

## **Chapter #7**

### **PSYCHOPATHOLOGY: THE COGNITIVE ORIENTATION APPROACH**

**Shulamith Kreitler**

*School of Psychological Sciences, Tel-Aviv University, Israel*

#### **ABSTRACT**

The objective of the chapter is to reintroduce into the scene of psychopathology the psychological perspective by describing the cognitive orientation approach to mental disorders. This cognitive-motivational approach emphasizes the role of meanings, beliefs and attitudes in promoting specific behaviors in the normal or abnormal range. A large body of empirical studies showed the predictive power in regard to behaviors of cognitive contents referring to themes identified as relevant for the particular behavior and presented in terms of four belief types (about self, about others and reality, about rules and norms, and about goals and wishes). The chapter presents a brief theoretical approach to psychopathology based on the cognitive orientation approach and describes its application to the following three disorders: paranoia, schizophrenia and depression. The presented studies describe questionnaires based on the cognitive orientation theory that enabled to differentiate between patients with specific diagnoses and healthy controls. The themes that contributed most to the differentiation are presented. These included, for example, non-conformity, perfectionism, extreme distrust of others, and rejection of compromise. The findings provide new insights into the underlying dynamics of the specific psychopathological disorders and enable delineating the blueprints of a general theoretical approach to psychopathology. The results may also be applied for assessment, prevention and therapeutic interventions in psychopathology.

*Keywords:* psychopathology, cognitive orientation, schizophrenia, depression, paranoia.

#### **1. GENERAL INTRODUCTION: COGNITIVE ORIENTATION IN THE DOMAIN OF PSYCHOPATHOLOGY**

##### **1.1. Cognitive approaches to psychopathology**

The attempts to understand and treat psychopathology are based on constructs from the most diverse scientific disciplines, including the genetic, biological, sociological and the variety of psychological approaches ranging from behavioral to affective and from familial to spiritual (Blaney & Millo, 2013). Within this variegated network of causal factors the cognitive models have played an increasingly salient role. They have been developed primarily in contrast to the dynamic psychoanalytically-based approaches that attributed psychopathology to unconscious drives and processes transformed by a variety of defense mechanisms (Fonagy & Target, 2003). The major cognitive models of psychopathology include such well-known approaches as cognitive behavioral therapy (Beck, 1976), rational emotive behavior therapy (Ellis, 1994), stress inoculation training (Meichenbaum, 1985) dialectical behavior therapy (Linehan, 1993), cognitive vulnerability models (Gibb & Coles, 2005), problem solving therapy (D'Zurilla & Nezu, 2010), and reality therapy (Glasser, 1998; Wubbolding, 2000). The cognitive models of this kind assume that faulty thinking is the cause of psychopathology. Faulty thinking refers to faulty cognitive processes and faulty contents. The faulty processes include, for example, rigidity,

arbitrary inferences, polarized thinking, selective abstraction, overgeneralization, magnification or exaggeration, and personalization (e.g., Schwartz & Caramoni, 1989). Faulty contents refer to negative thoughts, and nonadaptive rules of behavior concerning oneself and reality, such as pessimism, overambitious goals, as-if thinking, or exaggerated self-criticism, based on wrong assumptions and irrational beliefs (David, Lynn, & Ellis, 2010; Ledley et al., 2005; Mathews & MacLeod, 2005).

