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Qualitative Analysis of Psychological Intervention in Intensive Care Unit in Greece: A Case Study of An Adult Woman with Septic Shock

Dimitra Siousioura[1]*, Anastasia Kotanidou[2] and Spyros Mentzelopoulos[2]

[1]Clinical Psychologist, Intensive Care Unit (ICU), 'Evaggelismos' General Hospital of Athens, Greece

[2]Professor of Intensive Care Medicine, University of Athens Medical School, Intensive Care Unit (ICU), 'Evaggelismos' General Hospital of Athens, Greece

ABSTRACT

We report a case study of a woman with Septic Shock who attended Psychological Intervention after medical treatment in the Intensive Care Unit of a Greek Teaching Hospital in Athens. Qualitative analysis of data was collected from Focused Interview, Genogram as a family history tool and Psychological Intervention based on Short/ Systemic Psychotherapy. The study focuses on the deep understanding of the patient's changes in terms of thoughts, emotions and behaviors after the invasion of a serious disease, like Septic Shock.

***Corresponding author**

Dimitra Siousioura, 45-47 Ipsilandou street, GR- 10676 Athens, Greece, E-mail: dsiousioura@yahoo.gr

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Keywords: Septic Shock, Intensive Care Unit, Psychological Intervention, Stress, quality of life, Family history, Clinical Psychologist, Therapist

Abbreviations

ICU: Intensive Care Unit
I.P: Intetified Patient
SS: Septic Shock
DSM-IVTM: Diagnostic and Statistical Manual of Mental Disorders
QA: Qualitative Analysis

Introduction

Septic Shock (SS) is a life-threatening medical emergency is characterized by inability to maintain a mean arterial pressure of at least 65 mmHg without vasopressors and and/ or a serum lactate level of at least 2 mmol/L after fluid resuscitation in the context of a severe/systemic infection [1]. SS is defined as a subset of sepsis in which underlying circulatory, cellular, and metabolic abnormalities are associated with a greater risk of mortality than sepsis alone [1]. Concurrent organ dysfunction (as indicated by a Sequential Organ Dysfunction Assessment Score of ≥1 point) is almost always present [1]. SS crude hospital mortality reportedly amounts to 25.7-42.3%, and further rises to 49.7% when serum lactate exceeds 4mmol/L [1]. SS survival depends on the adequacy/efficacy and timing of initial treatment, including fluid resuscitation, vasopressors, antibiotics, additional measures of effective source control such as surgery or removal of an infected intravascular device, and the adherence to evidence-based, general management guidelines such as the use of protective ventilation for SS-associated acute respiratory distress syndrome [2]. Septic encephalopathy is a serious complication of sepsis / SS. In postmortem, human brain samples neuraxonal injury has been described, either as scattered ischemic lesions or as diffuse injury [3]. SS survivors may have chronic neurological deficits and may require prolonged rehabilitation due to critical illness-associated neuropathy or myopathy [4]. SS as a serious disease, brings patients up against complicated challenges as changes induced by its onset [5]. More specifically, patients' psychological reactions of adaption to the new reality of a recent, severe disease, like SS, concern [6]:

a. Personal stress for diagnosis, prognosis and complications. The patient feels deprived of: health, fantasies of immortality, personal space, independence, old ways of behavior, pleasurable activities, energy and other losses of previous self.
b. Interpersonal stress expressed either as social withdrawal, mainly due to the 'stigma' of the disease, or by a dependent / attached attitude towards family members, because of the unpredictabilities of the disease. The *invasion* of a serious and sudden event of disease is a 'threat' to the family atmosphere that is often manifested through aggression, anger, sadness. These feelings lead to 'relationship exhaustion' and frustration with other members. It is often therapeutic for patients to communicate myths, perceptions or even fears of death, in order for them to deepen in the pain caused by the disease [7].
c. The absence of psychological thought and in parallel lack of energy and fear of death enhance their *weak / fragile ego* [8,9].
d. The most common emotional reaction is depression, which

can be expressed with feelings of sadness, hopelessness and apathy. Very often, depression will develop, long after the diagnosis, when the patient begins to realize the reality and starts the process of adjustment. The following case study aims to present all these stages, challenges and psychological conflicts of an adult woman with Septic Shock (SS) who participated in **Psychological Intervention** voluntary, after she received medical treatment in Intensive Care Unit (ICU) in Athens. The Psychological Intervention:

I. Focuses on holistic psychosomatic care *whole-person care of the patient (the sense of wholeness in medical practice*),
II. Attempts to explore and therapeutically address the intermediate psychological conflicts that affect the patient, after the survival of SS,
III. Explores the impact of family patterns of three generations, (through Genogram), as it provides important information about the patient's family history,
IV. Combines medicine that is the realistic aspect of the disease-with - the psychology of patient's needs, the idiosyncratic individualized traits and quality of her life.

