A PSYCHIATRIC APPROACH TO PAIN MANAGEMENT IN ELDERLY PATIENTS UNDER DENTAL TREATMENT

Catalin Plesea-Condratovici[1], Lucian Stefan Burlea [2], Diana Bulgaru Iliescu[2], Jana Chihai[3], Luiza Nechita[4]

[1]Faculty of Medicine and Pharmacy, Dunarea de Jos University of Galati, 35 Alexandru Ioan Cuza Street, 800010, Galati, Romania;
[2]Faculty of Medicine and Pharmacy, Grigore T. Popa University of Medicine and Pharmacy, Iasi, 16 Universitatii Street, 700115, Iasi, Romania;
[3]Nicolae Testemițanu State University of Medicine and Pharmacy, 165 Stefan cel Mare si Sfant Boulevard, Chisinau 2004, Moldova;
[4]Galati County Hospital, Department of Cardiology, 177 Brailei Street, 800578, Galati, Romania;

Corresponding author* Burlea Lucian Stefan,Lecturer ,Phd
"Grigore T. Popa"University of Medecine and Pharmacy - Iași, România
e-mail :lucianburlea@yahoo.com

Soothing pain has always been a goal of medicine:
"Sedare doloreum-divinum opus"(Hippocrates)

ABSTRACT

Management is the art to achieve goals using work, the intellect, the behavior of other people; it is a necessity imposed by the introduction and study of a new discipline that will contribute to a better organization of the health system and to the improvement of the quality of healthcare and of human health. Knowledge of management functions is the key to a successful activity. Pain is defined as an unpleasant sensory and emotional experience, generated by real or potential tissue damage, and having a multifactorial and multidimensional nature. The objectives of establishing effective analgesic therapy are: to improve the patient's comfort and quality of care and to facilitate complete recovery. Human psyche, consciousness, takes shape gradually from birth to the end of life and one cannot know what one has not been taught or has not learned; one cannot understand something as long as the circumstances and education have not provided the appropriate means. The entire content of psychic, intellectual and emotional life is borrowed from social reality through activities and self-education. Skills are developed gradually through practice, their quality depending directly on the duration and quality of the practice. Necessities evolve in relation to the items we consume or use and the activities we undertake. Our feelings are modeled on the social relations in which we engage. Even goals, that would seem to have as a source the depths of our being, are actually learned in the context of human existence. The capacity of voluntary exercise also depends on the lifestyle and activity experienced by the human being as a child, a young person or an elderly one. Although mental disorders in the elderly have some special features, they do not differ substantially from the ones in younger adults. What distinguishes elderly psychiatric patients from other patients is their needs. **Material and method**: The sample investigation includes a total of 57 cases to have dental treatment at the University Clinic of Dentistry in Iasi. The sample includes 24 women (42.10%) and 33 men

(57.89%). **Results and discussion**: Although finally realized, pain remains up to this day difficult to quantify, mainly due to the involvement of a major affective component with a high degree of subjectivity; it is a matter of evolutionary physiology; the sensitivity to pain is considered to be an acquisition of phylogenesis, even if limited in some lineages. **Conclusions**: The majority of anxious patients present to a dentist in the final stage of development of a dental periodontal disease or after repeated painful crises of a condition of the pulp; no anxious patient is willing to treat carious lesions.

Key words: *management, mental disorders, pain, elderly, dentistry, analgesia*

INTRODUCTION

"Management is the process through which one gets an activity done by other people, correctly, on time and within budget" (D. Gustafson). Before being a science, management was for centuries an art – the oldest art which man has perfected ceaselessly since Aristotle, who wrote about the qualities mandatory for persons entrusted with leadership positions, up to Montesquieu, Rousseau and Voltaire, who referred to monarchies and principalities, their contemporary state forms. From art, management gradually emerged as a scientific discipline in the making, based on a systematic body of knowledge relative to positive but also to the mainly negative experience of managers.

As a psychological problem, pain is part both of normal life, and especially of the pathologic life of the body. Pain usually includes both physical and moral pain.

Pain is primarily a warning that awakens us to see that something is wrong with our physical body or with our inner world. Without pain waking us up in this way, as a caring guardian, we would remain unconscious to our own needs and imbalances instead of seeking healing and change (Anderson R., 2004). A different kind of pain is inner pain, deeply subjective and that cannot be understood from the outside. The human being can experience many types of pain that stem from different areas of our lives, starting from physical pain, to the pain of the soul, and reaching the more difficult to understand domain, that of spiritual pain (Restian A, 2008).