There are several major limitations of these approaches: first, the factors assumed to play a causal role in regard to psychopathology are mainly conscious and mostly even under voluntary control of the subjects, which contrasts with most of the evidence indicating also the impact of non-conscious material (Shevrin, Bond, Brakel, Hertel, & Williams, 1996); second, the cognitive factors considered as responsible for psychopathology are not specific to a certain kind of psychopathology (Coyne & Gotlib, 1983); third, the cognitive beliefs presumed to be at the root of psychopathology have simply been posited and assumed but are not based on a careful analysis of findings and exploration with subjects; and fourth, the beliefs presented as responsible for psychopathology have been declared to be "irrational" which in many cases is not the case (Newmark, Frerking, Cook & Newmark, 2006). In addition, many of the cognitive distortions assumed to underlie psychopathology have been extensively studied in cognitive and social psychology under the heading of cognitive biases (Bradley & Mathews, 1983; Wilke & Mata, 2012). These distortions depend on characteristics of information processing and are rather common in all domains of life. While some may be responsible for faulty decisions and behaviors, many are undoubtedly adaptive and necessary for adequate daily behavior. For example, they enable more effective actions in given contexts (Gigerenzer & Goldstein, 1996) or faster decision making when speed is of paramount importance (Tversky & Kahneman, 1974). It is not fortuitous to assume that the cognitive distortions may occur in abnormally behaving individuals not necessarily more often than in so-called normal individuals. In sum, the mentioned limitations may be responsible for the fact that meta-analyses showed very small therapeutic effects for the cognitive therapies (Lynch, Law, & McKenna, 2010).

## **1.2. The cognitive orientation theory**

The cognitive orientation (CO) approach to psychopathology is designed to overcome most of the cited limitations of the cognitive approaches. The CO is a model of behavior designed to describe major processes intervening between input and output and to enable understanding, predicting and changing behavior. It resembles the other cognitive models in assuming that cognitive contents, viz. beliefs, meanings or attitudes guide behavior, but does not share with them the assumptions of rationality, realism, reasonableness, decision making, and voluntary control characterizing presumably the generation of behaviors. Instead, it uses the construct of meaning, and shows how behavior proceeds from meanings and clustered beliefs which orient toward a specific output. The beliefs as well as the outcome may or may not be rational. The various phases of progression from input to behavioral output consist of different kinds of elaboration of meanings. These may be represented in terms of questions and answers. The first phase is focused on identifying the input. Hence, the question is "what is it?" and the answer is either an identification of the stimulus or partial or failure of identification which lead to transfer to the next phase. The second phase is focused on elaborating the identified input in terms of its implications for action. Thus, the question is "is action required" and the answer emerges from clarifying the involvement of the individual in the situation and its meaning. In case action is required, the question is "what action". Beliefs of different kinds are evoked and if a

sufficient number of beliefs orient toward a specific course of action, a motivational disposition is formed, which specifies the direction of action. The final phase is focused on the question "how to do it", answered in terms of a behavioral program (Kreitler & Kreitler, 1976).

The CO theory has first been developed in regard to everyday kinds of behavior and only later was applied to further domains, including cognitive behaviors, emotions, physical health and psychopathology (e.g., Kreitler & Kreitler, 1991; Kreitler & Margaliot, 2012). At present CO is a basic cognitive-motivational approach, including a theory, a methodology and a large empirical body of data. The basic research methodology of the CO model is presented in the next paragraph.

A large body of research demonstrates the predictive power of the CO theory in regard to actually observed behaviors in a variety of domains (see references in Kreitler, 2004, 2013; Kreitler & Kreitler, 1982). In each prediction study the procedure consists in assessing the motivational disposition for the output by means of a CO questionnaire and examining the availability of a behavioral program for implementing the intent. A CO questionnaire assesses the degree to which the participant agrees to beliefs orienting toward the behavior in question. The beliefs differ in form and contents. In form they refer to four types of beliefs, namely, beliefs about goals, about rules and standards (norms), about self, and about others and reality (or general beliefs). In contents they refer to themes which represent meanings underlying the output in question. The themes are identified by means of a standard procedure applied to pretest participants. It consists in interviewing the participants about the meanings of the key terms and then in turn three times sequentially three times about their responses. Repeating the questions about meanings leads to deeper-layer meanings, out of which those that recur in at least 50% of the interviewees are selected for the final questionnaire. Thus, the motivational disposition assessed by the CO questionnaire is not conscious, and is not liable to voluntary manipulations. It represents contents that are relevant for the assessed output while the subject is unaware of the connections between the contents and the output (Kreitler & Kreitler, 1988, 1990b).

The CO theory has also enabled modifications of behavior, such as rigidity, impulsivity, curiosity and eating disorders. The procedure consists in mobilizing sufficient support for the desired course of action by evoking in the participant beliefs orienting toward this course of action (Kreitler, 2004; Kreitler & Kreitler, 1990a).

