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CREATIVITY, MENTAL DISORDERS AND THEIR TREATMENT: RECOVERY-ORIENTED PSYCHOPHARMACOTHERAPY

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SUMMARY

This paper discusses interrelations between creativity, mental disorders and their treatment. The psychology of creativity is very important for successful psychopharmacotherapy, but our knowledge about creativity is still insufficient. Even that which is known is not within the armamentarium of most practicing psychiatrists. In the first part of this article creativity and possible associations between creativity, mental health, and well-being are described. The second part deals with the intriguing relationship between creativity and mental disorders. The third part emphasizes the role of creativity in the treatment of mental disorders. This paper ends by underlining the importance of a creativity-enhancing oriented, and personal recovery-focused psychopharmacotherapy in helping psychiatric patients achieve fulfilled and purposeful lives.

Key words: *creativity - mental disorders - personal recovery - creative psychopharmacotherapy*

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INTRODUCTION

There is a growing interest in the interplay between creativity and mental disorders, and in the role creativity plays in the success of psychiatric treatment. The importance of creativity in our personal and professional lives is growing, and it seems to be an essential feature of "a new age of creative mind" which looms on the horizon (see Wikipedia). One can say that success in life, in general, and success in disease treatment, in particular, depend on one's level of motivation, self-regulation and creativity. Creativity is affected by the ways in which we define and classify things and activities. Accordingly, patients should be viewed as active decision makers that are genuinely responsible for their own success in life as well as in therapy. According to The Physicians Charter, the principle of patient autonomy is one of the three fundamental principles of professionalism in medicine. It dictates that physicians must be honest with their patients and empower them to make informed decisions about the way they will be treated, cured or healed (see Jakovljević & Ostojić 2013). Self regulation, learning, motivation, and creativity skills are facets of creative psychopharmacotherapy as an art and practice of a learning organization (Jakovljević 2010). This concept views psychopharmacotherapy not only as the prescribing of mental health medications, but as a part of a creative life reorganization "with a little help from our medication friends".

The huge gap between the possibility of achieving high treatment effectiveness and poor results in clinical practice may be stitched by creativity. The immense capacity of human beings to be creative provides possibilities for the development of new mental health medicines, and for the more successful use of existing ones.

CREATIVITY, MENTAL HEALTH AND WELL BEING

Creativity refers to any idea, act, or product that significantly changes an existing domain, or transforms an existing domain into a new one in a meaningful and useful way (Thys et al. 2012, Sternberg 2006, Csikszentmihalyi 1996). According to Adler creative self represents "the dynamic aspects of human development", and is "the active principle of life", comparable to the concept of soul (Corsini 20002). It involves the forming of associative elements into new combinations that are meaningful, useful, or meet some needs. Usually, creativity is associated with divergent or lateral thinking (see De Bono 1990), imagination, fantasy, intuition, curiosity and their combinations, and it correlates with intelligence and psychoticism. One can say that mental processes leading to a new invention, solution, or synthesis in any area are pillars of creativity and creative thinking. Thinking generally includes mental processes in which images or ideas that represent subjects, objects and events are experienced or manipulated; these processes include imagining, remembering, problem solving, day dreaming, free associations, concept formation, and creative thought (Corsini 2002). Thinking styles are the mental frameworks that define how people process information and solve problems in specific situation. Creative thinking, critical thinking and reflective practice are interrelated and complementary processes. Creative thinking is associated with the creation and generation of ideas, processes, experiences and objects, critical thinking is occupied with their evaluation, while reflective practice is concerned with putting ideas into operation and taking stock of the outcomes and revising the approach accordingly. Creativity is defined by the presence of two important ingredients: originality (uniqueness or novelty) and effectiveness (relevance or appropriateness), both regarding

a particular context (see Abraham 2013). In other words, creativity involves discovery, improvement and creation. Creativity can be expressed in many different forms. According to Sternberg (2006) there are eight types of creative contribution: replication, redefinition, forward incrementation, advance forward movement, redirection, redirection from a point in the past, starting over/re-initiation and integration.