In terms of medical treatment, it may be etiological, when the cause is treated and the effect (pain) disappears, and symptomatic, focused on the symptom when the disease is idiopathic (of unknown origin).

Nevertheless, there is a profound sense of all forms of pain. Pain is the means by which a wise universe awakens us to the issues we ignore, favoring the onset of a process of development, growth, healing (Bucur, Al. *et al*., 2009).

During evolution each individual acquires an own psychological profile in relation to a series of circumstances, to the previous course of their personal life; each starts from a certain hereditary basis and has a certain way of life as individuals are not identical, although having some common features combined in a specific pattern.

Individuals become mentally ill when they no longer bear themselves or others, when they have an excessive concern for their bodies and themselves, when they lose touch with reality by retreating into their own world and can no longer adapt to social, occupational and cultural norms (Bolos, A. *et al*., 2012). The psyche is simply a function of the brain, a complex and versatile function dependent on information received from the outer world and on the physiological state of the nervous system. The brain is the host of a series of chemical (Scutariu M.M. *et al*., 2017) and electrical processes by means of which information is received, stored and processed.

The collective mentality about the mentally ill changed, on the one hand, due to the enormous progress of therapeutic means, and, on the other hand, due to the increased incidence of mental illness. This change triggered the necessity to define more clearly the role of the major therapeutic factor, family. When pain is accompanied by depression, the patient manifests a dangerous decline. Specialists noted, however, that pain and depression are

separate entities and the relationship between them is not mandatory. Pain does not necessarily involve the presence of depression, especially if the person affected is psychically strong. In addition, current treatment regimens are very effective in treating both affections, and their complexity, ensured by medication and psychotherapy, can make the symptoms much more tolerable leading even to their disappearance (Little, J.W. *et al*., 2008).

Any family doctor knows that the onset of a disease in a family member has an impact on the whole family system, and the evolution of the disease is influenced by the way in which family members engage in and adapt to the stress brought about by the illness and the needs of the suffering person (Restian A., 2008).

The world primary medical care by means of family doctors and human community in a judiciously organized health system (Carausu, E.M. *et al*., 2017a) is trying to solve in ambulatory acute and chronic diseases (Douketis, J.D. *et al*., 2016). The socio-psycho-emotional relationship of maximum complexity that each member of the family establishes with the other members represents an inter-relational model impossible to replicate, both in terms of profundity of these links, and their amplitude and emotional coloring.

The classification of mental disorders can be made into: neurotic and psychopathic personality syndromes; presenile psychosis and dementia (involutional melancholia, involution manic syndrome, psychosis, presenile delusions, involutional dementia), late catatonia, Pick's disease and Alzheimer's disease, presenile dementia of degenerative type, neurotic syndromes etc. (Bulgaru, D.I. *et al*., 2015; Sava, A. *et al*., 2012).

The study of the genesis of ageing and biological peculiarities, as well as of the causes determining it becomes useful for developing the health care management of pathological ageing (Carausu, E.M. *et al*., 2017b). Structural and functional modifications of cells, tissues and organs during ageing lead to personality changes. This process occurs naturally and physiologically, as opposed to early and disharmonious ageing due to pathological causes (Ciubara A. *et al*., 2016).

It is particularly difficult to distinguish mild dementia from normal ageing effects or from poor cognitive performance over the individual's lifetime, coming from low intelligence or lack of education. One third of elderly care homes residents manifest major cognitive damage. Affective psychosis, late paraphrenia and acute confusion are found to have better prognosis than arteriosclerotic psychosis.

The psychological discomfort of elderly patients is induced by anxiety (fear of the unknown) or by the fear of different elements mentally associated or based on experiences (Untu, I. *et al*., 2015) prior to dental treatment. One of these is the instinctive fear of aggression of the whole body, manifested through fear of concrete elements, such as pain, vibration, smell of burned tissue, removal of organs or tissues, hypersensitivity to noise, pain, fear of choking, especially during the phases of impression of the prosthetic field, at different stages of treatment. Psychological discomfort may be also generated by the patient's fear of a possible change in body scheme after dental treatment, as happens frequently in the first meeting of immediate adaptation of total dentures to the oral cavity.

