#### Review paper

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# **Roots of Alexithymia**

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**Abstract** - This paper presents the historical background and theoretical framework of alexithymia and the development of the instruments that measure this theoretical construct more accurately. The alexithymia concept was derived from clinical observation, initially formulated without an underlying theoretical framework. Nowadays, alexithymia is a part of the theory of cognitive processing and regulation of emotions. The paper also reviews the interest alexithymia aroused in research and clinical work of various fields of psychology, particularly psychoanalysis. The concept was developed from clinical experience with psychosomatic patients that responded poorly to psychotherapy. The development of the concept from categorical to dimensional is highlighted. Alexithymia was conceptualised as a defense mechanism, but also as deficit pathology. It overlaps with the concept of mentalization and can be viewed both in terms of state and trait features. Finally, the measuring instruments for alexithymia are comprehensively listed.

**Keywords:** alexithymia, psychoanalytic theory, psychosomatic disorder, the theory of mind, mentalizing

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# Historical background and theoretical framework of the alexithymia concept

The term alexithymia (Greek; a = lack, lexis = word, thymos = emotion, mood, or feeling) was coined by Sifneos and introduced in the early 1970s to denote a cluster of features including difficulty identifying and describing subjective feelings, a restricted fantasy life, and preoccupation with trivial aspects of external events' characteristics [1].

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Clinical observation of alexithymia date back to the 1940s [2]. Alexithymic deficits were described in patients with classic psychosomatic diseases as well as in general psychiatric patients, particularly in those responding poorly to psychoanalytic therapy [3-6]. Reusch described affective and cognitive disturbance due to developmental arrest in early childhood when emotions are not well connected with words and expressed through bodily channels [3], while Kelman associated externalized living as modus vivendi [6]. Marty and de M'Uzan's [7] introduce a concept of pensée opératoire (operative thinking), denoting the absence of fantasy and other manifestation of the depleted inner mental world

of feelings, ideas about intentions, needs, attitudes and focused on external events. They also suggested a vulnerability to somatic illness. Marty [8, 9] attributed it to a deficiency in mentalization – a concept introduced in the early 1960s. Almost simultaneously, Krystal independently described similar observations among patients with substance use disorders and posttraumatic states [10, 11]. Krystal first highlighted alexithymia as possibly the most critical single factor diminishing the success of psychoanalysis [12]. Rubins emphasized that Horney was the first to label these patients as alexithymic [5, 13]. McDougall referred to these individuals as normopaths, dis-affected and anti-analysands, and she warned of prolonged periods of stagnation in therapy [14-16]. In 1967 Sifneos reported his preliminary observations on some patients' distress from psychosomatic illnesses [16]. He recognized that they have no pathology of conflict as neurotic patients have, but rather show deficits in the ability to experience feelings. In the subsequent three years, Nemiah and Sifneos conducted a more systematic examination of previously tape-recorded interviews of patients with two of the following classic psychosomatic diseases specified by Alexander (duodenal ulcer, bronchial asthma, rheumatoid arthritis, ulcerative colitis, hypertension, hyperthyroidism, and atopic dermatitis) [17-19]. Their conclusion was that these patients have difficulty in describing and identifying their feelings. Also, many of these patients showed a thought content consistent with the concept of pensée opératoire. In the seminal publication, Nemiah, Freyberger, and Sifneos fully explicated core features of alexithymic individuals [20]. The year 1976 was defining for the alexithymia construct, when it was selected as the central theme of the 11th European Conference on Psychosomatic Research in Heidelberg, Germany. At the meeting, Sifneos told attendees that 'The word was simply used to describe certain clinical observations that were made over very many years. I tried appropriately to use a Greek word or a pseudo-Greek word for descriptive purposes' [21]. Alexithymia engulfs a disturbance in affective and cognitive functions and is characterized by a difficulty recognizing and verbalizing feelings, and a paucity of fantasy [1]. Nemiah and colleagues made the distinction between emotions and feelings [21]. Emotions have the neurophysiological component and the component of motor-expression of affect. Both components must have mental representations before the conscious experience of feelings [20]. More recently Damasio emphasized the same conceptual distinction and highlighted that emotions precede feelings [22]. Sifneos and Nemiah pointed out that alexithymia is not an absence of emotions, but rather a deficit in elaborating feelings [16]. Nemiah, Freyberger and Sifneos also reported that 'Although many individuals may initially speak of being nervous, or sad, or angry, if they are pressed to describe their feelings further and to tell the examiner what being sad or nervous or angry feels like, it rapidly becomes apparent that they are totally unable to do so' [20]. Many psychoanalysts and psychotherapists observed that those patients are deficient in specific psychological capacities and do not respond well to traditional interpretative psychotherapies [5, 6, 23].

