - CNPq.

### Search strategies: databases and inclusion/exclusion criteria

Starting with the guiding question "How has national and international literature in the field of Cognitive Behavioral Therapy utilized the Theory of Modes?", the process of selection and categorization of studies was carried out by two independent reviewers. In case of disagreements, consensus would be reached through consultation and analysis with an expert judge in the field. However, as there were no disagreements, a judge's evaluation was not required. The literature search was conducted

between February 18 and March 15, 2021, through the selection of articles, chapters, books, dissertations, or theses published in English and Portuguese in the electronic databases Scielo, PubMed, Scopus, and PsychINFO. The choice of databases was based on the relationship between the review's topic and the indexed contents, as well as the fact that the databases consist of international and national studies. Furthermore, to encompass the range of the Theory of Modes in the field of CBT, no time limits were imposed on publication dates. Based on the expertise of two reviewers specialized in the subject and consultations to published works on the subject, search terms were defined and the following combinations of descriptors and Boolean operators were used for all electronic databases: 1) (teoria dos modos OR modos OR modo) AND (terapia cognitivo comportamental OR tcc OR terapia cognitiva) AND (beck OR aaron t. beck); and 2) (theory of modes OR modes OR mode) AND (cognitive behavior therapy OR cbt OR cognitive therapy) AND (beck OR aaron t. beck).

Firstly, a free search without filters using the mentioned descriptors was conducted in the selected databases, identifying 1,437 productions. Based on this survey, a screening was performed by reading the titles, abstracts, and keywords, using the following inclusion criteria: a) literature directly related or referring to Aaron T. Beck's concept of modes; and b) focus or mention of Cognitive Behavioral Therapy. In total, 53 texts were screened at this stage. Subsequently, new works were eligible with a full-text reading of all texts, and those that were not in English or Portuguese, were duplicates, or did not address the construct of mode in the context of CBT were discarded. At this stage, 16 documents were eligible. Finally, a further refinement was made by excluding texts that did not cover the theme of this review, i.e., those that did not partially or fully mention and discuss modes. In the end, 11 studies were included for final analysis in this scoping review. The entire selection process is summarized in a flowchart (see Figure 1).

### Data extraction

The data was extracted and entered into a table to display the productions included in the review, according to the following information: identification and characteristics of the texts (title, year, source, journal, language, study country, authors, objective(s), and methodological approach) and main results and/or contributions to the TM.

### Data analysis

For interpretation and synthesis of the results, the extracted data was classified into categories. The division was solely didactic with the purpose of providing a descriptive analysis and enabling the discussion of associations made with the specific literature in the study area, as well as allowing for a critical view of the findings, highlighting strengths, limitations, and suggestions for future research.

## RESULTS

### Characteristics of the studies

The 11 studies included in the scope review were published between 1996 and 2021, were in English, and were produced or conducted in the United States (n = 9), the United Kingdom (n = 1), and Portugal (n = 1). The format of the publications varied, including articles (n = 7), complete books (n = 2), and book chapters (n = 2). Regarding the articles, the following types were identified: theoretical articles (n = 4), with two studies presenting and discussing cases of patients to demonstrate the clinical application of the theory; original articles (n = 2), one with a qualitative (no. 7) and one with a quantitative (no. 8) approach, and a review article (n = 1). Furthermore, most of the studies (n = 7) had ATB as one of the authors. Table 1 presents the list and characteristics of the studies included in the corpus of this review, listed in descending order by publication year.

The majority of studies (nos. 1, 3, 4, 5, 7, 8, 9, and 10) emphasized the theoretical and clinical aspects of specific maladaptive modes, such as the suicidal mode (Ghahramanlou-Holloway et al., 2015; Rudd, 2000) and the depressive mode (Moorey, 2010). However, a smaller portion of the publications (nos. 2, 6, and 11) focused on the fundamentals of the TM by detailing the composition and functioning of the construct. It is worth noting that out of the three studies published in the last five years, only one (no. 2) consisted of an update on the Mode Model. Nevertheless, all three (nos. 1, 2, and 3) used the TM for the treatment of individuals with severe mental health problems, primarily CT-R for individuals with schizophrenia. Furthermore, the findings revealed a lack of productions focusing centrally on modes related to non-psychopathological conditions. Table 2 presents a synthesis of the main contributions of the review studies to the TM.

Next, the results are presented based on the allocation of the productions into categories based on similarities in their content. The classification consisted of: 1) Definition and composition of modes; 2) Activation and adaptability of modes; 3) Specificities of modes; 4) Interventions directed at modes; and 5) Future agenda. It is worth noting that some studies were included in more than one group.

### Definition and composition of modes

Eight studies (nos. 1, 2, 3, 4, 6, 7, 9, and 11) explicitly mentioned the concept of modes, with most using Beck's (1996) work for the definition of the term. It was found that the understanding of the modes construct, in terms of the chronology of the texts, did not change significantly. The mode is delineated as a suborganization (Beck, 1996, 2018; Beck et al., 2015; Rudd, 2000) or an internal construct (Beck et al., 2020) specific to personality or a way of acting or doing (Beck, John, et al., 2021) that functions to organize responses when activated to deal with