### **1.3. The cognitive orientation approach to psychopathology**

The CO model of psychopathology assumes that psychopathological behaviors (or symptoms) are a function of a motivational disposition implemented by a behavioral program, which are manifested in the presence of or due to a specific stimulus or situation that act as a trigger. However, the motivational disposition defined in terms of the CO approach cannot be considered as the sole determining factor of psychopathology. It is only one set of determining factors within a network that includes also other factors, most probably biological and genetic, as well as familial and cultural. Accordingly, the issue is not whether the psychologically-based CO disposition is the cause for a psychopathology but what precisely is its independent contribution to understanding, predicting and changing the symptoms of interest

There are several components or aspects that play a role as determinants of psychopathology within the context of the CO theory. The primary and most important determinant is the motivational disposition. There are motivational dispositions orienting toward depression, paranoia, schizophrenia and other syndromes (see 2.). A motivational disposition orienting toward a particular syndrome may be characterized by nonrealistic or wrong beliefs i.e., so-called irrational beliefs (e.g., "only if one is clean from evil emotions, such as jealousy or anger, one is allowed to wash one's body") that may cluster with other irrational or even some rational beliefs supporting the same output so that the overall result is a motivational disposition to avoid hygienic behavior. An early publication about the world view of schizophrenics presents many examples of beliefs about oneself and others concerning themes such as perfect justice and the ideal world that may orient toward abnormal behaviors (Kreitler & Kreitler, 1965). By applying the CO theory specific sets of beliefs have been identified that orient toward particular psychopathological behaviors, such as expressive communicability in interpersonal situations by schizophrenics (Kreitler, Schwartz & Kreitler, 1987), aggressive behaviors in children (Carmel & Kreitler, 2010), addictions (Kreitler, 2014), cancer diseases (Kreitler & Kreitler, 1998), obesity (Kreitler & Chemerinski, 1988), anorexia (Kreitler, Bachar, Canetti, Berry, & Bonne, 2003) and other eating behavior pathologies (Kreitler, 2011).

Another possibility for psychopathology arises when the beliefs of the four belief types are mostly or even all of them rational and acceptable but the overall direction supported by all of them may be psychopathological, e.g., withdrawing from others (supported by beliefs, such as if your get too close to others one may inadvertently harm them). Thus, one should consider psychopathology in this respect based on inadequate beliefs or adequate ones clustered in terms of inadequate processes. Notably, the pathology may originate even earlier, in the stage of identifying the stimulus or situation which may be distorted or unrealistic. Thus, if a person identifies a tree as a threatening person, then all beliefs that the individual may have for defending oneself may be rational and acceptable as well as the clustering processes, although the final outcome of hitting the tree may be inadequate. Processes supporting different distortions in assigned meanings have been identified in schizophrenics in different stages of meaning assignment (Kreitler & Kreitler, 1986; 1967; Kreitler, Kreitler, & Wanounou, 1987-1988). Additionally, it is of special interest to note that beliefs identified by the CO methodology were shown to predict tendencies to apply specific defense mechanisms, such as projection or denial (Kreitler & Kreitler, 2004). Defenses of this kind were shown to support various personality disorders (e.g., Larsen et al., 2010; Valliant, 1994)

Further possibilities for psychopathology that need to be considered include situations when in many domains no action is possible because the individual does not have enough beliefs supporting any course of action; or no action is possible because the clustering process of beliefs culminates too often in different sets of contrasting motivational dispositions which result in conflicts or obsessive ruminations. Another possibility of no action may be due to the formation of a strong motivational disposition opposing the standard action expected in some given situation, for example, there arises a motivational disposition opposing the greeting of people or going to bed at night or continuing to go on a road after having started to walk. Finally, it is appropriate to highlight the role of behavioral programs in psychopathology. The individual may not have learned enough or adaptive or adequate behavioral programs for implementing one's motivational dispositions. Also conflicts between different behavioral programs may arise, that prevent adaptive

action. Another possibility would be when a person's motivational disposition that could be quite normal, for example, to get attention, is implemented by a behavioral program that is not considered as quite normal, for example, hitting or biting other individuals (Gelkopf, Kreitler & Sigal, 1993).