Creativity is a universal quality that exists in all people, but varies from person to person in the amount to which this potential is realized and developed. Unfortunately, most patients forget how to embrace this aspect of themselves. A creative sensibility refers to a "passionate commitment to creation as an intrinsically meaningful process and end in itself, sensitivities to the environment that can jeopardize or foster creative work, skills of aesthetic awareness and communication, and the capacity to break free from the confining ruts of customary and established patterns of thought and practices of the time" (Bartlett 2011). That which makes creative cognition different from normative cognition is still unknown. High creativity is attributed to flat associative hierarchies in semantic knowledge, defocused attentional processing, and cognitive disinhibition (Abraham 2013). Reduced white matter integrity in inferior frontal brain regions, increased gray matter in dorsolateral prefrontal and striatal areas, integrated white matter tracts in the corpus callosum and association cortices, greater right hemisphere contributions, increased frontal lobe activity, and heightened alpha synchronization have been reported in people with higher creativity (see Abraham 2013). The midbrain-cortex DA, 5-HT, and NE neurons which drive creative motivation interact with hemispheric and fronto-temporal influences on creativity (Flaherty 2011). The important impact of dopaminergic neurotransmission in creative thought and behavior is explained by its role in motivation, mental imagery including hallucinations and vivid metaphors, curiosity and novelty-seeking behavior, and reward-based drives (de Manzano et al. 2010, Flaherty 2011). It is interesting that intranasal oxytocin may reduce analytical thinking, and increase holistic processing, divergent thinking and creative performance (De Dreu et al. 2013).

For the purpose of this paper it is useful to make a distinction between "eminent creativity" and "everyday creativity" (Richards 1990). Everyday or ordinary creativity, also known as "little c" creativity, refers to the flexibility that helps us cope effectively with ever-changing personal and life problems, and find new solutions. It is not clear whether there is a gap or continuum between "big C" or "genius creativity" only possessed by a few, and ordinary creativity that all human beings possess (Andreasen & Ramchandran 2012). As creativity improves self-esteem, motivation, self-actualization and achievement, the concept of "everyday creativity" opens the door to psychotherapy and pharmacotherapy within a creativity paradigm. In these challenging and tempting times, it is more important than ever to be creative. According to humanistic psychology, creativity is significantly associated with mental health, well-being and intelligence. Creativity is an empowering and enriching process, and it helps people manifest something better for them. Creativity always begins with opening doors to better possibilities.

CREATIVITY AND MENTAL DISORDERS

„No great genius has ever existed without a strain of madness"
Aristotle

The association between creativity and mental disorders is an intriguing and controversial topic. This link has a long history dating from antiquity to the present time, popularized as the classic idea of the "mad genius", however the vast majority have dismissed the purported association as a myth and naive romanticisation of mental illness (Jamison 2011). There is a very controversial distinction between "normal creativity" or emotional creativity associated with bipolar disorder according to Jamison, and "genius creativity" or revolutionary creativity associated with schizotypy and schizophrenia according to Sass (see Thys et al. 2012). Mental disorders are generally recognized as harmful, disabling, devastating, and associated with negative stigma. This pessimistic view significantly contributes to less favorable treatment outcomes and a lower quality of life. However, there is both anecdotal and empirical evidence supporting an association between creativity and mental disorders (Andreasen 2005). Mental disorders may be associated with positive psychological traits of creativity, spirituality and resilience, but unfortunately, positive aspects are under-recognized as a potential benefit of mental disorders (Galvez et al. 2011). It has been proven that prominent creative people are at higher risk for certain forms of psychopathology including mood disorders, schizophrenia spectrum disorders, and alcoholism (Carson 2011). People in creative professions are treated more frequently for mental disorders than the general population (Kyaga et al. 2012).

The nature of the possible link between creativity and mental disorders is not known. There is an intriguing question: Why do some people with schizotypy become charismatics, while the others become patients with schizophrenia? There are several possibilities explaining the possible association between creativity and mental disorders. The link can be incidental or causal. Creative ability may influence a person to be vulnerable to mental disorders, and mental disorders may help one to be creative. In every adversity, including mental disorders, there is a seed of opportunity. Creative acts may be a way of dealing with the challenges and sufferings related to mental disorders. According to Carson (2011), shared genetic predispo-

sition, reduced latent inhibition (LI) and cognitive disinhibition that allow more stimuli into conscious awareness, and an attentional style driven by increased novelty seeking and neural hyperconnectivity with more interneuronal connections that may increase associations among disparate stimuli, are shared vulnerability factors for some mental disorders and creativity.

