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COGNITIVE-BEHAVIOURAL THERAPY FOR PATHOLOGICAL SKIN PICKING. EFFICACY AND PROCEDURES

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Summary

Pathological skin picking (PSP), also known as dermatillomania is characterized by excessive and repeated scratching or picking of normal skin or skin with minor surface irregularities. It leads to damage to the skin tissue and significant distress or functional impairment. What is important, this disorder is not caused by basic dermatological disease. Skin picking affects 1.5% of the general population and sometimes begins before the age of ten. Dermatillomania is closely related to trichotillomania (hair pulling disorder, TTM). While pathological skin picking has been documented in the medical literature since the 19th century, it has only recently been included as a distinct entity in psychiatric classification systems. Dermatillomania is not classified in the International Classification of Diseases, 10th Revision. However, in the 11th Revision and in the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition it was coded as excoriation disorder (ED), psychogenic excoriation or dermatillomania. Skin picking disorder has been included in the obsessive-compulsive disorder spectrum, given its overlap with conditions such as trichotillomania. One of the clinically effective treatments for dermatillomania is habit reversal training (HRT) and acceptance and commitment therapy (ACT).

Pathological skin picking

Pathological skin picking (PSP), also referred to as dermatillomania, is a repeating, ritualized scratching and picking of a healthy skin, which leads to visible skin damage. Self-mutilation is most commonly performed with one's own nails, pincers or toothpicks, rarely with needles and knives. People diagnosed with PSP pick skin on their face, arms, legs, stomach, back and hands [1-3], but mostly the face. Other areas are picked when the epidermis on the face is significantly damaged and the patient is forced to take a break from

picking it and let the wounds heal. PSP causes bleeding lacerations and ugly scars, which are a source of significant psychological distress to the patient (avoiding social events, group activities, going outside during daytime or avoiding well-lit places, formal events, entertainment, visiting restaurants and forming intimate relationships for the fear that others might notice the changes on the skin). Picking is a stress-coping mechanism, starting as an unconscious, uncontrolled activity [1]. Patients are aware of the consequences of their behaviour and many of them try to stop, but without effect [4]. Dermatillomania patients experience a strong feeling of guilt, shame, anger, sadness, anxiety etc., which are a part of their compulsive behaviour. And because they appear directly before picking the skin, some researchers regard this emotional dysregulation as the PSP pathomechanism. It is temporarily reduced after the action of picking and scratching the changes on the skin [5].

Considering the results of Keuthen et al. [1] research on the general population, the prevalence of dermatillomania is about 1.4%, however, this data may be underestimated due to the shame associated with admitting to having personal problems with skin picking. Researchers indicate that this disorder may be hereditary [1, 2]. PSP begins during puberty, which coincides with emerging dermatological changes on the skin of the face typical for adolescents (acne, seborrheic dermatitis, psoriasis), however, skin picking lasts even after the resolution of dermatosis. Some data suggest that this disorder may emerge at any age [6]. It occurs more often in girls and young women, nevertheless, one must consider that high prevalence of PSP among females may reflect only the discrepancy in seeking medical aid and may not indicate the actual occurrence in different genders [7].

The aetiology of the disorder is not precisely known. The following are among the possible causes of PSP: stress, anxiety, other psychological factors, traumatic events, particularly occurring in childhood and neurological imbalance connected to nervous system overload caused by stress. A number of triggers may cause an episode of skin picking in dermatillomania, often occurring simultaneously: stress, anxiety, idleness, boredom [8], exhaustion or anger [1]. Patients most commonly scratch pustules, crusts, scars, open wounds, skin changes after insect bites or just healthy skin [2]. The concomitance of pathological skin picking with other mental disorders has been confirmed in research, among the most common ones are: mood disorders, anxiety disorder, disorders caused by using psychoactive substances (alcohol, tobacco, drugs) and other impulse control disorders [1, 9].