In view of the accumulating evidence about the adequacy of the CO approach for describing psychopathological phenomena and predicting specific symptoms, it was considered important and justified to apply the CO theory to major diagnoses in the domain of psychopathology, i.e., paranoia, schizophrenia and depression. It was expected that studies of this kind would enable to extend the application and theoretical understanding of psychopathology in terms of the CO approach. The choice of diagnoses was guided by various considerations. First, they are major psychopathological disorders, second, they represent main classes of disorders, namely the psychotic (viz. schizophrenia and paranoia) and mood disorders (viz. depression), third, they exemplify deviant phenomena in different domains (viz. schizophrenia in behavior, paranoia in cognition and depression in affect). Notably, in regard to all three diagnoses the present studies could rely on previous empirical findings based on the CO theory.

## **2. THE COGNITIVE ORIENTATION OF PARANOIA**

### **2.1. Objectives**

The objectives of this study were to cross validate the results of a previous study in which the motivational disposition for paranoia was studied (Kreitler & Kreitler, 1997). The participants were paranoid patients (n=29) and three control groups (30 schizophrenics, 27 depressives and 64 healthy subjects) who were administered the CO questionnaire of paranoia which included beliefs of four types (goals, norms, about self and general) referring to 44 themes (e.g., masculinity, strength). Discriminant analyses showed that the four belief types enabled significant discrimination among the four groups and that there is a CO based on themes and conflicts characteristic for paranoia. Since the described study served for the original validation of the CO questionnaire of paranoia it was considered necessary to cross validate it in a new sample with a shorter version of the CO questionnaire.

### **2.2. Design**

The study was based on a two-group posttest-only design. One group included patients diagnosed as paranoid, the other included healthy controls, matched in age, gender and education.

### **2.3. Methods**

The number of participants was 40: 20 in each group, with a similar gender distribution (13 men and 7 women). The subjects in the two groups did not differ in age (means paranoids 41.3 yrs and controls 45.5 yrs,  $p = .566$ ). All paranoid patients had a certified diagnosis of paranoia or schizophrenic paranoia established in a major hospital for mental diseases and were living in a hostel for psychiatric patients. Their disease duration was at least 5 years. Both patients and controls had at least 12 years of education. The control subjects were recruited from workers in the hostel or a nearby hotel. The inclusion criteria for the control group were age (35-50 years, as in the paranoid group), both genders, at least 12 years of education (as in the patient group), no evidence of psychopathology in the volunteers themselves or their closest blood relatives, and sufficient

knowledge of Hebrew to respond to the questionnaire. Participation was voluntary. All subjects were administered the CO questionnaire of paranoia which included 71 items (32.13% of the original number), selected as those that differentiated best between paranoids and normal's: 20 beliefs about self, 21 general beliefs, 13 norm beliefs and 17 goal beliefs. The items referred to the following 15 themes: Existence of absolute truth, limited quantity of resources, need for understanding everything, guarding one's rights, keeping rules and regulations, not changing one's mind, admiring/accepting authority, rejecting authority, upholding masculinity, doing unto others as they do to you, controlling one's emotions, low control of one's life and fate, reacting to slights and offenses, no consideration for others, rejecting help from others. The Cronbach's alpha reliability coefficients of the four belief types ranged from .75 to .88.

#### **2.4. Results**

Mean comparisons of the four types of beliefs between the two groups by t-tests yielded significant results for all four belief types and for 13 of the 15 themes ( $p < .01$ ) showing that the group of paranoid patients scored higher than the controls, as expected. Table 1 shows the means and SDs as well as the t-test results of mean comparisons for each of the four types of beliefs, which in all cases were significant. A discriminant analysis showed that the scores of the four belief types enabled a correct classification of the subjects in 77.5% of the cases, which represents a significant deviation of 27.5% from the 50% expected by chance (see Table 1). The finding proves that it is possible to identify correctly paranoid patients to a degree above chance only on the basis of their scores in the CO questionnaire of paranoia.