CREATIVITY AND TREATMENT OF MENTAL DISORDERS

Creativity, motivation and self-regulation together are sources of well-being and a fulfilled life by focusing on the body, mind, heart and spirit within the holistic body-mind-energy-spirit paradigm (see Jakovljević 2011). Creativity asserts life, frees the human spirit and helps conquer both mental and somatic disorders. The psychology of creativity is very important for successful psychiatric treatment, but our knowledge about this phenomena is still insufficient. Even what is known is not within the armamentarium of most practicing psychiatrists. The idea that creative expression can significantly contribute to the healing process has been present in many different cultures (Stuckey & Nobel 2010). Literature reviews confirm that creative activities can have a healing and protective effect on mental health by promoting self-expression, boosting the immune system and reducing stress (Leckey 2011). As a vehicle of self-expression creative activities can be used to express feelings, increase self-awareness and insight to situation, facilitate problem-solving, and enhance learning, all of which may help patients to have a sense of control in their lives (Creek 2002 quoted in Griffiths 2008).

The shared genetic vulnerability model of creativity and mental disorders suggests that mental disorders may be reduced by treating symptoms associated with vulnerability factors, enhancing protective factors associated with creativity and enhancing overall creativity (Carson 2011). In general, treatments can be roughly divided into ones that are creativity-promoting and creativity-killing. Creativity-promoting treatment involves stimulating patients to learn and use creative modes of thought and behavior and redirecting their interests into creative fields. It is a well known fact that creative expression can make a powerful contribution to the healing process (Suckey & Nobel 2010). Stimulating patients to work with creative and artistic processes affects more than their identity with sick role. Through creativity, imagination and visualization, patients may recognize their inner reservoir of healing and create a new healthier identity.

Today most psychiatrists and their patients rely on external pharmacotherapeutic motivation. Many patients need external motivation, encouragement and support. This type of treatment motivation produces some success, but full personal recovery is based on an optimal balance of internal and external motivation, creativity and self-regulation. This issue can be relevant to significant individual differences in treatment outcome. In the wide sense, psychiatric treatment is actually a creative enterprise within which psychiatrists and patients combine their resources to generate a new plan, develop a different outlook, formulate alternative behaviors, and begin a new life. There are many creativity techniques that psychiatrists can employ to encourage the development and expression of creativity in patients, e.g. SCAMPER (Substitute, Combine, Adapt or Adopt, Modify, Put to other use, Eliminate, Rearange or Reverse); six thinking hats (de Bono 2000); Disney creativity strategy; metaphors and reframing; goal setting and problem solving; past, present and future; etc.

PSYCHOPHARMACOTHERAPY AND FOSTERING CREATIVITY IN PSYCHIATRIC PATIENTS

The creative abilities of psychiatric patients may be significant indicators of treatment effectiveness which involves the therapeutic efficacy and the incidence of the adverse effects. Creative psychopharmacotherapy is a new concept incorporating creativity, both on the sides of psychiatrists and patients, as its fundamental tool. Mechanistic, linear and binary categorical strategies of thinking have produced many oversimplifications, false beliefs and myths about mental health medications (see table 1), preventing their creative application and leading to poorer treatment outcomes. Some of them are related to all medications, while some only to specific groups. Further progress in clinical psychopharmacology will depend on the creative integration of a number of distinct and complementary approaches to treatment practice.

Psychopharmacotherapy may alter, preserve, foster or damage creativity in ways that significantly influence quality of life and personal recovery. Mental health medications produce effects on cognition, mood and emotions, motivation, and behavior. They change the ways patients feel subjectively, the ways they experience things and interpret reality, the ways they think themselves and others, and their fantasies and impressions. They also influence the goals and aspirations of patients, and the ways in which various tasks in life are undertaken and possibilities are realized (Murawiec 2009). Creativity is related to brains that have an appropriate capacity for goal-oriented motivation, novelty seeking, flexible associative networks, and lower inhibition (Flaherty 2011). The effects of mental health medications on patients' creativity are an essential component in the consideration of psychopharmacotherapy regimens. Creative patients may prefer to tolerate higher levels of mental symptoms in exchange for lower dosages of creativity-killing pharmaceuticals (Carson 2011). Patients with bipolar disorders and schizophrenia commonly discontinue medication due to complaints of creativity diminution and cognitive impairments caused by drug treatment (Kyaga et al. 2011).