There are two subtypes of PSP: impulsive and compulsive. Compulsive picking – aims at avoiding anxiety or behaviours occurring under the influence of obsessive thoughts about the skin. It is conscious behaviour. The patient tries to unsuccessfully resist picking. Impulsive picking may be totally automatic and connected to excitement, desire to feel

pleasure and reducing tension, the patient does not try to stop this behaviour. Researchers suggest that PSP may also have a mixed subtype [2, 7]. Certain studies examined which personality traits related to emotion regulation deficit allow us to predict certain PSP subtypes [10]. Results suggest that automatic (impulsive) skin picking is moderately related to avoidance, masochistic traits, and borderline personality traits, but is poorly associated with depression and psychological dependence. People exhibiting this PSP subtype may have deficits related to the ability to engage in goal-oriented actions. Skin tissue damage caused by repeated picking usually increases anxiety towards social interactions, thus amplifying personality traits connected to avoidance and maladaptive schemas. Compulsive PSP, however, may be a disadaptive coping strategy for dealing with unpleasant emotions (e.g. in borderline personality disorder) [7].

PSP in the classification of mental illnesses

The *International Statistical Classification of Diseases and Related Health Problems* — ICD-10 does not mention dermatillomania. Currently, PSP is regarded as behaviour which belongs to the group of habit and impulse disorders not classified elsewhere: F63.8 *Other habit and impulse disorders*: "This category should be used for other kinds of persistently repeated maladaptive behaviour that are not secondary to a recognized psychiatric syndrome, and in which it appears that there is repeated failure to resist impulses to carry out the behaviour. There is a prodromal period of tension with a feeling of release at the time of the act." [11, p. 123]. ICD-10 does not contain any mention of pathological skin picking, however, in the classification of mental disorders of the American Psychiatric Association – Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5, dermatillomania was added to a newly formed chapter: "Obsessive-Compulsive Disorders and Related Disorders" under the name "Excoriation (Skin-Picking) Disorder" code: 698.4 [12]. This classification (both in English and Polish language) does not have one term for this disorder, which may pose a problem from a diagnostic and definitional perspective: pathological skin picking, acne excoriee, excoriation disorder, dermatillomania, or skin-picking disorder are among commonly used terms. In DSM-5, pathological skin-picking is diagnosed in cases of repeated skin picking causing skin changes (criterion A), repeated attempts of decreasing the extent of, or resisting scratching (criterion B), and the behaviour is causing significant clinical distress or impairment of social, vocational, and other essential functions (criterion C). For a diagnosis under DSM-5, PSP cannot be caused by physiological effects of substances (*e.g.* cocaine) or the patient's general medical state *e.g.* scabies (criterion D), nor can it be explained by symptoms of other mental disorders (delusions or sensory

hallucinations in psychotic illness, attempts at improving perceived visual defects in body dysmorphic disorder, stereotypical movements in impaired movement stereotypies, auto-aggressive changes in self-inflicted wounds, which do not have a suicidal character – criterion E) [13].

In the eleventh edition of the International Statistical Classification of Diseases and Related Health Problems (ICD-11), published by the World Health Organisation, approved on May 2019, in the category "Obsessive-compulsive or related disorders" a subtype of disorders was identified, collectively referred to as body-focused repetitive behaviour disorders — BFRBD. This group includes trichotillomania, excoriation disorder (ED), other specified body-focused repetitive behaviours and unspecified body-focused repetitive behaviours. The new ICD-11 classification will be in effect from 2022. Pathological skin picking is also referred to as excoriation disorder in that document. This disorder is accompanied by repeated unsuccessful attempts at limiting or stopping the behaviour in the form of repeated scratching the skin on the face, arms, back and hands, leading to skin changes. Skin picking may occur in short episodes throughout the day or less frequently, however, this behaviour impairs the personal, family, social, educational, and vocational life of the individual [14]. Table 1 shows the changes in the new ICD-11 classification.

Table 1. **Comparison of selected groups of mental disorders and behavioural disorders in ICD-10 and ICD-11 [15].**