#### **2.5. Conclusions**

The major finding of the study is that a shorter version of the CO questionnaire of paranoia proved to be adequate for differentiating between a group of paranoid patients and normal controls. This finding confirms the validity of the questionnaire. Moreover, it lends further support to the conclusion that there exists a CO of paranoia that may be considered as a set of cognitive tendencies potentially functioning as psychological risk factors for paranoia. The constituents of the CO of paranoia may best be conceptualized in terms of the differentiating themes that characterize the paranoid group in contrast to the controls. The themes cluster mainly around the following five foci: (a) rigidity (themes of absolute truth, nor changing one's mind); (b) Safeguarding one's status (themes of guarding one's rights, reacting to slights and offenses); (c) Upholding justice (themes of keeping rules and regulations, doing unto others as they do to you); (d) feeling strong (themes upholding masculinity, admiring authority, rejecting authority); (e) control (themes of need to understand everything, control of one's emotions, control of one's life and fate, limited quantity of resources), and (f) distancing oneself from others (themes of no consideration for others, of rejecting help from others). Notably, the set of themes characterizing paranoids includes two kinds of potential conflicts. One kind of conflict is in regard to authority (admiring authority vs. rejecting it) and the other in regard to one's strength (feeling strong vs. low control of one's life and fate). The attempt to resolve these conflicts may be responsible in part for some of the pathological behaviors manifested by paranoid patients, such as defending oneself against others.

*Table 1. Means and SDs and t-test comparisons of the four belief types in the samples that were administered the CO questionnaire of paranoia, the CO questionnaire of schizophrenia and the CO questionnaire of depression.*

Type of Questionnaire	Samples	Beliefs about self	General beliefs	Norm beliefs	Goal beliefs	Correct identification by discriminant analysis
CO of paranoia	Paranoid patients	M=51.2 SD=11.2	M=55.6 SD=13.8	M=46.2 SD=10.3	M=54.3 SD=12.8	77.5% p=.01
	Healthy controls	M=43.5 SD=10.3	M=41.4 SD=8.3	M=37.1 SD=9.5	M=39.9 SD=8.3	
	No. of items	20	21	13	17	
	t-test	2.263 p=.029	3.943 p=.0004	2.904 p=.006	4.221 p=.0002	
CO of schizophrenia	Schizophrenic patients	M=145.3 SD=36.1	M=117.6 SD=30.2	M=147.9 SD=28.6	M=144.9 SD=31.9	76% p=.01
	Healthy controls	M=119.5 SD=20.2	M=99.7 SD=21.9	M=121.5 SD=21.7	M=125.3 SD=23.5	
	No. of items	49	49	51	50	
	t-test	3.118 p=.0034	2.394 p=.0204	3.677 p=.0006	2.473 p=.0174	
CO of depression	Depressive patients	M=60.9 SD=14.3	M=64.8 SD=12.9	M=68.6 SD=13.5	M=74.9 SD=16.1	70.6% p=.01
	Healthy controls	M=42.8 SD=10.4	M=52.5 SD=11.8	M=54.3 SD=14.2	M=59.5 SD=12.4	
	No. of items	21	25	24	26	
	t-test	4.221 p=.002	2.901 p=.0064	3.009 p=.005	3.125 p=.004	

### 3. THE COGNITIVE ORIENTATION OF SCHIZOPHRENIA

#### 3.1. Introduction

The first attempt to study the CO of schizophrenics has been done years ago (Kreitler & Kreitler, 1965), actually predating the formulation of the CO theory. Hence it was mandatory to repeat the study of the CO of schizophrenia in a new format, applying the standard methodology.

#### 3.2. Objectives

The goal was to construct a CO of schizophrenia that would prove adequate to characterize schizophrenic patients of different kinds and would constitute a valid tool for the assessment of schizophrenia and for exploring some of its underlying dynamics in psychological terms.

