

Vol. 5, Issue 2, October-2017
ISSN 2559-1649 (online)



ROMANIAN
JOURNAL
OF
PSYCHOLOGICAL
STUDIES

ROMANIAN JOURNAL OF PSYCHOLOGICAL STUDIES

HYPERION UNIVERSITY



ROMANIAN JOURNAL OF PSYCHOLOGICAL STUDIES

Vol. 5, Issue 2, October-2017

ISSN 2559-1649, ISSN-L 2559-1649

Biannual journal published by Hyperion University,
Faculty of Psychology and Educational Sciences, Department of Psychology

Editorial Board

Chief Editor:

- Steliana Rizeanu, *Hyperion University of Bucharest*

Executive Editor:

- Mihai Ciolacu, *Hyperion University of Bucharest*

Associated editors:

- Maria Manzat, *Hyperion University of Bucharest*
- Emil Razvan Gatej, *Hyperion University of Bucharest*
- Mihaela Stomff, *Hyperion University of Bucharest*
- Monica Elena Dumbrava, *Free International University of Moldova, Kishnev*
- Barbara Craciun, *Titu Maiorescu University*
- Mircea Bratu, *National University of Physical Education and Sports*
- Mihaela Chraiff, *University of Bucharest*
- Daniela Porumbu, *Transilvania University of Brasov*
- Aliodor Manolea, *Hyperion University of Bucharest*
- Dan Vasiliu, *Pedagogical University „I. Creangă” of Kishinev*

Scientific Board

- Acad. Ph.D. Leon Dănăilă, *Romanian Academy*
- Acad. Ph.D. Constantin Ionescu-Tîrgoviște, *Romanian Academy*
- Ph.D. Nicolae Mitrofan, *University of Bucharest*
- Ph.D. Mihai Golu, *Spiru Haret University, Bucharest*
- Ph.D. Steliana Rizeanu, *Hyperion University of Bucharest*
- Ph.D. Mânzat Ion, *Hyperion University of Bucharest*
- Ph.D. Matthew Hunsinger, *Pacific University, Hillsboro*
- Ph.D. Racu Igor, *Pedagogical University „I. Creangă” of Kishinev*
- Ph.D. Igor Vitale, *Università Popolare Europea, Italia*
- Ph.D. Zoran Zoričić, *Clinical University Hospital „Sister of Mercy”*
- Ph.D. Geanina-Cucu Ciuhan, *Pitești University*
- Ph.D. Maria Vîrlan, *Pedagogical University „I. Creangă” of Kishinev*
- Ph.D. Svetlana Rusnac, *Free International University of Moldova, Chișinău*
- Ph.D. Rodica Damian, *University of Houston*
- Ph.D. Stefano Amodio, *Istituto Armando Curcio, Italy*

Editorial Office: Hyperion University, Faculty of Psychology and Educational Sciences,
Calea Calarașilor no. 169, district 3, Bucharest, 030615
<http://rjps.hyperion.ro>, office@rjps.hyperion.ro

CONTENTS

Research articles

Spearman correlations between learning styles from rational level and Gardner intelligence types 3
Mihai Covaci	
Mindfulness and distal influence of social groups 9
Aliodor Manolea	
Teaching gross motor imitation skills to children diagnosed with autism 17
Daniela Doina Bololoi	
Steliana Rizeanu	
Stress, depression and dysfunctional attitudes among elders. A non-experimental approach 24
Mircea Bratu	
Radu Emanuel Rizeanu	
Psychotherapeutic approach of anxiety disorders – a false phobia, phagophobia. Case study 31
Cristina-Mihaela Stoian	
Steliana Rizeanu	
Differences between the self-assessed and observed level of aggressivity of younger drivers in traffic – a pilot study 37
Emil Răzvan Gâtej	
Steliana Rizeanu	
George Ursachi	



SPEARMAN CORRELATIONS BETWEEN LEARNING STYLES FROM RATIONAL LEVEL AND GARDNER INTELLIGENCE TYPES*

MIHAI COVACI ^a

^a „Ion Creangă” Pedagogical State University from Chişinău

Abstract

Perspectives on education are changing and expanding beyond the classroom, to an augmented environment, where are facilitated processes such as information access, expert opinions on the same subject, detailed analyzes of certain aspects, etc. This extension implies in different ways both teachers and learners in relation to the variety of learning styles and types of intelligence presented by H. Gardner. In current learning offerings and information access opportunities, students can effectively use their natural inclinations (converted to styles) to exploit learning, analyze information that is uninfluenced by aspects of a particular group, develop collaborative personality traits, and these aspects may indirectly cause teachers to adapt the methods used for the class. The purpose of the research is to observe the possible correlations between learning styles that predominantly use rational area from Kolb and Honey-Mumford models and Gardner intelligence types. Observing these correlations teachers can be helped in better understanding of students' attitudes towards the educational process.