Case Study

A 57-years-old woman participated in the study, after her survival from Septic Shock, at the Department of ICU of 'Evaggelismos' General Hospital in Athens. The patient's demographic and clinical characteristics are presented in Table 3. She was diagnosed with SS and had followed medical treatment in ICU. Psychological Intervention started in the beginning of 2019 and the meetings took place at 'Evaggelismos' General Hospital. The procedure lasted 5 sessions (Characteristic Phrases of the Patient), as seen in Table 1, and Psychotherapeutic Techniques based on Short / Systemic Psychotherapy [10-13]. The patient's participation in the intervention was based on her own consent and personal request. She had relationship problem with her last, 20 years old, daughter. Such as, troubles in communication, lack of discipline and intimacy, with complications in the family unity. Her uncontrolled stress-symptoms would reinforce her depressive mood. The Psychological Symptoms had been present before the onset of her disease, as seen in Table 2 [14,15]. The patient also was informed:

Table 1: Characteristic Phrases of Patient (I.P.)

Phrases
'I have notice that I don't forgive myself or others'
'I don't talk in order to find solutions, but relief'
'I made sacrifices for others and I'm losing myself'
'I feel sorrow, not from my disease but from my daughter'
'…unresolved grief from my daughter'
'I feel that I'm going to die not from my disease but from her'
'This relationship gives me the sense of never being at peace'
'I'm sometimes depressed and exhausted, when I think about it'.
'I feel permanent grief at home'
'I'm a kind of a strong mother but sometimes there is fear, something like a shadow'
'Disease reminded me that there is life for me out of the family'
'I feel sad, when I'm weak'
'Family problems led me almost to an exhaustion before coma (Septic Shock)'

Table 2: Patient's Psychological Symptoms

Psychological Symptom
Distress at real reminders of the difficult relationship with her daughter
Being upset and aggressive when reminded it
Irritability and alertness
Anger
Negative thoughts about this relationship that causes
interpersonal stress related to family context

Reference: AXIS IV (2000) Psychosocial and Environmental problems: problems with primary support group-discord and inadequate discipline with siblings, DSM-IV-TR- R (4th edition, Text Revision).

a. That the intervention regarded the psychological aspects of her disease.
b. That she should give information for Genogram from three generations of her family regarding demographics, critical family events and relationships between family members, as seen in Table 3 [16].
c. That the interview involved her emotional state for SS with minimal guidance [17,18].
d. About the rules and regulations of the psychotherapeutic process: discretion, empathy, confidence, open expression, and non-guided topics of discussion (therapeutic flexibility), unconditional acceptance of the patient [13,19-22].
e. That the Therapist was a Clinical Psychologist, specialized in Clinical & Health Psychology, (supervised by a mental health expert, in Liaison Psychiatry & Psychology) [23].

Table 3: Demographic and Clinical Characteristics of Patient (I.P.)

Parameter	Value
Sex	Female
Age	57
Nationality	Greek
Level of Education	Elementary
Occupation	Partly-skilled
Marital Status	Married
Children	3
Medical History	History of urolithiasis
Diagnosis	Acute pyelonephritis causing septic shock
Mental Health History	No history of other disorders.
	No history of antidepressant or other therapy
Current Problem	Psychological
Reason for Referral	Patient's own request
Social Network	Relatives, no 'significant others', no friends
Currently Living with	Her husband 'the weak member' and her last daughter
Family 'Role'	'The strong member'

Methods & Tools

The methodological tools used for the collection of the data and the analysis were:

A. Focused Interview (1 session)

Following the model of focused interview by Merton & Kendall [24] which gives emphasis on the subjective answers of the patient who was introduced to the issue of the interview prior to the process. The interview is a methodological tool with a large range of forms applications and use in qualitative research. It enables researchers to explore case studies that could not be studied with another methodological tool [25]. The interview uses thematic categories as a point of reference and since the study refers to a type of patient, the interview is characterized as clinical [18]. A warm attitude between the interviewer and the interviewee is a key factor in the process, changing the nature of the relation from investigative to humane with high confidence level and communication [26]. The Focused Interview was conducted by a Clinical Psychologist and took place in the Hospital setting of 'Evaggelismos' and the duration was 1 session. The material of the interview is subjected to content analysis and based on Grounded theory Methodology which seeks to derive thematic categories from initial data and was discussed with supervisor / mental health specialist. As an example, the following are some questions [27-30]:

- What are your expectations from the sessions?
- How is your disease involved in your life?
- How do you cope with your disease self-care in your every-day life?
- How does stress affect your disease?
- How do you manage stress in your every-day life?
- Do you feel satisfied by your life?
- What 'role' do you have in your family of origin?
- How does your disease affect the expectation of childbearing?
- How does your disease affect your life?
- In your opinion, what factors define your disease regulation / medical outcome?

B. Genogram (1 session)

The Genogram has contributed greatly in the study of the psychosomatic family [16] and has expanded to become a therapeutic tool within the frames of Family-Systemic Psychotherapy [16,31,32]. The aim of the Genogram is to study the adjustment and coping patterns, especially to different types of diseases, to generation beliefs concerning the disease, to identify patterns of family interaction, strengths and vulnerabilities of the family system. Also, can help form hypotheses about how problem behavior functions within the context of the family [33,34]. The present study uses the Genogram as a family history tool for a woman with SS.

C. Psychotherapy Process (3 sessions)

The patient enters the sessions according to her individual choice and will. The meetings of sessions took place at a General Hospital of 'Evaggelismos' in Athens, Greece. For the purpose of maintaining confidentiality, names and records have been changed. The patient gave an ethical clearance for this case study. After completion and evaluation of Focused Interview and Genogram, the Therapist explored, through Short / Systemic Psychotherapy [10,11,35] the degree to which this personality structure and family history contributed in the following:

a. The patent's stress which was often expressed by disbelief and anger toward her daughter.
b. The fear of isolation, darkness and death, after the diagnosis of SS.
c. The reinforcement of predispositional personality-characteristics such as negative or depressive attitude towards her daughter and her life meaning, in general. And, finally, the exploration of the causes of *giving up herself* [36].

The patient is in a '*one-up*' position and has the '*empowering*' to say what she wants [37]. Psychotherapeutic process doesn't join with long time sessions. The basic processes take place not only in the session, but mostly, after it, according to the patient's personality and phase of her life. For these reasons, Systemic Therapy has been characterized as 'short therapy of long duration' [38]. The Psychotherapeutic Techniques and Characteristic Phrases of I.P., as seen in Table 1, used by the Therapist are summarized in below. More analytically, therapeutic phases were formed according to the ***Sessions' agenda***: patient's personal history, patient's family history (through Genogram [32]) and the impact of three dimensions of time (past, present, future) on her current reality [8], the psychosomatic parameters of her disease, monitoring of conditions and emotions that precede SS, identification and expression of negative events, background elements and *traumas*, which contribute to her depressive mood and respect, flexibility and rapport between therapist and patient [11,38,39,41].

The following Psychotherapeutic Techniques are part of the Psychological Intervention applied to the Patient (I.P.).

Technique of free associations as catharsis [11]

She was upset because she was not receiving the support she wanted (from her daughter). She expressed emotional difficulty to manage criticism from her and weakness which builded on the existing weakness, that of the disease. She used defenses of overcompensation in order to balance this weakness by adopting the 'role' of the 'strong', primarily in the rest parts of her life.

Technique of focusing on exploring the intergenerational context of the patient [10]

The connection of her daughters' attitude and effective disease management by the patient was obvious. Intense preoccupation with these effects was explored as a priority in her life. So, her resistances begun to break down with respect to these difficulties. The flexibility of the therapist towards the patient lies on active listening, on empathy, on understanding of the deeper needs of the patient. Time and space was given to her to express free associations without predetermined agenda and interpretations. She referred to the mutual influence of physical and psychological factors, as intermediate variables on her disease. This correlation was identified with the concept of quality of life [42]: it refers to a complex and multidimensional parameter, which is the inter mediate variable on the objective disease data and the subjective perceptions and expectations of the patient on the physical, emotional and social well-being, embodying both the logical (satisfaction) and emotional element (happiness) in the final therapeutic effect. Also, the enmeshment in her family as the 'strong' member had deprived her of joy, friends, fun. She was affected by dilemmas about the balance between the extreme somatizations of her disease, her personal needs and the fear of complications of SS.