#### 3.3. Design

The design consisted in comparing two groups, one of schizophrenic patients and one of normal controls, matched in age, gender and education. .

### 3.4. Methods

The number of participants was 50: 25 in the group of schizophrenics, and 25 in the healthy control group. The subjects in the two groups did not differ in age (mean 38.2 yrs for schizophrenics and 42 for controls,  $p=.437$ ) and gender distribution (13 men and 12 women in each group). Both patients and controls had at least 12 years of education. The schizophrenic subjects were living in a hostel for psychiatric patients and had a certified diagnosis of one of the types of schizophrenia made in a major psychiatric hospital in Israel where they were hospitalized prior to being transferred to the hostel. Their disease duration was above 10 years. The control subjects were recruited from healthcare workers in a general hospital that was not connected in any way to the psychiatric hospital or the hostel where the patients stayed. The inclusion criteria were age (30-50, as in the group of schizophrenics), both genders, at least 12 years of education (as in the patient group), no evidence of psychiatric pathology in themselves or their closest blood relatives, and sufficient knowledge of Hebrew to respond to the questionnaires. Participation was on a voluntary basis. All participants were administered the CO questionnaire of schizophrenia. It was based on items concerning themes defined on the basis of interviews with pretest subjects conducted according to the standard procedure (1.2). The questionnaire included 49-51 items in each belief type, referring to the following 24 themes: keeping emotional distance from others, distancing oneself from emotions, concealing one's feelings from others, not letting oneself to be convinced by others, avoiding of giving to others, avoiding commitments in relationships, avoiding undertaking responsibilities, avoiding harming others in any way, avoidance of any form of violence, not caring about being consistent, believing that one has a higher mission/purpose in life, striving for extraordinary achievements, believing in an ideal world, believing in the existence of absolute truth, love etc., being pure and good in the highest sense of the words, nurturing one's inner life, doing with very little for oneself, being respected for what one is and not because of one's deeds, living in complete freedom, difficulty in getting orders from others, safeguarding one's energies, looking for the deeper underlying meanings, believing the world is a dangerous and threatening place, feeling that one carries death within oneself. The Cronbach's alpha reliability coefficients of the four belief types ranged from .73 to .81.

### 3.5. Results

Mean comparisons between the two groups by t-tests showed that the group of schizophrenic subjects scored significantly higher than the controls on all four belief types) and on 20 of the 24 themes (in 8 themes,  $p<.01$ , in 12 themes  $p<.05$ ). Table 1 presents the means, SDs and the results of the t-test mean comparisons of the two groups for all four types of beliefs. A discriminant analysis showed that the scores of the four belief types enabled a correct classification of the subjects in 76% of the cases, which represents a significant deviation of 16% from the 50% expected by chance (see Table 1).

### 3.6. Conclusions

The findings support the conclusion that there exists a CO of schizophrenia. The clearly delineated thematic clusters points toward the following foci as characteristic of schizophrenia: emotional distancing from others (which may also serve as a safeguard against harming others), striving for complete freedom, striving for high achievements, distancing oneself from the external world (which is supported by several themes focused



on avoidance of action of different kinds), considering the world as impure and dangerous while striving toward an ideal world of absolute truth and love. Notably, this set of themes contains many components corresponding to former descriptions of the schizophrenic view of life (e.g., Arieti, 1974).

## **4. THE COGNITIVE ORIENTATION OF DEPRESSION**

### **4.1. Introduction**

Depression is a major diagnosis in psychopathology, with cognitive, emotional and behavioral manifestations, some of them as serious as suicide. A questionnaire of CO of depression was prepared in the context of depressive patients treated in mental health clinics (Kreitler, 2012). It was first administered to 100 women immediately after delivery and it predicted significantly the occurrence of postnatal depression assessed a month later (Buzaglo, 2014). It was therefore considered advisable to extend the testing of this new instrument.

### **4.2. Objectives**

The goal was to test the validity of the CO of depression in a sample of patients diagnosed with depression as compared to healthy controls.

### **4.3. Design**

The design consisted in comparing two groups, one of patients diagnosed with depression and one of normal controls, matched in age, gender and education.

