THE SIGNIFICANCE OF UNDERSTANDING BODY LANGUAGE IN DEPRESSED PATIENTS WITHIN THE CONTEXT OF CREATIVE PSYCHOPHARMACOTHERAPY

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SUMMARY

Since it is generally known that the human body is the best image of the human soul, this paper aims to explain how important body language is when diagnosing psychiatric diagnosis “depression”. It is important to point out the importance of other alternative approaches in the treatment of depression when standard psychopharmacotherapy is not enough. Body language is a powerful form of non-verbal communication that provides important traces of intentions, emotions, and motivations in other people. In everyday life, we collect information about what people think and feel by their body posture, manners, and gestures. Evaluations of clinical depression are traditionally based on verbal information. However, non-verbal expressive behavior, related to reflexive feedback of a person, may reveal negative emotional or social processes that are not fully controlled by patients therapy, along with other artistic therapies (art therapy, drama therapy, and music therapy are other artistic therapies that are applied in Great Britain) offers an attractive opportunity for patients because it enables them to work on those issues that are placed on non-verbal and pre-verbal level.

Creative psychopharmacotherapy is the concept that involves creativity as its main means. In this context, the importance of physical activity and body movements will be emphasized in the treatment of depression, when regular psychopharmacotherapy is not sufficient.

To conclude, the patient has the right to actively take part in creating a therapeutic relationship and responsibly contributes to overcoming psychopathology. The importance of physical activities and body movements is emphasized in the treatment of depressive people. Studies have shown that the anti-depressive effect of physical activity is increased with simultaneous use of antidepressants, as well as that movement therapy and music therapy, together with regular phar-macotherapeutic methods, help with fast recovery and that they can be used in a creative approach to problem-solving.

Key words: body language, depression, non-verbal communication, creative treatment, art therapies

INTRODUCTION

“Human body is the best image of the human soul.” - Ludwig Wittgenstein

Body language is related to non-verbal signals that we use to communicate (Tipper et al. 2015). It conveys a significant quantity of emotionally and socially relevant information (Adolfi & Tranel 2003, Heberlein et al. 2004, Bigelow et al. 2006, Atkinson et al. 2007). It is estimated that 60-65% of human communication is conveyed by non-verbal behavior (Burgon et al. 2009).

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In everyday life, we collect information about what people think and feel by their body posture, manners, and gestures (Tipper et al. 2015).

Think for a moment, to what extent a person is capable of conveying, just by using their facial expression. A smile can denote either approval or happiness. Frown may be a signal of disapproval and lack of happiness.

In some cases, our facial expressions can reveal our genuine feelings in a particular situation.
Physical activity has a positive effect on a few molecular brain systems. Therefore, together with standard pharmacological therapy, in the treatment of depression, physical activity can also be recommended. There is clear evidence that physical activity is useful in the treatment of mild and moderate forms of depression, and that it can alleviate symptoms of mild and moderate depression to the same extent as standard treatments. A combination of physical activity with these treatments can have additional benefits. Physical activities should be recommended to individuals who suffer from depression, in addition to psychotherapy and medicines (Andersson et al. 2015).

This paper aims to explain how important body language is when diagnosing psychiatric diagnosis "depression". It is important to point out the importance of other alternative approaches in the treatment of depression when standard psychopharmacotherapy is not enough.

**NON-VERBAL BEHAVIORS AND DEPRESSION**

Many non-verbal behaviors are subconscious and may represent a more precise image of a patient's attitude and his emotional state (Philipport et al. 2003). They may present the patient's anxiety related to a particular topic they have talked about, despite verbal statements that the topic is inappropriate and that it does not cause any discomfort.

It is of great importance to consider the non-verbal behavior of the patient when estimating the risk of damage to oneself or others.

Alternatively, non-verbal behavior can enlighten the sense of transfer and counter-transfer between the patient and the doctor (Gretchen et al. 2010).

During the first meeting with the patient, evaluation of mental status can provide precious information about the patient and it begins from the very first encounter in a waiting room. Anxiety can affect the first impression due to the visit to a psychiatrist. What is the patient’s body posture like? Is the patient nervous or fidgety or he looks calm and relaxed? Does he look depressed or easily frightened, for example when the door is closed? Is there any walking disorder as the patient enters the doctor's office?