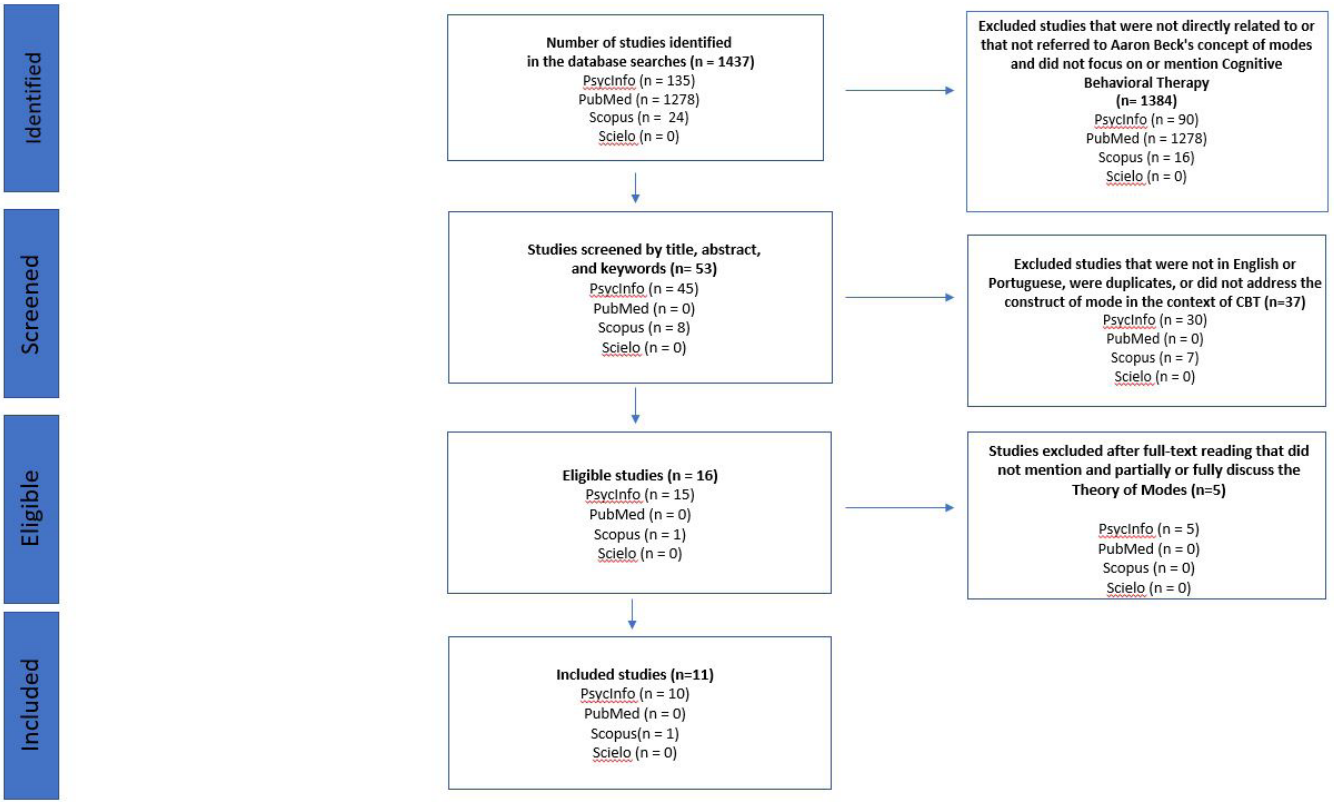


**Figure 1.** Flowchart of the research process and study selection for the scoping review.

specific demands, challenges, opportunities, and obstacles in the environment and culture (Beck et al., 2015). Therefore, the function of the mode is contextual, always anchored in a culture or society, and thus influenced by this context (Beck et al., 2020). In this direction, Beck et al. (2020) detailed the role of the construct in individuals' adaptation to a specific situation. Modes balance between an individual's internal and external environment, and this process usually occurs naturally, such as, for example, with the emergence of fear in the face of real danger.

Considering the individual's need to respond to a specific environmental situation, the presence of synchronous operation of a set of systems that integrate modes is necessary. Nine studies (nos. 1, 2, 4, 6, 7, 8, 9, 10, and 11) stated that the mode is composed of an integrated network of cognitive, emotional, behavioral, and motivational components. However, only seven (nos. 2, 4, 6, 7, 8, 9, and 11) partially or fully described the structure of the construct in detail.

Usually, the cognition component is the first to be activated when making automatic evaluations within a context (Beck et al., 2020), meaning it is responsible for functions involving information processing and meaning attribution (Beck, 1996). Cognitions form relatively stable complex structures called schemas (Beck et al., 2015), with contents referred to as beliefs that pertain to evaluations, rules, expectations, and assumptions that influence individuals' memories and associations (Beck & Haigh, 2014). Thus, beliefs have effects on other dimensions of personality, such as affect, which encompasses subjective emotional experience; motivation, which often occurs automatically and spontaneously, originates from the individual's core schemas and is associated with subsequent behavioral responses; and behavior, which includes behavioral inhibition or expression, and whose adaptability may not align with motivation (Beck et al., 2020). Furthermore, physiological responses, along with cognitive, emotional, behavioral, and motivational components, function synchronously for mode operation (Beck et al., 2020) and are relevant not only for their direct influence on individuals' behavior but also due to the interpretations individuals make of them (Beck, 1996).