ICD-10	ICD-11
F50-F59 Behavioural syndromes associated with physiological disturbances and physical factors F50 Eating disorders F51 Nonorganic sleep disorders F52 Sexual dysfunction, not caused by organic disorder or disease F53 Mental and behavioural disorders associated with the puerperium, not elsewhere classified F54 Psychological and behavioural factors associated with disorders or diseases classified elsewhere F55 Abuse of non-dependence-producing substances F59 Unspecified behavioural syndromes associated with physiological disturbances and physical factors.	Obsessive-compulsive or related disorders 6B20 Obsessive-compulsive disorder 6B21 Body dysmorphic disorder 6B22 Olfactory reference disorder 6B23 Hypochondriasis 6B24 Hoarding disorder **6B25 Body-focused repetitive behaviour disorders:** 6B25.0 Trichotillomania 6B25.1 **Excoriation disorder** 6B25.Y Other specified body-focused repetitive behaviour disorders 6B25.Z Body-focused repetitive behaviour disorders, unspecified 6B2Y Other specified obsessive-compulsive or related disorders 6B2Z Obsessive-compulsive or related disorders, unspecified
F60-F69 Disorders of adult personality and behaviour F60 Specific personality disorders F61 Mixed and other personality disorders F62 Enduring personality changes, not attributable to brain damage and disease	Disorders specifically associated with stress 6B40 Post traumatic stress disorder 6B41 Complex post traumatic stress disorder 6B42 Prolonged grief disorder 6B43 Adjustment disorder

F63 Habit and impulse disorders F63.0 **Pathological gambling** F63.1 **Pathological fire-setting (pyromania)** F63.2 **Pathological stealing (kleptomania)** F63.3 **Trichotillomania** F63.8 **Other habit and impulse disorders** F63.9 **Habit and impulse disorder, unspecified** F64 Gender identity disorders F65 Disorders of sexual preference F66 Psychological and behavioural disorders associated with sexual development and orientation F68 Other disorders of adult personality and behaviour F69 Unspecified disorder of adult personality and behaviour	6B44 Reactive attachment disorder 6B45 Disinhibited social engagement disorder 6B4Y Other specified disorders specifically associated with stress 6B4Z Disorders specifically associated with stress, unspecified
	Impulse control disorders 6C70 Pyromania 6C71 Kleptomania 6C72 Compulsive sexual behaviour disorder 6C73 Intermittent explosive disorder 6C7Y Other specified impulse control disorders 6C7Z Impulse control disorders, unspecified

PSP and other disorders

Pathological skin picking indubitably needs to be classified as a compulsive disorder, because repeated, harmful behaviour may be a symptom of losing impulse control, as well as a manifestation of an obsessive-compulsive pathomechanism [16]. Specific qualities of the impulse control disorder group include: 1) repeated behaviours without rational motivation, 2) harmfulness of actions regarding own body or other people 3) actions connected with impulses that are hard to control [17, 18]. Dermatillomania is very similar to trichotillomania (TTM), involving impulsive hair pulling by the patient, accompanied by psychological tension which subsides after pulling the hair and is replaced with pleasure and relief. Pathological skin picking often occurs in people suffering from obsessive-compulsive disorder (OCD). The main trait which indicates the similarity between PSP and TTM – disorders belonging to the obsessive-compulsive spectrum, is the onset of the disease. Source literature shows that most commonly, pathological skin picking, as well as compulsive hair pulling, begins in puberty or early maturity, however, first symptoms may appear in childhood [19, 20]. Skin picking, similarly to hair pulling in TTM, is predominantly intended to relieve internal tension and negative emotions or to fill time. The similarity between PSP and TTM manifests in the occurrence between genders (more common among females), the dysfunctional nature of the disorder or attempts to hide it, whereas differences discovered by researches include the emotional triggers or time spent performing the dysfunctional behaviour [21]. Pain is one of the major biochemical factors indicating that the disorder resembles self-mutilation, because pain appears later, after one or two hours from the act of

skin picking or hair pulling [17]. Very often, patients with PSP exhibit no tolerance for imperfections on their own skin, which results in strong efforts to smooth out or completely remove the spots. Thus, it quite often happens that dermatillomania may be a part of a bigger issue connected to body dysmorphic disorder, which means the patient is preoccupied with supposed skin defects and actions intended to improve and hide them, as well as making sure that they look perfect on the outside [22]. Considering the clinical similarities – PSP is often misdiagnosed as OCD or BDD.

Repeated skin picking exhibits certain similarities to repeated compulsive rituals in OCD which may be a reason to form a hypothesis of a shared neurobiological pathway of these disorders. However, PSP is to a large extent a disorder diagnosed predominantly in women, and OCD or BDD has been observed in both males and females [1, 2]. Some researches state that obsession regarding one's own look in BDD patients may also predispose the patient to compulsive skin picking and developing PSP [3].