Dentistry, as well as other disciplines, must be involved in the knowledge of physiological and pathological involution processes in order to synthesize geriatric prevention programs.

The significant results registered by the dental rehabilitation of elderly patients and the functional recovery of disorders caused by edentation make of gerontodentistry an important specialty in geriatrics and dentistry, while considerably contributing to prolonging life.

During senescence of the body and psychiatric diseases, characteristic changes occur in the elements of the stomatognathic system; ageing reaches all parts, making it difficult sometimes to distinguish

physiological forms from pathological ones.

The pace of senescence phenomena is variable, so that healthy oral structures or at different stages of alteration can be met, which makes the process of ageing particular for each element of the same individual.

The elder's face becomes a senile mask with a more serious mimic, a depressive aspect that could increase with the pathology (Checherita, L.E. *et al*., 2017). Elastin reduction in the structure of elastic fibers and the decrease in their quality lead to increased rigidity and immobility of the mucous membrane, which becomes thinner, losing its elasticity, harder and, in the same time, more bound to traumatic attacks, and consequently a better area for dentist treatment.

During ageing, numerous modifications occur particularly in the periodontal tissue and its reaction to internal and external irritations modifies; there is a progressive increase of periodontal disease with age and an exacerbation in close relation to a lack of hygiene at this age; the effects of periodontal disease or of ageing are difficult to distinguish as they most often interfere.

MATERIAL AND METHOD

The sample under investigation includes 57 cases to have dental treatment at the University Clinic of Dental Medicine in Iasi. The sample includes 24 women (42.10%) and 33 men (57.89%). The following variables (Dascalu, C.G., *et al*., 2008) were taken into consideration for each patient: age between 60-85 years, gender, domicile, education, profession, type of dental treatment for which they presented at the dentist.

RESULTS AND DISCUSSION

The sample under study includes 57 cases, of which: 9 cases (15.78%) with neurotic syndrome; 17 cases (29.82%) with psychosis; 4 cases (7.01%) with pre-senile dementia; 11 cases (19.29%) with psychotic syndromes, 8 cases (14.03%) with Alzheimer's disease; 3 cases (5.26%) with involution manic syndrome; 5 cases (8.77%) with involutional melancholia.

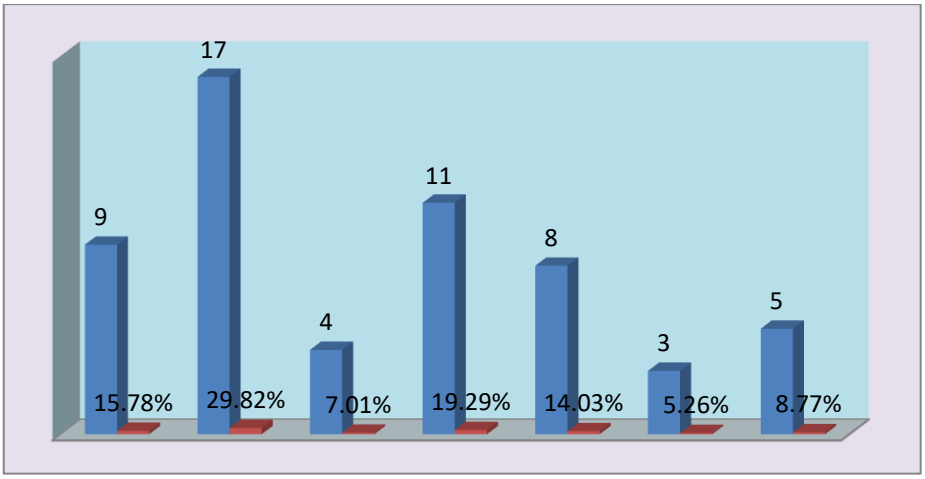

Fig. 1. Classification of mental disorders in cases under study

Depending on the mental constitution of the patient (introverted, extroverted or neurasthenic), fear will generate paralyzing or inhibiting reactions, more or less accentuated or aggressive (sudden, uncontrolled gestures, conflicting discussions with the members of the dental team, the refusal to collaborate, dissatisfaction expressed in relation to the results of the treatment).

Some patients externalize their emotional state through attitude or conversation, asking for much information either on the dentist, from common acquaintances or former patients, or on the treatment.