### **4.4. Methods**

The number of participants was 34: 17 in the group of depressive patients, living in a hostel for psychiatric patients, all with a certified diagnosis in a major public psychiatric hospital, and 17 in the healthy control group. The control subjects were recruited from the administrative workers in the university and a general hospital completely separated from the psychiatric hospital. They were first screened for depression by the Beck Depression Inventory and only those who scored in the lower 35% were included in the sample. The subjects in the two groups did not differ in age (mean 62.2 yrs for the patients and 59 yrs for controls,  $p=.22$ ) and gender distribution (11 women and 6 men in each group). All participants were administered the CO questionnaire of depression. It was based on themes defined on the basis of interviews with pretest subjects conducted according to the standard procedure (1.2). The questionnaire included 21-26 items in the different belief types, referring to 19 themes, such as avoidance of harming anyone, avoidance of active initiative, controlling one's emotions. A factor analysis of the responses in the study by Buzaglo (2014) showed that the themes formed four factors (accounting for a total of 61.506% of the variance) labeled as: striving for complete and perfect success as a condition for becoming at all engaged (accounted for 24.009% of the variance), assuming responsibility for anything that goes wrong (13.013% variance), doing what is required and expected rather than what is desired (12.897% variance), striving for complete control over situations (11.587% variance). The reliability coefficients of the four belief types were in the range of .75 to .82

#### **4.5. Results**

Table 1 presents the means, SDs and t-test mean comparisons for the four belief types in the two groups. The table shows that the group of depressive patients scored significantly higher than the controls on all four belief types. They also scored significantly higher on 15 of the 19 themes ( $p < .01$ ). A discriminant analysis showed that the scores of the four belief types enabled a correct classification of the subjects in 70.6% of the cases, which represents a significant deviation of 20.6% from the 50% expected by chance (see Table 1).

#### **4.6. Conclusions**

The findings provide additional support for the validity of the CO of depression. The thematic clusters highlight the following foci as playing a role in regard to depression: extreme approach toward success, assumption of responsibility, fulfilling expectations of others, and control. These tendencies provide deeper insight into the origin of the cognitive depresso-genic tendencies identified by other investigators, mainly the negative view of themselves and reality (Beck, 1976).

### **5. GENERAL SUMMARY AND CONCLUSIONS**

The three briefly presented studies should be considered as preliminary. Each of them provides evidence for the existence of a CO of the studied particular psychopathological disorders: paranoia, schizophrenia and depression. Some of the characteristics of the identified COs may be noted. The first is that they consist of sets of themes rather than of single themes, however dominant or important these may be. Hence, it is evident that the psychopathological nature of the COs consists not only in one or another theme but in the set as a whole. Secondly, the themes as such do not seem pathological or irrational or illogical. In some cases they may appear to be unrealistic, such as the schizophrenics' striving for an ideal world, but in no way can a striving of this kind, that is being shared by many generations and cultures, be considered pathological. Thirdly, although the themes cannot be subsumed under the heading of pathology, many of the themes in all three studied cases express tendencies that render it difficult to live a normal satisfactory life. This would apply to themes such as the avoidance of any harm to others, strict control of oneself, and assuming responsibility for everything that goes wrong or fails. Fourthly, while most of the themes in the COs of pathological disorders are not pathological as such, they may form pathology-generating conflicts when viewed jointly with other themes in the same CO. This holds for example for pairs of themes, such as extreme harm avoidance, which would indicate refraining from any action, coupled with extreme achievement motivation, which would require some action. Finally, it is to be noted that none of the identified themes or tendencies making up the COs becomes manifest directly in action, pathological or not. Behavioral manifestations can be expected only when the theme is supported by beliefs of the four types (about self, reality, norms and goals) and when the individual endorses beliefs of the four or three types of beliefs referring to at least several of the themes in the relevant CO. In that case, the expected behavioral manifestations would resemble those diagnosed as part of the symptomatic behavior of the specific psychopathological disorder.