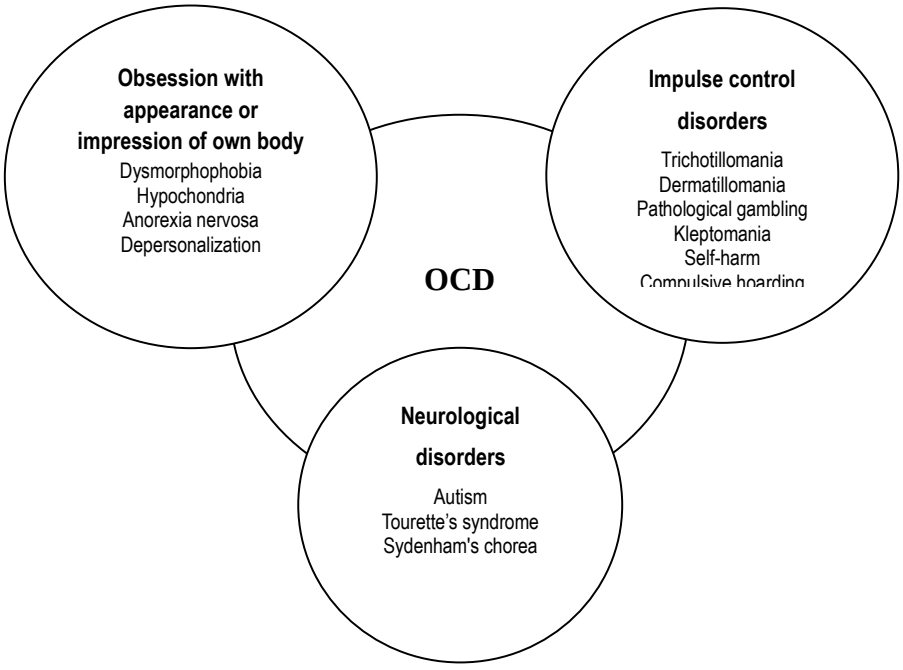

Figure 1. **Spectrum of the obsessive-compulsive disorder** [adapted from: 19, 20].

Figure 1 shows the obsessive-compulsive disorder spectrum, which in an interesting way combines disorders exhibiting similar traits, *e.g.* similar age of onset, chronic nature, and sometimes similar personality traits (most commonly borderline or antisocial personality) [10,

19]. This diagram is divided into three sets comprising the OCD spectrum disorders: obsession with appearance or impression of one's own body, impulse control disorders, and neurological disorders. Each of the disorders in each set shares traits similar to obsessive-compulsive disorder, for example, dysmorphophobia exhibits behaviours such as: excessive looking at oneself in the mirror and comparing oneself to others, hypochondria features repeated thoughts about the possibility of contracting a serious illness, kleptomania has behaviours focused on stealing, and in Tourette's syndrome it is coprolalia.

Cognitive-behavioural therapy

Cognitive-behavioural therapy (CBT) was developed in the 1960s, mainly in response to the limitations of psychotherapy at the time. The combination of cognitive and behavioural therapy is focused mainly on how people act in specific situations and how they view themselves, the world, and others. Cognitive restructuring of a particular event and the impact of negative automatic thoughts on behaviour, emotions, and physiological reactions are key in CBT. Starting in childhood, every person forms various beliefs. Most of them endure the entire life but some are modified by life experience. This way, a person forms their cognitive schema, unique to everyone. Cognitive schema is a structure which selects, codes, and evaluates stimuli acting on the individual [23]. It is cohesive and fixed knowledge of a person, shaped by past experiences. Cognitive schema extracts information fitting the current mood of a person from memory, thus, in ambiguous situations, they help interpret incoming information. This feature of cognitive schema causes new situations and events to be perceived and interpreted based on the basic beliefs of a person [23].