### *Activation and functionality of modes*

All 11 studies included in the review directly or indirectly addressed mode activation. This process is associated with information processing (Beck & Haigh, 2014). Four studies (nos. 4, 6, 10, and 11) described this stage in detail. Furthermore, the analysis of the productions included in the review revealed a variety of terminology related to explaining the process, which occurs through two subsystems that mutually interact and are driven by schemas (Beck & Haigh,

**Table 1.** Characterization of the studies included in the scoping review.

| No. | Authorship (Year) | Language/ Country | Format | Database | Relevant data about empirical articles | | |
|---|---|---|---|---|---|---|---|
| | | | | | Method | Design | Population studied |
| 1 | Beck, Grant, Inverso, Brinen and Perivoliotis (2021) | English/USA | Book | PsycInfo | Qualitative | Theoretical study | Theoretical study presenting therapeutic approach |
| 2 | Beck, Finkel and Beck (2020) | English/USA | Theoretical article with clinical case | PsycInfo | Qualitative | Theoretical study | Theoretical study presenting therapeutic approach |
| 3 | Beck (2018) | English/USA | Book chapter | PsycInfo | Qualitative | Theoretical study | Theoretical study presenting therapeutic approach |
| 4 | Beck, Davis and Freeman (2015) | English/USA | Book | PsycInfo | Qualitative | Theoretical study | Individuals diagnosed with personality disorders |
| 5 | Ghahramanlou-Holloway et al. (2015) | English/USA | Review article | Scopus | Qualitative | Literature review | Studies on the treatment of patients with suicidal ideation |
| 6 | Beck and Haigh (2014) | English/USA | Theoretical article with clinical case | PsycInfo | Qualitative | Theoretical study | Theoretical study on advances in Beck's mode model |
| 7 | Moorey (2010) | English/UK | Empirical article | PsycInfo | Qualitative | Case study | 22 postgraduate students in CBT |
| 8 | Nobre and Gouveia (2000) | English/ Portugal | Empirical article | PsycInfo | Quantitative | Case-control study | 29 males with sexual dysfunction and 102 without sexual dysfunction |
| 9 | Rudd (2000) | English/USA | Theoretical article | PsycInfo | Qualitative | Theoretical study | Theoretical presentation of the suicidal mode |
| 10 | Beck and Clark (1997) | English/USA | Theoretical article | PsycInfo | Qualitative | Theoretical study | Theoretical study on mode model and anxiety |
| 11 | Beck (1996) | English/USA | Book chapter | PsycInfo | Qualitative | Theoretical study | Presentation of the mode model |

2014). Initially, external and internal stimuli are processed and evaluated by proto-schemas. These proto-schemas monitor, detect, abstract, and categorize data from the external environment and subjective experiences that may be relevant to the individual, whether it involves vital issues, personal gains or losses, threats, or everyday issues. Proto-schemas are considered to function as a "gateway" in stimulus processing and can be seen as evolutionarily primitive schemas (Beck, 1996; Beck & Haigh, 2014). Proto-schema actions occur through what was initially called orienting schema (Beck, 1996), later orientation mode (Beck & Clark, 1997), and finally, automatic processing system (Beck & Haigh, 2014).

In this initial stage, data is processed rapidly, involuntarily, often without conscious awareness, and categorized with a high likelihood of containing errors in meaning (Beck & Haigh, 2014). Additionally, the affective, motivational, and behavioral systems are activated (Beck & Haigh, 2014; Beck et al., 2020). For example, when describing the information processing model of anxiety, Beck and Clark (1997) stated that this subsystem may exhibit biases in attentional focus, as individuals direct their attention towards negative environmental stimuli in order to attribute meanings. Furthermore, individuals who have made multiple suicide attempts more frequently orient themselves towards situations, experiences, and environmental data that activate the suicidal mode compared to non-suicidal individuals due to their orienting schema (Rudd, 2000).

The final stage of the information processing occurs through the subsystem referred to as the conscious control system or metacognition (Beck, 1996), secondary elaboration or metacognitive mode (Beck & Clark, 1997), reflective processing system (Beck & Haigh, 2014), or, more recently, reflective/superordinate processing (Beck et al., 2020). By operating in conjunction with the mode (Beck et al., 2020), its role is to refine or correct the meaning attributed in the initial automatic subsystem (Beck & Haigh, 2014). In other words, in the face of data assessed by automatic processing, a new analysis of a conscious and deliberate nature occurs, allowing the individual to employ problem-solving strategies, decision-making, and reasoning (Beck et al., 2020). Thus, reflective/superordinate processing plays an essential role