#### Lack of love, joy, and happiness

We can imagine an alexithymic person as an individual who lacks psychological mindedness, demonstrates a minimal interest in play and has concreteness in dreaming and thinking; someone who has limited awareness of emotions and drives, and a utilitarian style of living, whose behavior is guided by rules instead of inner feelings, fantasies, and wishes. When attending psychoanalytic therapy, an alexithymic individual fills the session with a monotonous chronological recital of external events and is unable to engage in psychotherapeutic therapy, provoking feelings of dullness and boredom in the therapist. Hence, it is very likely that alexithymia will be associated with less improvement in psychotherapy [24]. The alexithymic individual has a limited ability to experience pleasurable emotions such as joy, love, and happiness [25, 26]. Krystal conceptualized the course of maturation of emotions as a progressive desomatisation also linked to learning of words and subsequently differentiated into different subjective feelings [27]. Furthermore, the failure to link feelings with fantasies and to reflect on inner experience pushes the mind toward a preoccupation with the details of external events, which is characteristic of pensée opératoire [28]. With alexithymia, the emotions are still felt, but the connections with words and images are interrupted, the emotions are poorly represented at higher levels of consciousness, resulting in a deficit of conscious feelings and difficulties in identifying and verbalizing feelings. It is likely that individuals with difficulty identifying, verbalizing, and reflecting on feelings would be inclined to greater emotional arousal in response to emotional stimuli [29]. Individuals with alexithymic deficits can have outbursts of sadness or rage, which may seem to be at odds with the definition, but they have no understanding of these strong emotional expressions [30].

### Alexithymia and the concept of mentalization

During the 1960s in an attempt to understand the role of pensée opératoire in

psychosomatic illness, the French psychosomatic school introduced the concept of mentalization [8, 9, 31]. During the 1990s, Lecours and Bouchard extended the contributions of Marty and other French analysts by proposing a hierarchical conceptual model with levels of mentalization which shows some similarities to Krystal's theory of affects and Lane and Schwartz's hierarchical model of levels of emotional awareness [28, 32, 33]. It was around that time when Fonagy and Target adopted the concept of mentalization and defined it more broadly as the capacity to think about one's own and others' mental states regarding feelings, desires, and intentions [34, 35]. More recently, Fonagy, Bateman and Luyten described mentalization as a multifaceted construct with cognitive and affective components and indicated that mentalizing is not granted and constant capacity of the mind, but is in constant flux and dynamic and interplay context of specific attachment relationships is also influenced by the level of distress in specific moments [36]. According to Taylor and Bagby the way that Fonagy understands mentalization [36], and the way Lane applies it, is very different from how it was conceptualized originally by French psychoanalysts [8, 9, 23, 31, 36, 37]. Lane and colleagues argue that scientific developments since the 1970s, including the concept of 'theory of mind' or mentalization, make it essential to expand the alexithymia concept [38]. He permits a shift to a perspective that difficulty in verbalizing is the indicator, not the cause of the problem. Vanheule and colleagues also have highlighted that alexithymia is an indicator of an underlying process [39, 40]. While Taylor, Bagby, and Parker argue that alexithymia does not embrace the cognitive aspects of broad mentalization construct, the authors of this paper see externally oriented thinking as a teleological stance which is a developmental stage in mentalization [41]. Teleological stance/mode is extreme exterior focused thinking in which only observable change or action is considered to be a valid indicator of the intentions of others [42]. Lane and colleagues report that the Levels of Emotional Awareness Scale (LEAS) correlated positively with some measures of 'theory of mind', which is not the case with the Toronto Alexithymia Scale [37]. Some individuals with a high degree of alexithymia might be impaired in their ability to read the intentions, desires, and emotional states of others, but measures of alexithymia were not designed to assess this ability [43]. Several researchers have found associations between alexithymia and poor empathic abilities, which is consistent with clinical observations and suggests that impaired empathy is a correlate of alexithymia [28,44-46].