Technique of encouraging the expression of negative emotions related to her disease and traumatic experience [13]

She is psychosomatically destabilized because of her anger for her daughter. She refers about chronic conditions of intense stress *before* the disease onset. She considered her disease to be an inferior problem, compared to her *long accumulated grief (she*

overtly expressed the traumatic experience of the relationship with her daughter) [7]. This expression is reinforced, because it comes prior to her need to talk for the disease per se. The anxious structure of her personality and the intense confrontation with her daughter hurt her. At the beginning of the sessions, she expressed emotions of bitterness that proceeded her hospitalization in ICU. Then, she reduced idealization of life and begun to face reality: *she felt unhappy*. This awareness was painful, but closer to reality. The unexpressed repressed emotions become symbols, through extreme somatization. Apparently, they affect her personality with depressive mood and isolation. Negative emotions have been associated with inadequate physical health in chronic diseases or chronic complications [43].

Technique of concentrating on the difficult phases of her life, such as lack of satisfaction [13]

This psychological state was presented by her, as a predictor of her medical dysregulation. However, it seems that she begun to accept the disease as a factor that shapes her personality, by incorporating it in every-day life. So, she started to take into account the demands of the disease in her daily life. Also, she realized that her responsibility to change lifestyle based on individual needs and personality. Understanding the emotional needs of the patient enables the physician to differentiate her from the disease [44]. Thus, the patient is treated as a *whole person* and not as a disease pathology, based on a therapeutic relationship (patient-centered approach) [45,46]. When the disease becomes integrated in the individuals' life and identity, the sense of normality is not decreased [47].

Technique of focus on 'here and now', which includes the patient's symptoms and connecting them with her history [10]

She continued to express her dysfunctional experiences and symptoms: sadness, bitterness, anger, fear of death. She has identified them, connected with her story and started at her own space manage them.

Procedure

Qualitative analysis of the results took place, more specifically, triangulation of the data extracted from focused interview and genogram where correlated with the data collected from psychotherapy sessions. Triangulation is a research strategy that describes the use of various methodological tools for measuring a phenomenon, like a disease, aiming at the reliability and the validity of the study [17,48,49]. It is a multi-method research approach of human behavior and is particularly effective, when a case study is investigated.

Results

These significant correlations came up, which can be divided into the following areas of individual and family functioning.

A. Life Cycle: The differentiation of ego of her last daughter brings unbalance back the family of origin, as the 'intrusion' of the mother's disease upsets not only herself (I.P.), but also the family homeostasis. The context of serious illness causes patients and their family to adjust to changes [33]. By causing grief, exhaustion, unexpected situations, dysfunction and general imbalance.

B. Life Events and Family Functioning: Patients' disease causes a sense of insecurity and inferiority. Her place of origin was the Greek province where there is 'stigma' of the disease. Living in the province, where relationships are more personalized than in the city, is associated with the perception of the disease as 'stigma', sense of inferiority, burden, handicap. Stigmatization is a cultural construct and affects the meaning of the disease, the patient's everyday life [50] and reinforces negative beliefs about self.

C. Family Structure and Balance: Patient uses her disease in order to keep her daughter near to her. Mothership doesn't exist anymore. Instead of this, process of adulthood of her daughter just starting in the family structure. Then, psychosomatic condition of the mother (I.P.) becomes worse than ever.

D. Life Events before the Onset of the Disease: Patient was crying when she was talking for daughter's attitude which called *trauma*. Her daughter had a successful story: studies, freedom from obligations, fun, friends. From this point, starts the process of patient's grief. Because, daughter was a mirror for her and reminded satisfaction and happiness that she didn't managed. Then, she was exhausted from a psychosomatic point of view. Doctor who received her at Emergency Department said that: '*I received a lifeless body*'.