**Table 2.** Studies included in the scope review and their contributions to the Theory of Modes.

| Nº | Authorship (Year) | Main contributions to the Theory of Modes |
|---|---|---|
| 1 | Beck, Grant, Inverso, Brinen and Perivoliotis (2021) | Description of access, energization, development, updating, and strengthening of the adaptive mode in Recovery-Oriented Cognitive Therapy (CT-R) for individuals suffering from severe mental health problems. |
| 2 | Beck, Finkel and Beck (2020) | Definition, description of the structure, activation process, adaptation and maladaptation of modes, as well as their relationship with psychopathology, especially regarding the mechanisms responsible for the activation and change of personality components in schizophrenia. Additionally, it addresses how the Theory of Modes provides a basis for a new psychotherapy for schizophrenia and other mental disorders. |
| 3 | Beck (2018) | Importance of using therapeutic interventions to promote the shift from the regressive mode to the adaptive mode in patients with schizophrenia. Additionally, it describes the clinical application for maintaining the activation of the adaptive mode through a progression of behavioral tasks directed towards the individual goals of the patient. |
| 4 | Beck, Davis and Freeman (2015) | Emphasis on the importance of the mode to understand that individuals' responses (e.g., subjective, cognitive, behavioral, psychological) are strongly interrelated, forming a multidimensional interactive psychological structure. Additionally, understanding the process of mode activation provides the basis for Cognitive Therapy of Personality Disorders. |
| 5 | Ghahramanlou--Holloway et al. (2015) | Based on the conceptualization of suicidal mode activation, cognitive and behavioral strategies are recommended to prevent the recurrence of suicidal behaviors. |
| 6 | Beck and Haigh (2014) | Expansion of the Theory of Modes based on the description of the Generic Cognitive Model. Specifically, the mode model provides a substrate for manic episodes and endogenous depression. Additionally, there is a characterization of the self-expansive and self-protective modes. |
| 7 | Moorey (2010) | Presentation of a maintenance model of depression based on the Theory of Modes. |
| 8 | Nobre and Gouveia (2000) | Characterization of the relationship between cognitive, affective, behavioral, and physiological sexual dimensions of the cognitive model of erectile dysfunction with reference to the Theory of Modes. |
| 9 | Rudd (2000) | Description of the suicidal mode, including its components and clinical application, based on the Theory of Modes and its relationship with psychopathology. |
| 10 | Beck and Clark (1997) | Characterization of the anxiety information processing model, involving the role of the primary, orientation, and metacognitive modes. Additionally, it highlights clinical contributions regarding mode deactivation and activation. |
| 11 | Beck (1996) | Description of the Theory of Modes, encompassing definition, structure, activation, mode specificity, as well as aspects of clinical application in Cognitive-Behavioral Therapy. |

in maintaining adaptive modes activated or in deactivating or reducing the impacts of the activation of maladaptive modes, as it enables a restriction or disinhibition of behavioral reactions (Beck et al., 2020).

However, it was observed that over time, there have been no updates to the initial graphical representation of mode activation presented by Beck (1996). Nevertheless, two studies provided illustrations with adaptations when describing the cognitive model of erectile dysfunction (Nobre & Gouveia, 2000) and the suicidal mode (Rudd, 2000). Developed by the authors of this review in order to synthesize the findings and facilitate the understanding of this process, a schematic representation of the mode activation structure is suggested (see Figure 2):

Regarding the functionality of the mode, when it is dysfunctional/distorted, or rather, when information processing contains biases, it can generate maladaptive modes composed, among other elements, of rigid or distorted beliefs, biased cognitive elements such as interpretations, memory, and attention, and, finally, repercussions on other systems depending on the context, including excessive or inappropriate affect and dysfunctional behaviors (Beck & Haigh, 2014). Thus, despite there being a greater quantity of adaptive modes than maladaptive ones in individuals, modes configure themselves as maladaptive or "patient" modes when they are excessively activated or hypertrophied, that is, when people see themselves as weak, incompetent, and incapable, and others as threatening, rejecting them, and their future as uncertain and negative, which increases the likelihood of the presence of psychopathologies (Beck et al., 2015, Beck, Grant, et al., 2021).

However, reflective/superordinate processing can function as a sort of protective factor, as it can inhibit a maladaptive response or reduce the implementation of a specific mode, in addition to promoting a functional response. The adaptive mode is one in which the entire network with the dimensions of the individual's personality (cognition, affect, motivation, and behavior) is functionally responding to internal needs and external factors, promoting a balance between the means (Beck et al., 2020).

In summary, the contents of the studies included in this review suggest that personality is composed of a system

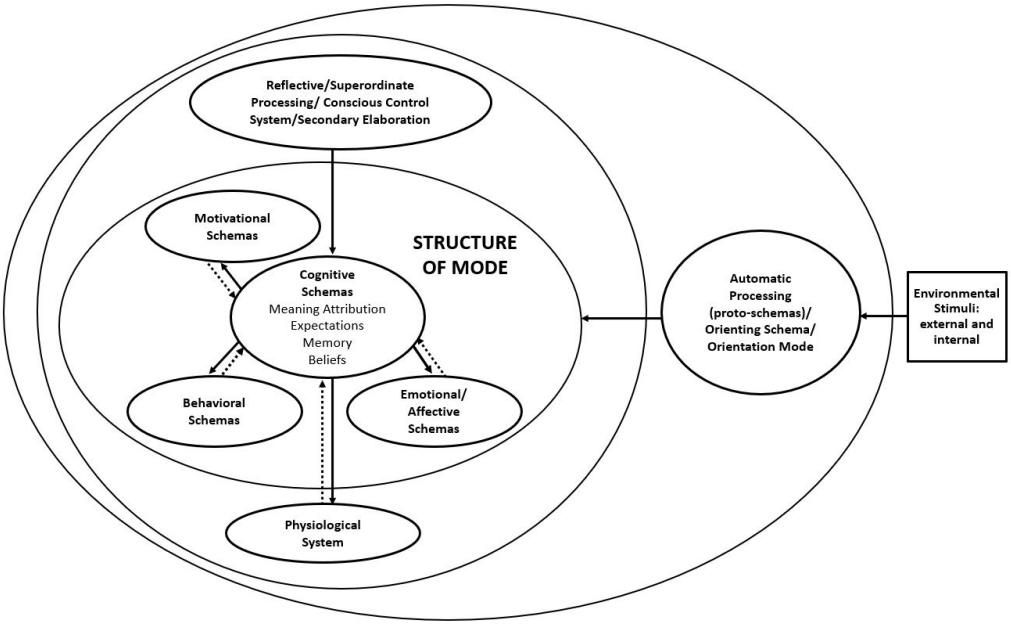


**Figure 2.** Diagram of the activation and structure of the mode integrated with information processing*.
*Graphical representation adapted from Beck's (1996) mode.

of modes, integrated with cognitive, emotional, motivational, and behavioral components (Beck et al., 2020), which will influence the processing of environmental stimuli up to the formation of a response (Beck et al., 2015). The activation of the various modes, including the transition from one mode to another, will depend, among other factors, on the interpretations of the individuals of the data imposed on them by the context, as well as their attentional focus, thus enabling adaptation or non-adaptation to situations (Beck & Haigh, 2014; Beck et al., 2020).