# Dimensional or categorical construct?

While Lane and colleagues proposed two subtypes of alexithymia anomia (lack of words for emotions) and agnosia (not knowing one's emotions), Primmer suggested various degrees of alexithymia [37, 47]. The concept of affective agnosia is a cue that alexithymia is not merely a difficulty in finding words for feelings, but involves a deficiency in the mental representation of emotions [37]. Contrary to Nemiah and Sifneos, Krystal regarded alexithymia as a dimensional construct and reported that 'Most patients are able to experience some feelings some of the time' and stated that alexithymia is not an 'all or nothing' manifestation [28]. It is possible that the same individuals with alexithymia might express fluctuations in their level of emotional awareness and they shift back and forth on the continuum between affective agnosia and anomia proposed by Lane and colleagues [37]. Following Krystal's ideas about the impact of trauma on affect development and affect regression, the degree of alexithymia in a person is likely to reflect the extent of trauma experienced by the person during childhood or as an adult, and whether or not an attachment figure was available to contain and modulate the person's distress [48]. Contemporary theory and research of alexithymia suggest continuous rather than categorical approach, as it often includes trait and state components alike [37, 47, 49–52]. The empirical results of different studies provided substantial finding for viewing alexithymia as a dimensional construct, as well as findings from several different taxometric investigations [23, 50, 51].

# Primary versus secondary alexithymia

A distinction between primary and secondary alexithymia was made in the last century [53]. Primary alexithymia was thought to reflect 'structural or neurobiological defects' and secondary or acquired alexithymia was seen as emerging from 'developmental arrests or from a catastrophic environmental onslaught', or a reaction to life-threatening illness or medical treatment [25, 54]. Secondary alexithymia is thus amenable to change when the medical illness or life setting improves [55-57]. Taylor, Bagby, and Parker have pointed out that alexithymia is the name of the multifaceted construct, and regardless of etiology, is not only a difficulty in finding words for emotional feelings or emotional non-expression in the face of situational stressors that clears when stress decreases [41].

#### Defense mechanism

Several psychoanalysts advocated that alexithymia is ego defense or immature defense mechanism against anxiety and underlying neurotic conflicts [5, 6, 58-60]. On the contrary, Krystal argued that alexithymia is a defense in a teleological sense only, as it is an arrest in affective and cognitive development [61]. McDougall reconciled with the proposed explanation that defense theory and the deficit/developmental arrest theory are not mutually exclusive [62, 63]. Her theory depicts alexithymia as a massive defense against primitive dreads and overwhelming pain rather than neurotic anxieties. Other authors perceive alexithymia as massive defense against intolerable emotions as well as a deficit in the mental representation of emotions, or as a diminished capacity for imagination and mental representation of emotions [23, 33, 58, 64].

#### State and trait features

Empirical findings demonstrate that although alexithymia is a trait, it shows some state variation as a reaction to the presence of illness [23, 49, 65]. Patients affected by panic disorder might resolve the alexithymic reaction only after remission when symptom severity returned to the premorbid level [66]. This supports the hypothesis of alexithymia as a personality trait with state characteristics which wax and wane together [66]. Fonagy P., Bateman A., and Bateman A. emphasize that in contrast to alexithymia, mentalization is not a static and unitary skill or trait but a dynamic capacity [67]. Several studies have shown lack of absolute stability of alexithymia, although generally speaking, an individual's degree of alexithymia is fairly constant in clinical situations and other interpersonal contexts [65, 68, 69].