In the office, a series of non-verbal behaviors that give information about the patient are noticed. Things like the place where the patient decides to sit, position during the conversation, eye contact, and the way the patient reacts to interpretations that overcome simple verbal recognition, should be taken into account. With time, the psychiatrist adjusts to the patient’s basic appearance, attitude, and behavior. Some of these non-verbal behaviors can direct the psychiatrist to a particular diagnosis.
Non-verbal behavior of psychiatrist affects, to a great extent, a dialogue between the patient and psychiatrist. Just like the psychiatrist observes the patient in the office, the patient observes a psychiatrist as well. Non-verbal behavior plays an important role in establishing therapeutic union in any type of patient’s interaction (Tickle-Degnen 2003).

**Theories of depression and non-verbal behavior**

A few theories of depression directly deal with non-verbal behavior and predict patterns that should be indicative of the state of depression. The hypothesis of affective dysregulation (Clark et al. 1991) defines depression in terms of valence, which records positivity or negativity (i.e. pleasantness or adverseness) of emotional state. This hypothesis claims that depression is characterized by a lack of positivity and excessive negativity. Deficient positivity is in accordance with many neurobiological theories of depression (Henriques et al. 2000) and emphasizes the symptom of anhedonia.

Excessive negativity is in accordance with many cognitive theories of depression (Beck 1967, Bower 1981) and emphasizes the symptom of rumination.

In favor of the hypothesis of affective dysregulation, with a few exceptions, observation studies have revealed that depression is characterized by decreased positive expressions, such as smile and laughter (Chentsova-Dutton et al. 2010, Gaebel et al. 2004, Gehricke et al. 2000, Renneberg et al. 2005, Rotenberg et al. 2002, Sloan et al. 2001, Tremeau et al. 2005, Tsai et al. 2003). Some studies have shown that depression is characterized by an increased amount of negative expressions (Reed et al. 2007).

However, other researchers have stated the opposite effect: that depression is characterized by decreased negative expressions (Gaebel et al. 2004, Renneberg et al. 2005).

**Facial and bodily expressions of depression**

Most symptoms of depression are noticeable. In depression, facial expressions and head movements (Joshi et al. 2013, Girard et al. 2014) are reduced.

Head movement speed is also slower in depression (Joshi et al. 2013, Girard et al. 2014). Omega sign and Veraguth’s fold are two facial features that are considered diagnostics of melancholic depression (Taylor et al. 2006).

Despite its long history and relative objectivity, these valuable signs are forgotten in current psychiatric practice (Saraf et al. 2019). Omega sign, (also known as "omega melancholic") was first described by Charles Darwin in 1872 as "grief muscles" in his book "Expression of emotions in humans and animals" where he, by graphic details, described melancholic depression, with predicted biological insight (Saraf et al. 2019).

Heinrich Schule (1878), a German psychiatrist, suggested the expression "melancholic omega", for distinctive cleavage of skin above nose dorsum (Saraf et al. 2019). It is called like that because it reminds of a letter O in the Greek alphabet (Omega), that appear as two vertical gaps between eyebrows that are joined together with a horizontal fold on top (Taylor et al. 2006). Veraguth’s fold is, in a similar way, a significantly noticeable sign that appears in chronic depression. Initially, it was described by Otto Veraguth in around 1911, who observed eyelid folds in patients with chronic depression (McDaniel et al. 2004). Veraguth’s sign appears in the form of triangular palpebral folds that move diagonally from side corners of the eyes, medially upwards, to the medial end of the eyebrow (McDaniel et al. 2004, Sadock et al. 2017).

In the wake of current progress in neurobiological understanding of mental illnesses, we are heading towards more objective tools for diagnosis and researching new paradigms for a better management of mental illnesses. In that context, the Omega sign and Veraguth’s fold are assuming new significance in the diagnostic and therapeutic domain (Saraf et al. 2019).