## *Specificities of mode*

In general, Beck (1996) defines three categories of modes: a) primitive modes, focusing on demands related to evolution, such as survival, protection, and security; b) constructive modes to enhance individual resources; and c) minor modes directed towards everyday activities, which are easier for the individual to activate and deactivate, a process that is completely different in psychopathological conditions.

Furthermore, in addition to the classification regarding mode functionality (adaptive and maladaptive modes), as discussed in the previous subsection, the studies included in the review reveal that there is a categorization of modes in terms of psychopathology, meaning they belong to the broader group of maladaptive modes. Thus, the various psychopathological modes (Beck, 1996) can be conceptualized as primitive modes, such as, for example, depressive mode, anxious mode, suicidal mode, panic mode, specific phobic mode, and obsessive-compulsive mode, corresponding to mental disorders or mental health problems. Additionally, the classification can encompass personality disorders, compulsive behaviors (drug use, excessive eating, anorexia, and self-harm), and psychotic conditions. Three texts (Beck, 2018; Beck et al., 2020; Beck, John, et al., 2021) specifically addressed modes related to schizophrenia, one (Beck et al., 2015) discussed modes in personality disorders, one the depressive mode (Moorey, 2010), one the erectile dysfunction-related mode (Nobre & Gouveia, 2000), one the anxious mode (Beck & Clark, 1997), and two the suicidal mode (Ghahramanlou-Holloway et al., 2015; Rudd, 2000). When addressing the suicidal mode, Rudd (2000) differentiates between suicidal modes and non-suicidal modes or facilitating modes, which are composed of cognitions, affects, and behaviors that increase the risk of activating the suicidal mode by including self-destructive behaviors, for example. Additionally, the author proposes another category, compensatory modes, which encompass behaviors that reduce the occurrence of behaviors associated with the risk of suicide, as well as include functional beliefs that are important for the restructuring of maladaptive cognitions by individuals. Furthermore, Beck and Haigh (2014) describe two types of modes relevant to understanding endogenous depression, mania, anxiety symptoms, and paranoia: the self-expansive mode and the self-protective mode. The self-expansive mode is a network aimed at increasing personal resources or the value that the individual attributes to themselves. On the other hand, the self-protective mode is constituted by a network oriented towards identifying dangers and threats, as well as coping with them.

Beck et al. (2015) accurately summarize the relationship between the specificity and activation of modes in psychopathological processes. The authors point out that the strong activation of dysfunctional schemas and modes is at the core of mental disorders. For example, in anxious conditions, the threat mode is excessively activated; in depressive conditions, the mode has dominant schemas related to self-devaluation

of the individual; and in panic conditions, the mode involves components associated with the imminence of a catastrophe. As for modes in personality disorders, Beck et al. (2015) state that they tend to be denser, more stable, and more easily activated compared to the modes in the previously mentioned conditions. What will differentiate each personality disorder are the predominant beliefs and strategies. For example, in the narcissistic mode, beliefs for achieving higher status predominate; in the dependent mode, contents related to seeking relief and attachment predominate; and in the obsessive-compulsive mode, the purpose to gain greater control over oneself and others predominates.

### *Interventions targeted at modes*

Most of the studies included in the review addressed intervention elements that consider aspects related to the TM, except for Nobre and Gouveia (2000), which emphasized the process of elaborating the cognitive model of erectile dysfunction based on the TM. The interventions proposed by the studies in the review that focus on the entire mode or its components are described below. It is worth noting that, as it is not within the scope of this article, the description of strategies and techniques will not be detailed.

In the first detailed description of the TM, Beck (1996) indicated three essential actions for "treating" the maladaptive mode: deactivating it, modifying its structures and contents, and building or reinforcing adaptive modes in order to neutralize it. For this, in addition to distraction strategies and skills training, the author emphasizes the modification of dysfunctional beliefs, especially unconditional ones categorized as core beliefs. On the other hand, Beck and Clark (1997) were specific in proposing cognitive and behavioral interventions for the treatment of patients suffering from anxiety, in order to deactivate the primitive threat mode and strengthen the activation of more constructive and reflective thought modes. However, the authors do not detail which techniques and strategies are indicated, only mentioning the importance of reducing cognitive errors associated with anxious conditions and the exposure technique.