# Instruments developed to assess alexithymia

Since the concept of alexithymia was introduced as a coherent construct, several re-

searchers have attempted to develop reliable and valid instruments for its measuring. Many of observer-rated questionnaires, self-report scales, and projective techniques are available, but most of these with poor psychometric properties [70]. Haviland has given a detailed overview of the instruments for measurement of alexithymia by enlisting them as self-report, structured interview, semi-structured interviews, observer reports, projective test, and self-report / rater scored [71].

Most researchers agree that clinically observable features of alexithymia consist of four salient components (restricted imaginal process included), even though the widely used measurement of alexithymia, Toronto alexithymia scale (TAS-20), consists of three subscales [20]. Vorst and Bermond included impaired capacity for experiencing feelings of emotion as the fifth component of the alexithymia concept [72]. Some researchers have suggested fantasizing and emotionalizing as correlates rather than prominent constituents of the alexithymia construct, while others have proposed externally oriented thinking (EOT) subscale substantially different than difficulty identifying feelings (DIF), and difficulty describing feeling (DDF) subscales [73,74]. Some of these topics were explored recently, and it has been suggested that restriction of imaginal capacity might be a less salient component of the alexithymia construct [75]. The same study supported pensée opératoire as a salient component of the alexithymia construct which might be adequately assessed by the EOT subscale [75]. For decades, the concept of alexithymia has challenged discussion concerning facets that constitute this construct, which is reflected in the subscales of different instruments for measuring alexithymia [29]. Nevertheless, empirical research is challenging to

address the complexity of the multifaceted alexithymia construct. Measurement of alexithymia has been proven as problematic in the clinical and nonclinical sample [76].

Some of the earlier instruments for measuring alexithymia reflect the duality of theoretical perspectives and categorize individuals into those with and without alexithymia, such as the first instrument for measurement of alexithymia Beth Israel Hospital Psychosomatic Questionnaire (BIQ), or interviewbased Diagnostic Criteria for Psychosomatic Research, Alexithymia (DCPR-A) [77]. DCPR-A assesses 12 psychosocial syndromes clustered into five diagnostic areas, one of which is alexithymia with difficulties verbalizing and communicating emotional states, reduced fantasy, external thinking, physical reactions to strong emotions; outburst of anger, crying, or joy [78]. BIQ, as well as Alexithymia Provoked Response Questionnaire (APRQ) and Karolinska Psychodynamic Profile (KAPP) are assessment scales to be used with an interview [79, 80].

Some authors suggest that self-report scales do not reliably assess individuals with a high degree of alexithymia, who may lack the introspective capacity to accurately evaluate their difficulty in identifying and describing subjective feelings [54, 81, 82]. The Shipko and Noviello Alexithymia Scale (SNALEX) lacks construct validity as a measure of alexithymia in psychiatric patients [83]. Twentytwo item MMPI Alexithymia Scale was developed in Denver from the first 556 items derived from Beth Israel Psychosomatic Questionnaire (BIQ) and is supposed to have more stability over time [84]. Unfortunately, MMPI Alexithymia Scale as well as the original and revised versions of the Schalling-Sifneos Personality Scale (SSPS)lack validity and have poor internal reliabilities [74, 85-87].