Core beliefs are basic beliefs about oneself, other people, and the world. People suffering from dermatillomania often have following beliefs about themselves: "I am ugly," "I am weak", and about others: "People judge," "People reject", and about the world: "The world is dangerous." PSP patients exhibit several strong conditional beliefs, such as: "If I am ugly, no one will love me." "If I have spots on my face, I have to get rid of them immediately," "You always have to have a beautiful face". Certain parts of the schema are distorted by cognitive errors, called cognitive distortions such as mindreading, catastrophizing, selective attention, and dichotomous thinking. Mindreading means the person assumes they know what others think about them. An example of this distortion in the context of PSP would be: "He thinks that the scars on my face are disgusting". Catastrophizing is creating dark scenarios in one's head and thinking what may happen: "I will never stop scratching my face." "The scars will get so big that everyone will see them." Selective attention means that only selected information, which fit the vision of the world

of the particular person are picked up and other information is omitted or negated. “They are only looking at my scars and scabs.” Dichotomous thinking includes viewing particular events only in polar opposites. “Either I have the smoothest face, or I am the ugliest person in the world” [23].

CBT is used in the entire world, it is often recommended by research centres as an exclusive or additional form of treatment for many disorders such as post-traumatic stress disorder, obsessive-compulsive disorder, anxiety disorders etc. Various models of disorders and protocols adjusted to them are used in practice. CBT has a defined structure and timeframe and is goal-oriented. While working with clients, the therapist is using many therapeutic techniques, both cognitive and behavioural intended to change the dysfunctional thinking, emotions, and behaviours.

Treatment of dermatillomania

Recently, there has been a noticeable increase in people suffering from pathological skin picking. They go to psychotherapy specialists mainly due to the fact that dermatologists, who are the first physicians in contact with the patient, started recommending cognitive-behavioural therapy together with dermatological treatment. In reality, however, only 30-45% of people with diagnosed dermatillomania seek treatment [7]. Research shows that in over 47.5% of PSP patients, first symptoms began before the age of 10, and about 11.5% of the patients may attempt suicide in the future [2, 21]. Yet, it is difficult to start therapy at such a young age because skin problems are typical in adolescents. Researchers and clinicians’ interest in PSP patients is increasing, which is apparent in the rising number of studies regarding excoriation disorder. Anti-depressants prove to be effective in treating dermatillomania [4], in particular escitalopram which belongs to selective serotonin reuptake inhibitors (SSRI) [24]. Other clinical studies quote mixed efficiency of SSRIs in treating PSP, they suggest, however, that N-acetylcysteine (NAC) [1] and naltrexone (opioid receptor antagonist) [25] may help with symptoms such as biting nails or picking skin. All researchers agree that the most effective treatment of dermatillomania combines pharmacotherapy with non-pharmacological methods [1].

CBT is a scientifically proven method in treating patients with a variety of mental disorders [23], it is also recommended to treat pathological skin picking [4]. CBT is the most common and most effective method of treating PSP or other body-focused repetitive behaviours such as TTM [26]. With regard to PSP, cognitive-behavioural therapy includes psychoeducation, cognitive restructuring, focus on preventing relapses by increasing the patient’s sense of own efficiency, and clearly defined techniques of reducing the need to pick

their skin. Thus, CBT involves working on changing the way of thinking that leads to specific dysfunctional behaviours, simultaneously introducing behavioural therapy, which leads to changing the compulsive actions [23]. Cognitive restructuring in PSP therapy begins with the patient recognizing their own system of evaluating outside appearance, condition of the skin on the face, that is developing metacognitive skills: "I have to have beautiful skin, otherwise they will not accept me", by learning to recognize the way of processing information – distinctive cognitive distortions and ruminating, ending with modification of interpreting relations between an individual and their surroundings: "If he is looking at me, that means he likes me, not that he is looking at my scars."

In disorders related to pathological skin picking, basic elements of the cognitive-behavioural therapy can be divided into two stages: 1) finding factors triggering and sustaining skin picking during habit reversal training (self-awareness training journal) and 2) developing the awareness of a patient's own behaviour with cognitive restructuring, which is a cognitive discussion of specific core beliefs and automatic thoughts, as well as a therapy based on acceptance and commitment [26]. Effectiveness of the behavioural interventions based on habit reversal training (HRT) was confirmed by research as an efficient method of non-pharmacological treatment of PSP [4], however, a combination of HRT with acceptance and commitment therapy (ACT) achieves very good results [1, 22].