Ghahramanlou-Holloway et al. (2015) also proposed interventions for a single mode, the suicidal mode. They described Post-Admission Cognitive Therapy, an adaptation of a CBT protocol aimed at suicide prevention in hospitalized patients. The treatment consists of four phases: case conceptualization, skill acquisition, relapse prevention, and post-outpatient treatment. In addition to common strategies in other protocols, such as cognitive restructuring, emotional regulation, acquisition of skills (e.g., problem solving), Post-Admission Cognitive Therapy includes specific interventions to deactivate the suicidal mode and activate adaptive modes in patients. Furthermore, Rudd (2000) summarized the treatment directed at suicidal patients. Despite the emphasis on cognitive restructuring in treatment, the author understands that individuals cannot perform it without activation of the suicidal mode with all its components. Consequently, aspects such as the activation process of said mode and the emotional, motivational, and behavioral aspects that integrate it are fundamental for significant and lasting changes in the personality of the patients. Therefore, occurrences of suicidal crises should be expected by therapists, as this is an important stage of treatment leading to changes in content, reduction of triggers, and improved activation threshold of the suicidal mode. Rudd (2000) emphasizes that, initially in treatment, focusing on facilitating modes and on the development and refinement of compensatory modes (see definitions in the Specificities of modes subsection) do not contribute to the improvement of patients, as these modes are not at the core of suicide.

On the other hand, when addressing the maintenance cycles of depression, Moorey (2010) indicated that the proposed model based on the TM is useful for the first phase of treatment. That is, the developed mode should be used in the case conceptualization process, both for initial sessions so that patients have an overview of the factors that keep the depressive mode activated, besides being useful for psychoeducating them about the cognitive model, and for specifying the modal components related to individuals. Another benefit of using depression maintenance cycles is making patients aware that the presence of depressive symptoms is due to the psychopathological condition, not personal aspects of themselves. Finally, it also aids the definition of treatment goals.

In the treatment of individuals with personality disorders, Beck et al. (2015) emphasized that the main objective is to reduce the valence of maladaptive modes and enable the greater intensification and availability of adaptive modes, either through the modification of dysfunctional schemas or the development of functional ones, respectively. Furthermore, Beck et al. (2015) highlighted the role of cognitive interventions as the main catalysts for the desired changes. However, they also highlight that using a variety of strategies for an extended period with a focus on restructuring the cognitions of patients with personality disorders is usually essential. While there are specific interventions selected based on each personality disorder, in general, interventions for this clinical group consist of cognitive (e.g., labeling imprecise or distorted inferences, examining possible explanations for people's behavior, analyzing information in schema diaries, and defining ideas or constructs relevant to self-concept or the current situation of the patient), behavioral (e.g., monitoring and scheduling activities, behavioral rehearsal, modeling, assertiveness training, behavioral redirection techniques, behavioral chain analysis, graded exposure tasks, stimulus control, and contingency management), and experiential (e.g., role-play, recalling experiences and reviewing childhood, mental imagery, calming and expressive exercises,

clarification of values, and attention-based exercises) techniques and strategies.

While there are traditional CBT protocols for specific mental disorders (Beck & Haigh, 2014), Beck et al. (2020) describe a unique method for deactivating maladaptive modes and activating adaptive ones, whether for psychopathological cases or not. Similar to Beck et al. (2015), Beck and Haigh (2014) list a series of interventions based on the components of the Generic Cognitive Model. The selection includes cognitive interventions (e.g., psychoeducation and cognitive restructuring), behavioral interventions (activity monitoring and scheduling, identification, engagement in prosocial behaviors and meaningful or pleasurable activities, relaxation, distraction, use of competitive neutralization behaviors, graded exposure tasks, and behavioral rehearsals), and attentional focus interventions (e.g., thorough review of records, behavioral experiments, and mindfulness practices are suggested) (Beck & Haigh, 2014).

Beck et al. (2021), Beck et al. (2020), and Beck (2018) propose modal interventions that integrate CT-R for patients with schizophrenia, and Beck, Grant, et al. (2021) and Beck et al. (2020) for individuals with severe psychopathological conditions, such as cases with negative symptoms, delusions, hallucinations, communication challenges, trauma, self-mutilation, aggressive behavior, and drug use.

CT-R, influenced by some aspects within the cognitive-behavioral approach, such as the fact that it is transdiagnostic, is based on patients' strengths and focused on building a meaningful life through values (Beck, Grant, et al., 2021; Beck et al., 2020). It presupposes case conceptualization, experiential learning, strengthening positive beliefs and actions, and emphasizes a good therapeutic relationship. The concept of recovery in CT-R encompasses the recovery of interests, capacities, aspirations, problem-solving ability, effective communication, and resilience (Beck, Grant, et al., 2021). The essential components of treatment consist of accessing and activating the patient's adaptive mode, encouraging its development and maintenance, and working on strengthening the mode for resilience building, as well as reducing the strength of the maladaptive mode (Beck, Grant, et al., 2021; Beck et al., 2020; Beck, 2018).

By focusing on the activation and maintenance of the adaptive mode, CT-R (Beck, Grant, et al., 2021) has four essential components: 1) accessing and energizing it through human connection regarding interests and activities that stimulate the individual, enabling the mode to occur more frequently and predictably; 2) developing it through eliciting and enriching aspirations, in other words, extracting meaning from what people truly desire in their lives; 3) updating it with daily positive actions to realize the meanings valued by the individual, which increases the likelihood of strengthening positive beliefs and weakening negative ones; 4) strengthening it by drawing conclusions from the experiences lived throughout the therapeutic process, which promotes the development of resilience and autonomy. The entire treatment is guided by the Recovery Map, used for gathering information and planning strategies and interventions.