The Amsterdam Alexithymia Scale (AAS) is a self-report questionnaire covering five essential features of alexithymia and encompasses fantasizing and analyzing emotions [88]. Sifneos developed previously mentioned observer-rated BIQ, but with lack of adequate interrater reliability [41, 89]. Following suggestions of Sriram, Taylor and Bagby developed a modified version for measuring alexithymia with six items that assess affect awareness and six items that assess operative thinking [30, 90]. The same authors gave the most significant contribution to the development of instruments for measuring alexithymia. Nowadays, Modified-BIQ is used only occasionally. Later, they developed the Toronto Structured Interview for Alexithymia (TSIA) which is a more reliable method then self-report question measurement [91]. Measuring alexithymia with structured interview method assesses the imaginal processes, although the items may not adequately capture wish fulfillment imaginations and fantasies, which was the content emphasized by Krystal, and Nemiah, Freyberger and Sifneos [20, 92]. The TSIA consists of 24 interview questions distributed across four sixitem subscales and includes a separate subscale for measuring the fantasizing facet over the three facets also assessed by the TAS-20 [50]. The TSIA correlates positively with the TAS-20 in a variety of samples [91]. Rorschach Reality-Fantasy Scale (RFS) or Rorschach Alexithymia Scale (RAS) represent an alternative method for assessing the creation, imaginal capacity and potential space between reality and fantasy [93-96]. The Scored Archetypal Test (SAT9), similarly to Rorschach, uses projective instruments to measure the degree of alexithymia [97]. The California Q-set Alexithymia Prototype (CAQ-AP), an observer- and a self-report measure of the alexithymia construct, compares to which extent the alexithymia is determined either by the patient or by an observer [98-100]. Nemiah, who actively participated in the construction of this instrument, stated that CAQ-AP seems to provide the most accurate and complete description of alexithymia, as it was initially derived from clinical observation [71]. Observer Alexithymia Scale (OAS) is a self-report questionnaire to be completed by a subject's acquaintance or a relative and has 33-items based on a five-factor structure: distant, uninsightful, somatizing, humorless, and rigid [101]. Lane and Schwartz proposed a complex hierarchical model of cognitive-emotional development which can be assessed with the self-report instrument Levels of Emotional Awareness Scale (LEAS) [33,102]. Although the LEAS may adequately assess the levels of emotional awareness construct and the continuum of increasing cognitive complexity, and can also distinguish between affective agnosia and anomia, it 'was not created as a measure of alexithymia per se' [82], and was recently described simply as 'a performance measure of the ability to put emotions into words' [38, 82, 102]. The recent meta-analytic review has shown a small overlap between LEAS and TAS-20 [103]. The Bermond-Vorst Alexithymia self-report Questionnaire (BVAQ) was developed to improve assessment of the salient features of alexithymia as a diminution of fantasy [72]. Vorst and Bermond view emotionalizing as a fundamental personality dimension that falls outside of the alexithymia construct [72]. However, recent network analysis of the BVAQ did not support emotionalizing as a distinct component of the alexithymia construct [29]. Recognizing the limitations of existing measures, the Toronto Alexithymia

Scale (TAS) was developed with concern for empirical and theoretical congruence with the alexithymia construct. It encompasses five different features of alexithymia including lack of introspection, social over adaptation, and limited fantasy life together with difficulties remembering dreams [104]. Initially, it had 41 items. Half of these items were phrased negatively, to compensate answering tendencies and at the end, only 26 were retained. Fifteen items had to be dropped due to low correlations [105]. The resulting scale with 26 items comprising the TAS was clustered into a four-factor structure and covered diminished daydreaming (supposed to represent a limited fantasy life). In the available literature, we have found it as the original 26-item TAS whichis still used worldwide [104, 106]. In subsequent studies, the TAS-26 was found to have some psychometric shortcomings such as social desirability, a high number of items measuring diminished daydreaming, and low item correlation, also the daydreaming factor correlated negatively with the first factor and had little theoretical coherency in the alexithymia construct. The authors of the scale suggest that self-report assessment of daydreaming activity is confounded by a social desirability response bias and may not adequately capture the capacity for imaginal activities [70]. They also added that the compositional structure of the TAS-26 does not represent the separate domains equally. So they decided to develop an improved and revised version TAS-R where all items assessing daydreaming were eliminated [26]. In the first revision, TAS-R had 23 items and a two-factor structure with DDF and DIF items tending to collapse into one single component [70, 105]. In the second revision they added 17 new items, and at the end, 20 items were included in TAS-20