The diagnostic feature of depression is also lowered body posture. Persons with mild and moderate depressive symptoms have lowered posture. While research shows that upright posture improves self-confidence and mood in healthy individuals, a few researches have studied this in depressed individuals. The aim of the study was conducted by Carrisa et al. (2017) was to investigate if a change of the posture can reduce a negative effect and tiredness in people with mild or moderate depression, who had been exposed to stressful assignments. In the beginning, all participants had significantly more lowered posture than normative data. Postural manipulation significantly improved posture and increased a positive influence of awake and tiredness, compared to usual posture (Carissa et al. 2017).

**BRAIN AND DEPRESSIVE BODY LANGUAGE**

How does the brain "read" body language? What brain substrates out of decoding body movements, are directly involved in extracting meaning from affection loaded bodily expressions? Brain has few functionally specialized structures and systems for processing socially relevant perceptive information. Colliculus-striatal circle of subcortical superior pulvinar mediates reflexive perception of emotion from body posture, especially fear, and activates proportional reflexive motor responses (Cardinal et al. 2002, Sah et al. 2003, de Gelder & Hadijikhani 2006). The region of the occipital cortex, known as the outer body surface (EBA) is sensitive to body shape (Hadijikhani & de Gelder 2003, Astafiev et al. 2004, Peelen & Downing 2005, Urges et al. 2006). The fusiform gyrus of the ventral
CREATIVE PSYCHOPHARMACOTHERAPY OF DEPRESSION

Psychopharmacotherapy is an amazing field that can be understood in many different ways. That is both science and art of communication with a highly subjective dimension. With the arrival of a significant number of efficient and well-tolerated medicines for mental health and after the 1990s, it increased our treatment options of major mental disorders in more successful ways, with much better outcome of treatment, including full recovery. However, there is a big gap between our capabilities to achieve high efficiency in treatments and failure to achieve results in everyday clinical practice (Jakovljević 2013).

Any medical or psychosocial treatment consists of two components. One of them is related to the specific effects of the treatment itself, and the other one is related to the context of the treatment, individual perception, imagination, subjective meaning, and psychobiological response. Psychopharmacotherapy is a practice that is dependant on the context because different contexts affect the meaning of biological variables in different ways. Creating a favorable treatment context, as well as creative cooperation with patients and their families, can significantly improve the outcome of the treatment (Jakovljević 2013).

Cognitive-behavioral therapy (CBT) is a recommended treatment of unipolar depression in adults (Butler et al. 2005). However, medical records show that the rate of relapse ranges from 29% to 39% during one year and between 40% and 60% during two years (Hollon et al. 2006, Vittengl et al. 2007, Dobson et al. 2009). Medicines used in depression treatment have a similar efficacy as CBT in the treatment of depression, but the rate of relapse ranges between 29% and 60% during a one-year or two-year time period (Parker et al. 2008). There is a clear need for developing more efficient treatments of depression and for reducing the rate of relapse after the treatment.

Metacognitive therapy (MCT) (Wells 2009) is the treatment that can offer improvement because it is aimed at specific processes that are believed to increase the risk of depression. It is based on a model of self-regulatory executive function (Wells 2000), that suggests that low mood and depression are extended with consistent styles of thinking such as depressive called "cognitive attention syndrome" (CAS), affects positive and negative metacognitive uncontrollability and danger of rumination and concern, as well as non-adjusted executive control of attention process.

Empirical studies, such as Papageorgiou and Wells (2003) and Solem et al. (2016), have confirmed theoretically consistent relations between positive metacognitive beliefs, rumination, negative metacognitive beliefs, and depression in accordance with a model. The model predicts that recovery from depression requires a reduction of rumination, concern, and dysfunctional metacognitions, as well as changes of metacognitive beliefs (Wells 2009). Explanation of mechanisms of MCT changes can help extend and develop an understanding of depression and enrichment of the treatment itself (Hoffart et al. 2018).

Creative approach to psychopharmacotherapy could improve everyday clinical practice and bridge the gap. Creative psychopharmacotherapy is the concept that involves creativity as its basic means (Jakovljević 2013, 2021). In that context, the importance of physical activity and body movements in the treatment of depression will be emphasized, when regular psychopharmacotherapy is not sufficient.