### *Future Agenda*

Among the 11 studies analyzed in this review, only two (Beck et al., 2020; Rudd, 2000) addressed the need for advancements regarding the theory of modes. Although Rudd (2000) emphasizes the importance of refining the theory of the suicidal mode, the author does not specify which theoretical aspects require greater depth. However, he indicates that it is essential to conduct experimental studies that validate the mode in question. For example, investigations that explore peculiarities of belief systems, modal differences according to the individual's mental disorder, and ultimately, develop and validate a suffering tolerance scale based on the mode model.

The indispensability of having instruments to measure the various components of the modes was also emphasized by Beck et al. (2020). Two recommendations were made: 1) measuring the intensity or speed of mode activation, and 2) examining specific cognitions and attitudes related to the process of deactivating one mode in order to activate another. It is worth noting that, among the studies included in this review, only Nobre and Gouveia (2010) described and used a measure with such a focus. The Sexual Model Assessment Questionnaire specifically evaluates three components of the mode: automatic thoughts in sexual situations, affective response, and physiological response associated with each thought.

## DISCUSSION

The objective of this article was to comprehensively identify, map, summarize, and report on the relevant literature available on the Theory of Modes related to Beck's Cognitive Model. The scoping review elucidated five main categories of findings regarding the TM, which are discussed in more detail in this section. Firstly, the studies revealed a scarcity of empirical investigations demonstrating the validity of the TM. The studies that did demonstrate it were limited to specific modes, namely the depressive mode (Moorey, 2010) and the erectile dysfunction mode (Nobre & Gouveia, 2000), not assessing more global theoretical aspects of the TM.

One hypothesis for the limited quantity of empirical research on the TM could be the incomplete understanding of important aspects of the theory by therapists and researchers in the field of CBT. While ATB identified the existence of modes in the early development of cognitive theory in the 1960s and 70s (Beck et al., 2020), it was not until the 1990s that the first formulation of the TM was presented to the scientific community including the description of modal components

and the activation process, among other elements (Beck, 1996). However, some theoretical aspects were only clarified almost 20 years later, involving the continuum between adaptation and maladaptation, information processing, and schema activation, for example (Beck & Haigh, 2014). Finally, new contributions, such as the relevance of socio-cultural aspects in mode activation, and for the first time, the explicit indication by ATB of the need for research on the TM, were only made recently (Beck et al., 2020). In this manner, since the TM was formulated over a long process, and even then, did not count on entirely clarified data, researchers in the field of CBT may have been limited from delving empirically into the TM. It is worth adding that, due to the fact that the first description of the TM was published in a book chapter (Beck, 1996), professionals around the world may have had difficulties in accessing the material. Furthermore, it could be assumed that researchers may not have felt the need to systematically include the TM in their studies because the linear cognitive model is already able to explain almost entirely various psychopathological conditions and be useful in their treatment. However, currently, it seems that the inclusion of the TM will be crucial, as one of the current trends in CBT is the dedication to treating severe psychopathological conditions with CT-R, which is based on the TM (Beck, Grant, et al. 2021). In addition to this need, there are revisions and possible updates to existing clinical protocols with the integration of the TM (J. Beck, 2021).

Another finding of this review is that over the years, production related to the TM remained concentrated in the United States, consistent with the conclusion drawn by Fordham et al. (2021) when they revealed the limitation of research in the field of CBT in countries outside of USA. Additionally, most of the contribution observed in the reviewed studies came from the primary author of the mode model, ATB. The findings highlight the need for conducting more studies, especially randomized clinical trials, systematic reviews, and meta-analyses, addressing clinical application based on the TM under different conditions, populations, and contexts to promote theoretical and practical advances in the field of CBT.

Regarding the definition and composition of the described modes, the conceptualization and function of the construct remained largely the same over time, with few changes, revealing the consistency of the TM. However, the results reveal that more detailed description of the components that integrate the modes and their interactions is something that still needs to be further explored in the literature. It is assumed that insufficient depth regarding mode elements may hinder better understanding of the mode activation process. Possibly, as a result of this deduction, among other justifications, Beck et al. (2020) suggest the need for the development of instruments to measure the different components of the modes. Therefore, it is observed that, although modes are a network composed of cognitive, emotional, motivational, and behavioral domains that act synchronously and interact mutually, studies predominantly emphasize the elements and functioning of the cognitive component (e.g., Nobre & Gouveia, 2000). Beck et al. (2020) caution that while cognitive schemas are crucial within a mode, as they, for example, control information processing (Beck & Haigh, 2014), the mode must be understood holistically with all the domains that make up personality. This understanding is a paradigm shift from the transition from the linear cognitive model to the Generic Cognitive Model, as observed in the history of the construction and refinement of the TM (Beck, 1996; Clark & Beck, 1999; Beck & Haigh, 2014; Beck et al., 2020).

Furthermore, most of the reviewed studies do not explore more specific characteristics of the modes, such as aspects of intensity, load, and durability of an adaptive and maladaptive mode. It is necessary not only to develop studies to measure these mode elements, as stated by Beck et al. (2020), but to include these variables in the formulation of maladaptive modes as well. Productions included in the review are limited in these aspects, such as Ghahramanlou-Holloway et al. (2015), Moorey (2010), Nobre and Gouveia (2000), and Rudd (2000).