Table 1. Harmful myths about mental health medications that prevent their creative application

Myth 1.	Mental health medications are ineffective
Fact:	Mental health medications are effective if used properly/creatively
Myth 2.	Mental health medications represent only symptomatic treatment
Fact:	Mental health medications are involved in the normalization of the neuronal dysfunctions underlying abnormal patterns of thoughts, experiences and behaviors in different mental disorders
Myth 3.	Mental health medications are only for crazy people
Fact:	Mental health medications are for patients with mental disorders which are treatable and curable
Myth 4.	Mental health medications are addictive
Fact:	The vast majority of mental health medications are not addictive
Myth 5.	Mental health medications change personality and self
Fact:	Untreated mental disorders change and damage personality and self
Myth 6.	Mental health medications are toxic drugs
Fact:	Mental health medications are safe and non-toxic when used properly
Myth 7.	Mental health medications are for morally weak people
Fact:	Mental health medications are for people with mental disorders
Myth 8.	Mental health medications should be stopped as early as possible
Fact:	Mental health medications should be stopped when full recovery is achieved
Myth 9.	Mental health medication must be taken lifelong
Fact:	The vast majority of mental health medications should not be taken lifelong
Myth 10.	Mental health medications are the cause of violent, suicidal, or criminal behavior
Fact:	Mental health medications are unlikely to create new suicidal, violent, or criminal ideation
Myth 11.	There is no significant difference between mental health medications belonging to the same class when used in equivalent doses
Fact:	Global efficacy of mental health medications belonging to the same class is very similar, but specific effectiveness is significantly different
Myth 12.	Mental health medications with more mechanisms are better than those with less mechanisms
Fact:	Sometimes it is thrue, but not always
Myth 13.	Myth 13. Mental health medications with more mechanisms are “dirty” drugs
Fact:	There are no dirty medications, there is only unwise or “dirty” use of medications
Myth 14.	Monotherapy is recommended as good clinical practice in contrast to polypharmacotherapy which is implicitly or explicitly considered as bad clinical practice
Fact:	Creative polypharmacotherapy should be the rule rather than the exception

Having knowledge of the shared features that underlie creativity and mental disorders may help psychiatrists to preserve creativity while the mental disorders are treated with medications (Flaherty 2011). As per our current neuroscientific understanding of creativity mechanisms, the majority of implications for suggested treatment are based on theoretical inferences or those from basic research, rather than on controlled clinical trials (Flaherty 2011). In general, stimulating mental health medications are more helpful in fostering creativity in inhibited patients, while sedating ones are better in agitated patients. However, hypersedation may block or suppress creative expression of patients. Mental health medications may have a direct or indirect impact on the consumer's creativity. For example, by eliminating depression or anxiety, SSRIs can foster creative activity. However, SSRIs may lower appetitive motivations, such as libido and curiosity, and cause apathy syndrome. Regarding the effects on DA and NA transporters, there are significant differences between individual SSRIs (Stahl 2013) which may explain their different effects on creativity. As dopaminergic agents may increase creative motivation and goal-directed drives, taking SSRIs with dopaminergic activity or adding bupropion to an SSRI without dopaminergic activity can treat SSRI-induced apathy syndrome (Flaherty 2011). The final impact of antipsychotics on creativity depend on their effects on different receptors. Blocking 5-HT2C receptors stimulates DA release in prefrontal cortex and has pro-cognitive effects (Stahl 2013); partial agonists of 5-HT1A receptors in prefrontal cortex and presynaptic 5-HT1A receptors in raphe nuclei accelerate DA release in the striatum (Stahl 2013). Slow dissociating high-potent dopaminergic antagonists can cause demoralization and amotivational syndrome.

Personal recovery is strongly associated with working towards better mental health, regardless of the presence and severity of a mental disorder (Slade 2011). Creativity is particularly relevant to achieving personal recovery that involves purpose, hope and optimism, spirituality, personal mastery, new self-identity, connections and interpersonal skills, symptom management and destigmatization. Creative psychopharmacotherapy is a pro-recovery treatment that promotes and fosters creativity in psychiatric patients. There are many creativity techniques: 1. establishing purpose and goals; 2. building motivation, particularly intrinsic motivation; 3. stimulating and rewarding curiosity and exploration, 4; encouraging confidence and a willingness for self-change; 5. promoting supportable beliefs about creativity; 5. building basic skills; 6. providing opportunities for choice and discovery; 7. focusing on mastery and self-competition, etc. As energy flows where attention goes, each therapeutic session should be a unique creation. Therefore, psychopharmacotherapy may be recognized as a process of multiple-source creation and as an art of creative communication based on science.

CONCLUSION

There has been a traditional trend to see mental disorders cast in a black-and-white light, and to endeavour to eliminate everything regarded as pathological or as a part of the mental disorder. Viewing certain aspects of mental disorders as potentially beneficial opens avenues for a creative approach to treatment. Promoting creativity, motivation and self-regulation is essential within the concept of creative psychopharmacotherapy.

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