E. Patients Personality traits and patterns of Personality Functioning: Patient (I.P.) had high expectations from her husband and daughter imposed by the disease. Also, her rigid personality-structure and matriarchy were responsible for her difficulties, not only in managing life events, but also in her everyday functionality. She experienced internal conflicts caused by the influence of external 'musts' and 'shoulds', which lead to burnout, expressed by anger, disbelief, intense internalization and finally a depressive mood. The psychosomatic condition of the patient before the onset of SS, is translated, as an unconscious attempt to ask for help. She didn't know any other functional way, other than through her symptoms distress, tense, anger. Some patients under stress tend to behave in demanding or aggressive ways. These styles may complicate relationships with loved ones.

Discussion

People with a history of a threatening disease such as SS and long length of hospital stay develop a sense of vulnerability. The patient (I.P.) of the study was concentrated on conflicts caused by the influence of external 'musts' of traditional type of her family (work, family, children, no social network). She could not prioritize her personal needs without the feeling of guilt caused by the discrepancy between personal needs and familial 'musts'. So, she lead to burnout expressed by anger, bitterness, depressive mood, even *trauma* (as she said). She becomes in a crisis of a meaning of life when she was 'near' the death (SS), a borderline experience. The serious disease brings disturbance in her current life, because she realized that all these 'shoulds' restricted freedom, autonomy and satisfaction of life. Her daughter's *differentiation of the ego* was a reminder for her emptiness [51]. This psychological burden was presented to all sessions, as *traumatic* life evens, in a clear and linear way: stress due to long unresolved mourning, revival of negative emotions in later *trauma of the disease* and fear of death. SS triggered death fears to her existential anxieties which are common in serious diseases. The meaning of an individual's life sterns from the way they deal with basic concepts which are connected with human existence, such as death, freedom, isolation and lack of meaning [52]. The search of meaning, due to serious diseases and their chronic complications has been found to be positively associated with better psychological adjustment [44]. Because, the deepest existential need for life eventually dominates. This deep understanding triggered when she realized that *she is alive*! SS is a dangerous disease that caused *an existential shock* of the meaning of life. Unconscious processes that she didn't knew their impact till her hospitalization in ICU. Patients usually are *silent* about their high anxieties, such as freedom, isolation and finally fear of death. Anderson and Wolpert refer to

the aforementioned procedure as an opportunity for change [53]. As the patient obtains deeper self-awareness, the perception of the condition is modified and this leads to eventually redefine disease; the individual discovers new potentials and gives a new meaning to life in general [54]. **More specifically**, through Psychotherapy sessions, she developed insight, expressed herself in a dynamic way and provide arguments on the issues that concerned her *traumas* and her life, in general. Stress existed as a constant sense of threat in her life before the diagnosis of SS. Then, she met her limits and priorities and considered that controlling stress was something that contributed to her emotional equilibrium. She managed to make the connection between the quality of her life and the feeling of *catharsis* (purification) [55]. She had periods of sadness not only because of the SS. She had become vulnerable and selective in the sense that she had limited travelling and friendly contacts, as she would choose to do only specific things every day in an attempt to control stress and manage her disease. She also recognized that she was overprotected towards her daughter and felt safe to handle confrontation with the family and not to integrate her family's problems into her life and her disease. Through sessions, she realized the importance of living for the present and of reconciliation with the difficult parts of herself, such as her serious disease (SS). The supportive atmosphere in the sessions facilitated the diffusion of patient's *traumas*. This means that the patient was able to express and elaborate on negative emotions such as insecurity due to the threat of SS, loss of somatic control, which may often lead to extreme behaviors such as giving up physical exercise or medical monitoring. The areas where **Psychological Intervention** focused were:

- Patient's family history in order to identify the conflicts and the dysfunctional models within the members of her family, especially her daughter.
- Gradual accomplishment of realistic targets regarding regimen and every-day activities, which give patient's life a positive meaning [52,56].
- Provision of information and advice, not only about the condition itself, but also about various aspects of her life [57].
- Realization her unconscious *trauma* -which were expressed through her sadness, bitterness and anger – and its contribution to her medical history [40,58].

Finally, the increase of chronic diseases or chronic complications of a serious disease, like SS, generated the need for replacing the concept of *cure* with the concept of *care* in medical practice. The notion of the *whole* was raised by Socrates in the context of a holistic perception about health [59]. The examination of an adult woman with SS who participated in Psychological Intervention does not allow generalizations for other SS patients. Our aim was to analyze in depth the patient's emotions, behavior and *traumas*, after participation in the Intervention that focuses on psychological aspects of SS. Further research is required on the increased demand for Psychological Interventions in ICU settings.

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