Still regarding the global view of the mode, the review is consistent with recent explanations of how the activation of maladaptive modes occurs by involving the presence of errors in information processing and cognitive biases that trigger positive or negative affect and dysfunctional motivations and behaviors, for example (Beck, John, et al., 2021). Possibly, due to the cognitive component being generally the first to be activated in the mode, which then activates other personality functions (Beck et al., 2020), this may contribute to researchers using the TM to emphasize this path of mode maladaptation. This situation provides fertile ground for imprecise understandings of the cognitive model and the interventions derived from it. Therefore, the exclusive use of the original linear cognitive model is a limited view of the current scope of Cognitive Theory. This assumption is based on the latest edition of one of the most important books in the field of CBT (J. Beck, 2021), which already includes important elements of CT-R, largely based on the TM, in the treatment of patients who do not have severe mental health problems. It is worth noting that J. Beck (2021) states in the preface of the book that CT-R is currently being adapted for non-hospitalized clients with a wide range of mental disorders or psychological problems, or individuals with medical conditions with psychological components.

Furthermore, the findings reveal that one of the greatest contributions of the TM to the field of CBT is that through the process of mode activation, it is possible to elucidate that symptoms belonging to mental disorders are a continuum with “normal” cognitive, emotional, motivational,

and behavioral reactions and the errors of everyday life (Beck, John, et al., 2021). In other words, individuals usually manage to adjust to specific demands of the environment with the activation of an adaptive mode, whether it be experiencing anxiety in situations of real danger, anger in response to offenses, sadness in the face of loss, or joy and pleasure when gaining something, resulting in synchronous functional reactions. However, when this process is exaggerated, it becomes maladaptive, and symptoms may arise (Beck, John, et al., 2021; Beck et al., 2020). Therefore, biases in cognitive processing and the alternation between mode activation also occur in the absence of psychopathologies, as the compositional structures of the mode can also be observed in its functioning and activation (Beck et al., 2020). The differentiation of certain disorders facilitates the identification of triggers for activation, cognitions, emotions, and behaviors, but this does not constitute a limitation in the use of the model, precisely because it is transdiagnostic (Beck & Haigh, 2014) and focuses on the activation and deactivation of modes. Beck has been pointing out the need to look beyond psychopathology since the 1990s (Beck & Clark, 1997), which is consistent with the new direction indicated by J. Beck (2021).

In addition to the need for an updated graphical representation of the mode activation process that incorporates elements such as information processing, which has already been included in the scheme proposed in this review (see Figure 2), it is also necessary to include distinct forms of functional and dysfunctional outcomes for individuals. Furthermore, it was found that the reviewed studies need to consider recent updates to the TM (Beck, John, et al. 2021; Beck et al., 2020) regarding the functioning of maladaptive modes, such as the suicidal mode (Ghahramanlou-Holloway et al., 2015; Rudd, 2000), depressive mode (Moorey, 2010), and erectile dysfunction mode (Nobre & Gouveia, 2000).

Another aspect identified as a result of the conducted scoping review was the greater detailing of the influence of other factors in mode activation. According to Beck et al. (2020), in addition to the balance between external and internal factors of individuals, their sociocultural expectations also play a role in this process. For example, it is a consensus that the formation and contents of cognitions inserted in individuals' belief systems vary according to cultural context, which also impacts behaviors (Naeem, 2019). Therefore, Beck's TM contributes to enabling the field of CBT to consider sociocultural components in research and treatments.

Regarding interventions targeted at modes, it was found that the predominant focus was on productions that emphasized the deactivation of maladaptive modes. However, it was only with the implications in the treatment of clients with schizophrenia that strategies and techniques for the construction and activation of adaptive modes, as well as their maintenance, began to be used more consistently. This scenario, in light of the promising results of CT-R (Grant et al., 2018; Grant et al., 2017), led to new trends in the field of CBT.

## FINAL CONSIDERATIONS

This review has some limitations. More recent research has been focused on CT-R, which is based on the Theory of Modes. Due to the search window defined for this review, it was not possible to include more recent studies that demonstrate interventions and provide a more concrete explanation of the use of the TM, such as the study by Beck, John et al. (2021). Additionally, we chose to restrict searches to research that specifically focused on Beck's TM and its clinical implications, rather than studies that tangentially touched on the topic or presented other definitions of modes and schemas. It is suggested that future studies conduct broader comparisons of similarities and differences between Beck's definition of modes and those of other authors, and how this may impact clinical practice. Furthermore, studies that provide cognitive conceptualizations based on the Modes Model and interventions that encompass this model, such as CT-R, are also recommended. Another limitation was the absence in this review of productions that did not originate from the searches conducted in the databases used, such as Clark and Beck (1999), Beck (2008), and Clark and Beck (2010). In the same vein, no national studies were found, which may indicate shortcomings in how up to date Brazilian therapists and researchers in the field of CBT are.

From the selected texts, an important gap in the literature regarding the use of interventions and theoretical aspects of the Modes Model is also evident. As the linear model is widely used in CBT interventions, the Modes Model has been less explored in the literature. Further studies are needed, for example, to delve into what adaptive modes are and how they are formed, as well as the functioning of reflective processing, recently referred to by that term. Additionally, the need to deepen interventions for patients without a diagnosis becomes pressing, since Beck posits the applicability of the Modes Model to this target population as well.

However, the conducted scoping review demonstrates that the Modes Model postulated by Beck in the 1990s was constructed and rethought over the years, expanding to encompass new possibilities. The use of the Modes Model is applicable in disorders such as anxiety and depression, severe mental disorders like schizophrenia, and also in cases without a diagnosis in order to encompass the functioning of the individual. Based on culture and context to understand what is adaptive or not for each person, the use of the Modes Model encompasses important aspects that go beyond the understanding and treatment of symptomatology.

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