consisting of three factors DIF, DDF, and EOT. It was considered as being independent from the socially desirable answers. In empirical studies, the TAS-20 is widely used as a measurement for alexithymia construct because of its supposed good psychometric properties [105,107]. TAS-20 provides a dimensional and categorical assessment of the alexithymia features. It incorporates empirically derived cutoff scores as well as scores ranging from 20 to 100. The TAS-20 has been translated into more than twenty languages and has been cross-validated by confirmatory factor analysis in Western, Eastern European, East Asian, and Middle Eastern countries [108-112]. These findings support the view of alexithymia as a universal trait rather than a culture-bound construct. The TAS-20 indirectly assesses imaginal processing of alexithymia by the EOT subscale, even though this subscale correlates negatively with measures of fantasy [113, 114]. The omission of an explicit assessment of imaginative processes may produce issues of 'noise' and unreliable responding that is assumed to be associated with the self-report method or the weakest point of a chain of TAS-20 measurement [50]. Kooiman, Spinhoven, and Trijsburg highlight unsatisfactory low internal consistency of the EOT factor and low test-retest reliability for DDF and EOT subscales [105]. They also noted that TAS-20 assesses some, but not the fantasy aspect of alexithymia. Their opinion is to use the TAS-20 in empirical research combined with some other instruments for alexithymia [105]. Similar viewpoint have Rokvić and Jovanović who suggest a modification of the EOT subscale [115]. Although TAS-20 authors recommend using total TAS-20 scores, researchers often calculate total and subtotal scores and evaluate all relationships with external correlates [71]. Many studies found that the TAS-20 weakly correlated with older age, male sex, lower socioeconomic status and fewer years of education [82]. The common limitations of the self-report method are poor self-insight as alexithymic patients usually are not very self-reflective, dissemblance and various response styles, as well as poor comprehension of some of the respondents [105, 116-118]. One of the possible TAS-20 limitations is that highly alexithymic individuals cannot accurately assess their deficits in affect awareness due to lack of insight [23]. Lane and colleagues added an inherent difficulty with the use of self-reports to measure, and that is the reason why authors recommend using more than one method when assessing alexithymia [30, 43, 50]. Vanheule noted that asking a person if he or she is unaware of his or her feelings is to a certain extent paradoxical and therefore, measuring alexithymia by self-report is problematic [119]. On the other hand, Taylor, Bagby, and Parker yielded good results regarding construct validity and endorsed TAS-20 as a valid measure of the alexithymia construct [41,107].

#### Limitations

In this review we focused on the historical background and theoretical framework of the alexithymia construct and the instruments developed to assess alexithymia. Due to the abundance of theoretical and empirical knowledge on the alexithymia construct, we could not encompass the genetic and environmental/developmental factors in the etiology of alexithymia, as well as attachment theory, childhood trauma and all other factors that distress the development and affect regulation. We have to acknowledge the

common limitations of narrative versus systematic literature review as a potentially biased source and selection of literature, less evidence-based inferences as well as qualitative analysis instead of quantitative synthesis.

#### Conclusion

Alexithymia is not classified as a mental disorder in DSM-5. Nevertheless, it is accepted that alexithymia has a negative impact on a variety of somatic and mental health treatments. The recent review 'The relationship between alexithymia and morbidity' listed many somatic and mental disorders and their

connection with the alexithymia construct [120]. Alexithymia is an intriguing topic and has generated a large body of research in the past 40 years. Debates about the definition and measurement of alexithymia continue even though its etiology has not been firmly established [71].

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#### **Conflicts of interest**

None to declare.

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# Korijeni aleksitimije

**Sažetak**- Ovaj pregledni rad predstavlja povijesnu pozadinu i teorijski okvir koncepta te razvoj instrumenata koji mjere aleksitimiju. Koncept aleksitimije proizašao je iz kliničkog promatranja, bez prethodno osmišljenog teorijskog okvira. Danas je aleksitimija dio kognitivne teorije i teorije regulacije afekta. Aleksitimija je pobudila veliko zanimanje psihoanalitičara, kao i kliničara drugih teorijskih usmjerenja. Koncept je nastao iz kliničkih iskustava sa psihosomatskim bolesnicima kod kojih je uočen nezadovoljavajući odgovor na psihoterapiju. U ovom radu opisujemo razvoj od kategorijskog do dimenzijskog koncepta aleksitimije. Aleksitimija se može razumjeti kao obrambeni mehanizam, ali i kao patologija deficita. Preklapa se s konceptom mentalizacije. Mogu se razlikovati njene *state* i *trait* karakteristike. U završnom dijelu članka navedeni su svi instrumenti za mjerenje aleksitimije.

Ključne riječi: aleksitimija, psihoanalitička teorija, psihosomatske bolesti, teorija uma, mentalizacija