Typically, mentally unstable patients come to the clinic accompanied by family members, which is a secure element for them, especially when the patient's problems

are the problems of the whole family, who, by their attitude, may mitigate or aggravate his mental drama.

In the same category of anxious patients also fall those who do not dare approach the doctor directly and do it through intermediaries, seeking mediation of the first contact with the dentist through relationships, phone calls etc.

Pain causes a series of mental changes, most physicians having to take into account the anxiety and fear.

Pain is defined as an "*unpleasant sensory and emotional experience*", the result of real or potential tissue injury, the sensitivity to pain generating a series of individual manifestations that may influence patient behavior depending on the type, intensity and duration of the pain stimulating agent. The perception of pain results from the particular treatment of conscientious sensory information, the subject of attention, interpretation and memorization of every individual. Although finally realized, pain still remains a manifestation difficult to quantify, mainly due to the involvement of a major affective component with a high degree of subjectivity.

Among the cases under study, there are patients showing avoidance behavior caused by anxiety– 20 patients (35.08%). Consequently, anxiety has repercussions on the oral health of individuals. The subjects in the anxious group (37 cases, 64.91%) manifest anxious anticipation of pain as an important contributor to the development of anxiety.

Anxiety becomes pathologic when it is present in excess either as duration and frequency, or intensity. Pathological anxiety is fear without actual or defined object, feeling of terror, of imaginary representations, more or less ineffable, the harmful or paralyzing experience manifesting generally in psychological, somatic and behavioral forms.

Anxiety caused by dental treatment is a well-known phenomenon. In its severe forms anxiety can have a negative impact on the doctor-patient relationship preventing correct diagnosis.

Patients who have experienced anxiety have undergone the most unpleasant experiences. A specific behavior of patients with dental phobia is the postponement of meetings to the dentist by cancellation of appointments. Factors that appear to contribute to the development of phobia are: anticipation of pain, social factors and the type of dental treatment.

Pain during the therapeutic procedure contributes most to the development of anxiety.

Patients mentally anxious or restless were recommended psychotropic drug therapy, most commonly before starting treatment sessions.

Adjuvant analgesics are drugs that do not have pain as the primary indication, but can be analgesics in certain circumstances. Antidepressants and anticonvulsants are among the most commonly used. Their combination in the treatment of pain requires good knowledge of their adverse effects and of the situations in which they can be used safely.

Far from having a protecting role, in dentistry pain is harmful and pathogenetic during dental treatment, being inseparable, among others, from the feeling of fear and rejection. Toothache, more or less violent, represents, together with renal colic, one of the most violent manifestations of pain, and that is why Pierre Fauchard names it suggestively "tooth rage".

Pain is an aspect of evolutionary physiology; it is considered that sensitivity to pain is an acquisition of phylogenesis, even if limited in some lineages. L.V. Bertalanffy claims that pain is a counterface of biological progress. Its relevance in appropriate reactions of the body adjusting is real, which does not mean that any pain is useful. As an important symptom, pain can become a barrier in some necessary therapeutic interventions.

As a psychological matter, pain is a part of both normal life, and especially of the pathological life of the human organism (Leriche). Algic sensitivity differs greatly from one individual to another, which conditions the genesis and character of pain.

As a subjective symptom and mental reaction, pain has an individual, personal character; as such, it can be the starting point of a typology.

Pain perception differs from one individual to another, the same as the emotional response and the behavior occasioned by pain. The pain threshold is lower in men than in women, in young people than in older people.

Pain is more often than not the symptom that "pushes" the patient to see a doctor, but it also creates the fear of doctor. A trivial therapeutic recommendation is "to respect" pain until its causes are determined (i.e. until drafting a diagnosis); clinical exploration should be guided by the existence of painful areas and points, especially to children (Lupu V.V. *et al*, 2016a) and elderly patients.

Some authors argue that pain and negative emotion occur simultaneously due to similar biological mechanisms. Consequently, serotonin and epinephrine play an important role in inducing anxiety and pain modulation. Other authors have correlated distress with anxiety and found that this is responsible for the induction and maintenance of chronic musculoskeletal pain by increasing tonicity. Maybe "the dentist or oral-maxillofacial surgeon targets the easiest way to get an autonomous negative reaction" (Cohen L.L. *et al*, 2002).

Pain is a sensation symptom involving an unpleasant affective component of a dermal or internal origin (organic and psychic) (Şchiopu U., 1997).