Physical activities in the treatment of depression

What can be done when a regular psychopharmacotherapy fails in the treatment of depressed patients? Hundreds of epidemiological studies have shown that the risk of developing depressive symptoms can be 20-40% lower in physically active people compared to those who are not (Mammen et al. 2013). Aerobic physical activity of low to high intensity, including reduced sitting time, reduces the risk of developing depression (Låkartidningen 2015).

By means of the Cochrane database and other publications, at least 10 meta-analyses have been published, of viewable studies from 2001 (Lawor et al., 2001) to 2013 (Cooney et al. 2013), that examined the antidepressive effect of physical activity. One of the first meta-analyses was conducted in 1998. Compared to the treatment without effect, the effect of physical exercise is noticeable, without difference between different types of exercise. A better efficacy was also noticed if the treatment lasted for >9 weeks compared to <8 weeks. The best effect was recorded for moderate to severe depression (Craft et al. 1998). Data in the latest Cochrane report for the year 2013 (based on 39 studies) match with other, recent meta-analyses (Rethorst et al.
increased level of BDNF in people with depression and increased cell survival and growth of new nerve cells and synapses, especially in the hippocampus (but also in prefrontal and temporal brain area) as well as protection from nerve damage caused by stress and, in that way, probably be more resistant to stress, for instance through normalization of frequently elevated cortisol levels, as the result of increased activity in the hypothalamic-pituitary-adrenal cortex (HPA axle). Depression is related to a low level of neuroprotective hormone BDNF (neurotrophic factor) in people with depression and anxiety (Szuhaney et al. 2015).

Physical activity has a positive effect on few molecular brain systems. The examples are dopamine and norepinephrine, but also serotonin and endorphin, which stimulate increased formation of neuronal cells in the hippocampus, the center for learning and memory (Erickson et al. 2012, Eyre et al. 2012). In depression, a lower volume of the hippocampus is noticed and it is believed that the stress hormone, cortisol, plays an important role in the reduction of cell formation. It has been confirmed that reduced volume of the hippocampus is around 5% lower in depression (Cole et al. 2011, Schmaal et al. 2015, Bora et al. 2012, Du et al. 2012, Kempton et al. 2011, Koolschijn et al. 2009, McKinnon et al. 2009, Zhao et al. 2014). Physical activity will probably be more resistant to stress, for instance through normalization of frequently elevated cortisol levels, as the result of increased activity in the hypothalamic-pituitary-adrenal cortex (HPA axle). Depression is related to a low level of neuroprotective hormone BDNF (neurotrophic brain factor). This hormone will probably contribute to increased cell survival and growth of new nerve cells and synapses, especially in the hippocampus (but also in prefrontal and temporal brain area) as well as protection from nerve damage caused by stress and, in that way, reduce depression (Erickson et al. 2012, Eyre et al. 2012, Carek et al. 2011). Physical activity causes an increased level of BDNF in people with depression and anxiety (Szuhaney et al. 2015).

Creative art therapies in the treatment of depression

For those who have difficulties with expressing themselves by using just verbal language, as required by standard forms of treatment of mental disorders, art therapies can provide alternative means of expression, in order to help patients realize and overcome their problems (Utteley et al. 2015). Conceptualizing body, mind, affect, and perception as unity, Creative Art Therapies (CAT), such as music, dance/movement, art and drama therapy, as well as simple artistic interventions, use artistic media in order to approach the patient on creative and non-verbal level (Koch et al. 2011). Apart from cognitive ways, CAT is aimed at active creating, interception (bodily experience) and expression, in order to reach emotions and change behavior (embodied grade) (Prinz 2003). Usage of salutogenic approach to health and illnesses (Antonovsky 1997), CAT provides action possibilities aimed at maintaining health and focus on aspects of health promotion.

Art, music, dance, drama, and poetry, used as therapy, are called “creative artistic therapies”, because of their root in art and theories of creativity. These and other therapies that use self-expression as part of treatment are also called “expressive therapies” (Malchiodi 2005, 2013, 2014).

Recently developed Koch’s model of embodied aesthetics (Koch et al. 2011, 2017, Koch 2017) emphasizes the embodied effective nature of CATs (creative artistic therapies). Unlike ordinary therapies, all CATs stimulate and enable their patients to actively create or generate. Attention and concentration are, for example, affected by perception, exploring and creating artistic content, as well as explicit use of body (bodily perception and expression). Appropriate artistic media (art, music, dance, theatre) provide in that way various methods of activating resources and coping skills and increase flexibility of action, self-efficacy, and empowerment (Koch 2017, Oepen 2014, Bräuning 2012).