Habit Reversal Training

Source literature provides examples of using habit reversal training to treat trichotillomania [27]. Due to the similarities between the underlying pathomechanism of TTM and PSP, habit reversal training was modified to better suit treating dermatillomania. The efficiency of habit reversal training requires consideration of several distinctive PSP traits: a) patients can abstain from scratching their skin only for a short while, b) tension and the feeling of discomfort during that time increases, evoking a state of anxiety in the patient, c) in a short time, sensory symptoms start to appear, *i.e.* tingling or itching of the skin, d) the act of scratching skin changes starts and the behaviour is reinforced by the resulting feeling of relief. Considering the traits above, HRT presents the PSP patient with alternative methods of dealing with tension and sensory symptoms before they start scratching their skin; it also provides specific guidelines regarding what to do if they succumb to the compulsive behaviour.

HRT includes:

1. Self-awareness training, comprised of daily monitoring skin picking: Places where the scratching occurred, grading the need to scratch on a scale from 1 to 10, the level of awareness of the particular behaviour on a scale from 1 to 10, emotions the patient is feeling while scratching and thoughts which accompany the act, body symptoms, effort needed to resist the scratching, and subjective assessment of the reason for skin picking, that is what in the patient's opinion lead them to the dysfunctional behaviour.
2. Relaxation training, mainly Jasobson's progressive relaxation, which involves tightening and relaxing particular muscle groups, as well as breathing training – practising diaphragmatic breathing 2-3 times a day for a week.
3. Developing a competing response, which involves selecting a substitute behaviour, preventing skin picking, as well as decreasing the desire to do it, *e.g.* slight tightening of muscles in the arm or hand [26, adapted from: 27]. The procedure of developing a competing response is as such: raise an arm straight ahead, tense the arm muscles for 10 seconds, 5 seconds break, repeat three times, then bend the arm at the elbow at a 90 degree angle and tense the muscles for 10 seconds, 5 seconds break – repeat three times. Then, bend the arm at a 45 degree angle and tense the muscles for 10 seconds, 5 seconds break – repeat three times. The sequence should be repeated until the desire to pick subsides. This procedure should be practised and used daily for a week before proceeding to the next step.
4. Situational training of competing responses requires practising tensing the muscles slightly in different places and situations, when it is likely that the desire to pick skin will appear. This desire is the strongest at home, in the bathroom, and whenever the patient is alone. Often, patients wait for everyone at home to go to sleep to start picking their skin. Daylight and an empty apartment facilitate scratching.
5. Relaxation training combined with competing response training means practising deep breathing and relaxation for a minute whenever the patient feels the urge to pick the skin. Then, they practice the competing response until the urge for the dysfunctional behaviour subsides [adapted from: 27].

The HRT procedure requires the particular stage of the procedure to start over whenever the patient succumbs to the compulsive behaviour. It is recommended to practice the sequence of habit changes every day, regardless of whether the desire to perform the compulsive picking appears. Getting social support by patients is also very important, it will encourage them to practice therapeutic exercises [adapted from: 27].

Table 2. **Exemplary HRT self-awareness training journal** (own elaboration)

Date	Place	Desire to scratch skin 0–10	Level of urge awareness 0–10	Emotions	Thoughts	Sensory symptoms (tingling, itching)	Effort to stop scratching 0–10	Reason for scratching

Acceptance and Commitment Therapy

Acceptance and commitment therapy is a psychotherapeutic approach created by Steven C. Hayes, Kelly G. Wilson and Kirk Strosahl [28]. It belongs to "third wave therapies" along with mindfulness-based cognitive therapy (MBCT), dialectical behaviour therapy (DBT), and schema therapy. ACT grew within the scope of contextual behavioural science (CBS), which in its premise was close to B. F. Skinner's radical behaviourism philosophy. However, ACT highlights the importance of verbal processes for the regulation of individual behaviour [28]. This therapy is focused on expanding the repertoire of patients' responses and actions in their environment, and not on reducing symptoms. The ultimate goal of ACT is to increase psychological flexibility of the patients, that is to allow them to live in accordance with their own values, even if this is connected to experiencing internal discomfort from negative emotions or thoughts. It is believed that avoiding these unpleasant experiences is related to the inability to have a valuable life. Psychological flexibility is not only a therapeutic goal but also a mediator of a change in therapy and the foundation for mental health [28]. ACT proposes to accept these thoughts and feelings instead of trying to control them and teaches to approach thoughts as what they actually are, *i.e.* products of the mind – not reality. One of the verbal processes contributing to the development of psychopathology is cognitive fusion. It involves assumptions that cognitive content is the objective truth about the human being and the surrounding world. The following thought may serve as an example: "No one will love me with such an ugly skin on my face". Cognitive fusion with such a thought in a dermatillomania patient may lead to a strong emotional response and increase the auto-aggressive behaviours to decrease tension and the experienced negative effect.