Psychogenic pain is the somatic manifestation of emotional disturbance. This diagnosis is made after the others have been eliminated. The relationship between pain, anxiety and depression are so complex that it is not always easy to identify the causes and consequences. Psychobiological modern investigations showed a varying degree of intensity and duration of painful responses depending on the patient's degree of anxiety, this bearing great importance on the addressability to the therapist (Lupu V.V. *et al*, 2016). In other various conditions strongly associated with the psychological environment, psychogenic pain may play a determinant role. (Olaru *et al*, 2016)

Let us not forget that art, in general, reflects in its various forms this condition: pain, the tragic and rarely victorious struggle of the human being against fate.

Talking about pain as a state of mind in music, we must mention that humans are accompanied by music in all stages of his life. This way, birth and marriage are sources of joy, whereas death is associated with such great pain that the kinds of music expressing it are laments, mourning songs or funeral marches (Untu *et al*, 2015; Lupu V.V. *et al*, 2017). However, phenomenons like child marriage and teen birth are, by contrary, sources of various psychological disorders. (Diaconescu *et al*, 2015)

A composer who had a troubled life and suffered very much was Ludwig van Beethoven. The feeling of pain is best expressed in Beethoven's 5th Symphony in C minor (also called "The Symphony of Destiny"), among Beethoven's most dramatic compositions as life is conceived like a series of fierce battles between the great aspirations of the humans and the dark forces adverse to human happiness.

Beethoven's main reason to compose it was to transpose on musical notes the landlord's knocking on his door for the rent. The first notes express the terrible pain of poverty increased by the physical pain the composer has to endure in later years. The crucial figure marking the transition from the Classical to the Romantic eras was deaf and he associated through the first notes the knockings on the door with his heartbeat.
But Beethoven also created the famous 3rd Symphony, "Eroica", dedicated to Napoleon Bonaparte's victories. The funeral march is the most dramatic part of Symphony no. 3, expressing the grittiness of separation from the loved ones, while the instruments participating sound like mourning sighs.

CONCLUSIONS

A mostly important factor is the patient's type of personality; certain patients undergoing traumatic dental treatment may not develop anxiety, while other patients, under the same conditions, do.

Due to the anatomo-physiological or socio-psychological mechanisms, pain can no longer be seen as only a sensation, but as a complex pathological phenomenon with multiple anatomo-physiological, psycho-intellectual, psycho-emotional and psycho-sociological implications.