Music therapy (MT) is targetted use of music (perception, production, and reproduction of music) within a therapeutic relationship, aimed at recovery, maintenance, and promotion of physical and psychological Health (Anonymous 2017).

With the help of various instruments or one’s own voice, emotions and imagination are expressed and contact is made (Anonymous 2017, Kunzmann 2015). In that context, music deepens the ability to tempt oneself and others, symbolizes, and connects (Martin et al. 2018).

Dance movement therapy (DMT) is defined as the therapeutic usage of movements in order to strengthen the emotional, cognitive, physical, spiritual, and social integrations of an individual (EADMT). Physically, EADMT stimulates the vestibular cardiovascular system.
Religiosity, spirituality and depression

Religious and spiritual factors are increasingly being examined in psychiatric research. Religious beliefs and practices have long been linked to hysteria, neurosis, and psychotic delusions. However, recent studies have identified another side of religion that may serve as a psychological and social resource for coping with stress (Koenig). Many empirical studies have shown inverse associations between measures of religiousness and spirituality (R/S) and depression (Braam & Koenig 2019). The level of religious moral beliefs of war veterans in Bosnia and Herzegovina was inversely correlated to depression severity. The religious moral beliefs may help protection of the war veterans’ mental health stability after surviving multiple war traumas (Hasanović & Pajević 2016). Mind-body medical interventions are commonly used to cope with depression and yoga is one of the most commonly used mind-body interventions. Yoga could be considered an ancillary treatment option for patients with depressive disorders and individuals with elevated levels of depression (Cramer et al. 2013).

The reported observational studies suggest that frequent private prayer is associated with a significant benefit for depression, optimism, coping, and other mental health conditions such as anxiety (Anderson & Nunnely 2016).

Practicing religion (regular performing daily prayers) is associated with reduction of tendencies towards the tendency for risk, impulsiveness, and aggression. It is also associated with successful overcoming of emotional conflicts in war veterans who practiced religion than their peers who did not practice religion (Pajević et al. 2017, Hasanović et al. 2021, Hasanović 2021). Sufi music may reduce anxiety of patients undergoing medical procedures like haemodialysis, coronary artery surgery, angiography, colonoscopy, bone marrow aspiration and biopsy procedures. Evidence from single studies suggests effects on depression and stress as well (Gurbuz-Dogan et al. 2021).

Integrative approaches involve two or more expressive therapies for stimulating consciousness, stimulating emotional growth, and improvement of relationships with others. This approach is distinguished by combining modalities within the therapeutic session. Integrative approaches are based on various orientations, including art as therapy, artistic psychotherapy, and the use of art in traditional cure (Estrella 2005, Knill et al. 2005).

CONCLUSIONS

"The most important thing in communication is listening to what has not been said"

Peter F. Drucker

Non-verbal signals can warn a doctor about important states that can usually be predicted or denied. They can also help recognize if the patient feels comfortable with a particular topic of conversation. Apart from the importance of recognition of non-verbal signs in patients, the ability to control consciousness of one's own non-verbal behavior and the way it can affect interactions with patients is crucial for the improvement of our ability to establish a therapeutic relationship.

Mental disorders have a significant individual and social impact, and traditional treatments can show limited effects. It is important to observe every patient as an individual that needs to be motivated for treatment in a sense of creating a convenient therapeutic relationship as possible.

The importance of physical activities and body movements is emphasized in the treatment of depressive people. Studies have shown that the anti-depressive effect of physical activity is increased with simultaneous use of antidepressants, as well as that movement therapy and music therapy, together with regular pharmacotherapeutic methods, help with fast recovery and that they can be used in a creative approach to problem-solving.

The patient has the right to actively take part in creating a therapeutic relationship and responsibly contributes to overcoming psychopathology. It is necessary to have a personalized approach and use all potentials that a person possesses in order to create a convenient therapeutic response as possible. In that way, the patient himself is maximally involved in the treatment process, which can contribute to rapid recovery.

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