In cognitive fusion, a person treats thoughts, words, and events as if they were reality, that is they react to the constructs of their own mind as to a specific, real situation in the physical world [29]. Cognitive defusion is used to reverse this process, which aids separating

thoughts from reality and teaches how to look at one's own thoughts carefully and with distance, not taking them literally [30].

The effectiveness of acceptance and commitment therapy was confirmed by numerous research [28]. This type of cognitive-behavioural therapy, promoting acceptance of negative thoughts and emotions as an element of human experience and encouraging one to think about responses to these negative thoughts and feelings in a way consistent with individual values and goals, is effective in PSP patients. ACT is intended to break the pattern of avoiding experiences, which is attempts to change the frequency or form of the unwanted, internal experiences, including thoughts, emotions, memories, or bodily sensations even when such behaviour is a source of personal suffering [30]. A person suffering from PSP by scratching their skin tries to decrease their psychological suffering: "I want to have smooth skin, without spots, only then others will accept me and I will be beautiful." Internal tension to remove the spots, get others' sympathy, and avoid feeling negative emotions require more frequent cognitive contact with particular experiences. As a consequence, the person who is trying to avoid the experience has to face it again. Acceptance is an alternative process to avoiding experiences, which in ACT is understood as recognizing current thoughts, emotions, and sensations without trying to change their content, frequency, or form. The goal of acceptance is to increase the flexibility of the actions taken in the face of previously limiting experiences. This increases the frequency of behaviours consistent with the values and goals of the person. However, HRT does not teach competing response to skin picking. Using HRT intervention and ACT significantly decrease pathological skin picking or hair pulling in TTM [1, 22]. Certain studies indicate that considering the subtype of PSP one can select the most effective therapy [26]. In automatic skin picking (impulsive subtype) HRT works very well, however, in the compulsive subtype (where skin picking is a fully conscious action of the patient) the researchers suggest that it is necessary to use acceptance-enhanced behaviour therapy (AEBT), which is used first is unimportant. Research and numerous case studies indicate that AEBT may be effective in decreasing the intensification of skin picking [26, 30, 31].

Conclusions

Certain specialists regard pathological skin picking as a type of addiction or a form of self-mutilation, others formed a hypothesis that it is a result of the inability to cope with stress and negative emotions, however, it is not clear what exactly causes dermatillomania. Apart from the aetiology of this disorder, it is worth to notice that when left untreated it becomes a chronic illness, often causing a significant psychosocial dysfunction and may lead to life-threatening medical problems or suicidal behaviours. Controlling this behaviour is crucial to

maintaining long-term health and quality of life. Holistic PSP therapy should focus on: 1) precise diagnosis of the skin disorder and intercurrent mental disorders, 2) collaboration with dermatologist, 3) psychoeducation of the patient, 4) providing cognitive-behavioural therapy (including habit reversal training and acceptance and commitment therapy) as well as 5) using pharmacotherapy (SSRIs, N-acetylocysteinecysteine, naltrexone) – medicine selection should always consider concomitant disorders and the patient's history. Indubitably, using cognitive-behavioural therapy in treating dermatillomania leads to change in the dysfunctional beliefs of the individual, which positively affects the progress of the treatment. There is also evidence suggesting a positive impact on treating pathological skin picking with a combination of HRT and ACT, which is acceptance-enhanced behaviour therapy (AEBT), but this issue requires further examination.

What limits the effectiveness of cognitive-behavioural therapy in treating PSP are other concomitant personality disorders, most commonly borderline personality disorder as well as young age of the patient. Young people have not yet developed metacognitive skills and this may adversely affect or even prevent successful cognitive restructuring.

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