REFERENCES

1. Anderson, R. The Puzzle of Pain. 2nd ed. London, New York: Gordon &Breach; 2004
2. Bucur, Al., Navarro Vila, C., Lowry, J., Acero, J. Compendiu de chirurgie oromaxilo- faciala, vol. 1 si 2, Editura Q Med Publishing, Bucuresti, 2009.
3. Bolos, A., Ciubara, A.M., Chirita, R. Moral and ethical aspects of the relationship between depression and suicide. Rev. Romana de Bioetica, 2012; 10(3): 71-79.
4. Scutariu M.M., Danila V., Ciupilan C., Ciurcanu O.E. Semiology of the pain syndrome– identifying the ideal methods of locoregional anesthesia based on their rationale and features, Revista de Chimie, 2017; 68(10): 2373-2377.
5. Carausu E.M., Paris S., Burlea L.S., Tucmeanu A.I., Antohe I. The Crisis Impact on the Romanian Health System and Population Health. Revista de Cercetare si Interventie Sociala, 2017a; 57, 120-137.
6. Little, J.W., Falace, D.A., Miller, S.M. Dental Management of Older Adults, In: Dental Management of the Medically Compromised Patient, Seven-th edition, Chapter 20, Allergy, Mosby, Elsevier. 2008, p. 302-314.
7. Restian, A. Bazele medicinei de familie editia III–a revizuita, Ed. Medicala Bucuresti, 2008.
8. Douketis, J.D., Syed S., Schulman S. Periprocedural management of Direct Oral Anticoagulants: Comment on 2015 American Society of regional Anesthesia and Pain medicine Guidelines Regional Anesthesia & Pain Medicine, 2016; March/April, Volume 41, Issue 2, p. 127–129.
9. Iliescu-Bulgaru, D., Costea, G., Scripcaru, A., Ciubara, A. Homicide and alcohol consumption. A medico-legal and psychiatric interdisciplinary approach; Multivariate analysis**.** Romanian Journal of Legal Medicine, 2015; 23(2): 137-142.
10. Sava, A., Furnica, C., Petreus, T., Chistol R.O., Motoc, A.G.M. Trigeminal nerve: MRI anatomy and case presentation of trigeminal neuralgia due to arterial compression, Romanian Journal of Morphology and Embryology, 2012; 53(4): 1097-1102.
11. Carausu, E.M., Dascalu, C.G., Zegan, G., Burlea, L.S., Lupu, I.C., Antohe, I. The General and Oral Health Status in Older Adults from Rural Environment of Iasi County, Romania. Revista de Cercetare si Interventie Sociala, 2017b; 59, 187-208.
12. Ciubara A., Chirita, R., Burlea, L.S., Lupu, V.V., Mihai, C., Moisa, S.M., Untu, I. Psychosocial particularities of violent acts in personality disorders, Revista de Cercetare și Intervenție Socială, 2016; 52, 265-272.
13. Untu, I., Chirita, R., Bulgaru-Iliescu, D., Chirila, B.D., Ciubara, A., Burlea, S.L. Ethical Implications of Bio-Psycho-Social Transformations Entailed by the Aging Process. Revista de Cercetare si Interventie Sociala, 2015; 48, 216-225.
14. Checherita, L.E., Rezus, E., Leon, M.M., Stamatin, O., Carausu, E.M. Impact of Medication with Diclofenac Sodium vs. Etoricoxibum in Patients with Inflammatory Reumatic Pathology, Prosthetic Complications and Algo-dysfunctional Syndrome. Revista de Chimie, 2017; 68(5): 977-981.
15. Dascalu, C.G., Carausu, E.M., Manuc, D. Methods for Data Selection in Medical Databases: The Binary Logistic Regression- Relations with the Calculated Risks. World Academy of Science, Engineering and Technology, 2008; 14, 278-82.
16. Lupu, V.V., Ignat, A., Paduraru, G., Ciubara, A., Moscalu, M., Marginean, C.O., Burlea, M. Correlation between the different pH-metry scores in gastroesophageal reflux disease in children, Medicine, 2016a; Volume 95, Issue 26, p e3804, doi: 10.1097/MD.0000000000 003804.
17. Cohen, L.L., Bernard, R.S., Greco, L.A., & McClellan, C. B. A child-focused intervention for coping with procedural pain: are parent and nurse coaches necessary? Journal of Pediatric Psychology, 2002; 27(8): 749-757.
18. Șchiopu Ursula. Dicţionar de psihologie, Editura Babel, Bucureşti, 1997.
19. Lupu, V.V., Ignat, A., Paduraru, G., Ciubara, A., Ioniuc, I., Ciubara, A.B., Gheonea, C., Burlea M. The study of effects regarding ingestion of corosive substances in children — Revista de Chimie, 2016b; 67(12): 2501-2503.
20. Olaru C., Diaconescu S., Trandafir L., Gimiga N., Stefanescu G., Ciubotariu G., Burlea M. Some Risk Factors of Chronic Functional Constipation Identified in a Pediatric Population Sample from Romania. Gastroenterology Research and Practice, vol. 2016, Article ID 3989721, 8 pages, 2016. doi:10.1155/2016/3989721.

21. Olaru C., Diaconescu S., Trandafir L., Gimiga N., Olaru R. A., Stefanescu G., Ciubotariu G., Burlea M., Iorga M. Chronic Functional Constipation and Encopresis in Children in Relationship with the Psychosocial Environment. Gastroenterology Research and Practice, vol. 2016, Article ID 7828576, 7 pages, 2016. doi:10.1155/2016/7828576.
22. Lupu, V.V., Ignat, A., Stoleriu, G., Ciubara, A.B., Ciubara, A., Lupu, V., Burlea, M., Stratciuc, S. Vaccination of Children in Romania between Civic Obligation and Personal Choice. Revista de Cercetare si Interventie Sociala, 2017; 56, 123-132.
23. Diaconescu, S., Ciuhodaru, T., Cazacu, C., Sztankovszky, L.Z., Kantor, C., Iorga, M. (2015). Teenage Mothers, an Increasing Social Phenomenon in Romania. Causes, Consequences and Solutions. Revista de Cercetare si Interventie Sociala, 51, 162-175.