The COs are basically unique for each disorder. However, they also share some of the constituent themes. The major recurrent themes are a tendency toward assuming extreme positions, namely, an-all-or-nothing approach; keeping an emotional distance from others,

for different reasons, such as harm avoidance or keeping one's freedom; and a very high achievement orientation. If these and other themes prove to recur consistently in further COs of psychopathological disorders, it would be justified to examine the hypothesis that they constitute the core of a general possibly phenotypical tendency for psychopathology.

Notably, the motivational disposition for each set of psychopathological outputs is specific for that output. Even if there is some overlap in the themes correlated with different outputs, further themes specific for the particular output are likely to be discovered. However, the span between specific and general motivational dispositions in psychopathology may be bridged by a further potential paradigm. According to this paradigm, there exists a general motivational disposition for a certain cluster of symptoms which is complemented by specific clusters orienting toward particular symptoms within that cluster. There is already evidence supporting this paradigm in regard to at least two domains: one domain is eating disorders where the general motivational disposition is complemented by themes supporting bulimia or overeating or anorexia nervosa (Kreitler, 2011); another domain is addictions where the general motivational disposition for addictiveness is complemented by themes representing addictions for example for drugs or alcohol or internet or shopping (Kreitler, 2014). It is likely that a similar situation would characterize also the domain of schizophrenia. It should further be mentioned that even when there is a specific motivational disposition for a particular syndrome, such as schizophrenia, it is further complemented by motivational dispositions for specific pathological behaviors such as not taking care of oneself, not working, not taking medications, etc.

The information provided by the CO questionnaires about each of the studied diagnoses may be of applied for identifying individuals at risk and instituting programs of prevention. This possibility may be of great value particularly in situations evoking stress or for populations exposed to crises. Detecting individuals with a CO vulnerability may be of great value in averting the development of pathology or at least minimizing its intensity.

It needs however to be reiterated that the COs are not the causes for psychopathology. They are merely predispositional tendencies of psychological risk factors that may enhance the probability of developing a psychopathological disorder as part of a network of other biological, genetic and environmental factors, when one is exposed to a specific instigating trigger. As such the COs may be considered as likely risk factors of psychopathological diagnoses that can be used for assessment, early detection, and as the basis for psychological preventive measures and therapeutic interventions.

The major limitations of the studies based on applying the CO approach to psychopathology are the small size of the samples, the absence of information about responses of patients with other diagnoses to the same CO questionnaires, and the exclusive dependence on correlational designs. Future studies should enlarge samples, test the same questionnaires also with patients of other diagnoses than those for which they have been originally designed, and add research designs based on prospective prediction and interventions.

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## AUTHOR INFORMATION

**Full name:** Shulamith Kreitler

**Institutional affiliation:** School of Psychological Sciences, Tel-Aviv University

**Institutional address:** Tel-Aviv University, Ramat Aviv, Tel Aviv 69978, Israel

**Short biographical sketch:** Shulamith Kreitler was born in Tel-Aviv, has studied psychology, philosophy and psychopathology in Israel, Switzerland and the USA. She got her PhD in Bern Switzerland. She has worked as a professor of psychology in different universities, including Harvard, Princeton and Yale in the USA, as well as in Buenos Aires, Argentina and Vienna, Austria. She has been a professor of psychology at Tel-Aviv University since 1986, has established the Unit for Psychooncology at the Ichilov Hospital in Tel Aviv and since 2007 is the head of the psychooncology research center at Sheba Medical Center, Tel Hashomer. She is a certified clinical and health psychologist. Her research is in personality and cognition, with an emphasis on psychological factors involved in the occurrence of oncological diseases and coping with them. She has developed the theory of cognitive orientation which provides the concepts and methodology for predicting and changing behaviors, and the theory of meaning which enables assessing the cognitive infrastructure of cognitive acts and personality traits. Kreitler has written over 200 scientific articles and published 15 books, e.g., *Handbook of Chronic Pain* (2007), *Pediatric Psycho-Oncology: Psychosocial Aspects and Clinical Interventions* (2004, 2012), *Cognition and motivation* (2013), *Meaning – its nature and functions* (2013), *Confronting dying and death* (2012).