Key-words: Learning style, types of intelligence, correlations

1. INTRODUCTORY CONSIDERATIONS

At the present, speciality studies have synthesized about 71 patterns of learning styles, 13 of them being more common (Coffield et al., 2004). Within these models, cognitive style and learning strategies can change depending on various factors and contexts of learning places. The classification of these styles is usually done on three levels: the sensory or perceptual level, which presents the styles according to the predominant implied or dominant receptor; the level of information processing, which relates to how information is decoded, memorized,

Corresponding author: Mihai Covaci

E-mail address: mihaicovaci@gmail.com

* The current article is a material from the doctoral thesis

analyzed and used later to solve problems, leaving its mark on certain analytical or global attitudes, values and interpretations of events; and the mixed level when equivalence between the used receptors and equality between specific information processing functions or the first two levels interrelate and give rise to what is called the „personal style of learning” (Semionov, 2011), or naturally results a combination of existing styles (Focşa-Semionov, 2009).

David Kolb has made a classification of learning styles in relation to the external environment, styles that represent the best adaptation of the individual to the world around him, and so these styles symbolize the form of resolving the tension between the adaptation modalities and the solutions found (Kolb, 1981). The typology of the psychological characteristics of learning proposed by D. Kolb uses four styles or forms, namely concrete experience, reflexive observation, abstract conceptualization and active experimentation. The four learning styles based on concrete experience, reflected observation, abstract conceptualization and active experimentation can be treated either individually (in the case of the first model) or by combining them. Thus, we can have: the divergent style (obtained from the combination of the concrete experience + reflected observation); assimilation style (obtained from the combination of reflected observation + abstract conceptualization); the convergent style (obtained from the combination of abstract conceptualization + active experimentation) and the acomodor style (obtained from the combination of active experimentation + concrete experience).

The Honey-Mumford Model. This model started by working on Kolb's model and adding higher levels through which the individual perceives, processes and represents the information. Thus, four styles were developed as individual learning preferences: theoreticians, pragmatics, activists and reflectives (Bernat, 2003; Duff, 2001; Penger & Tekavčič, 2009).

From the perspective of use and addressability of learning styles, the models developed by D. Kolb and Honey-Mumford are thought to be models that address and evaluate the capacity for rationalization, analysis, comprehension and information processing (Bernat, 2003; Cassidy, 2004). These models along with Gardner's multiple intelligence model are vital features in the process of acquiring information.

Howard Gardner's multiple intelligence theory is considered to be one of the most remarkable access of the human psyche. Gardner has defined intelligence as „the ability to solve problems or to create products that are valued by multiple cultures” and this definition, as Gardner continues, „does not say anything about the sources of these abilities or appropriate means of” testing „it.” (Gardner, 2011). In fact, Gardner has proposed three distinct uses of the term intelligence: a property of all human beings, a dimension that differentiates human beings and a way in which a certain activity takes place (by virtue of the proposed goals) (Gardner, 2011). Building on this definition and on these distinctions, eight different criteria for multiple intelligences have been outlined on the basis of

biological and anthropological evidence (Gardner, 2011). Thus, eight types of intelligence have been identified: verbal / linguistic intelligence, logical / mathematical intelligence, visual / spatial intelligence, body / kinesthetic intelligence, musical / rhythmic intelligence, interpersonal intelligence, intuitive intelligence and naturalistic intelligence (Gardner, 2006). These are also different ways to discover and explore the environment, ways that have been labeled by Gardner as human intelligence (Armstrong, 2009; Gardner, 2011; Rizeanu, 2016).

2. OBJECTIVES AND IPOTES

The objective of the research is observation of the possible correlations between rational learning styles and Gardner intelligence.

Research hypothesis: There are Spearman correlations between rational learning styles and Gardner intelligence types among students at the faculty of psychology.

3. METHOD

3.1. PARTICIPANTS

In this research participated 101 students from the Faculty of Psychology at Hyperion University in Bucharest.

3.2. INSTRUMENTS

- The Kolb questionnaire contains 12 items with four answer possibilities;
- The Honey-Mumford Questionnaire (Serea, 2006), (MAAN and A.N.F.P.; 2012), (Pasaniuc, 2014), (weebly) contains 80 items with a single answer. At the end, the points (or ticked items) are added and the predominant style is deduced from the following scales:

Tabel 1 – Honey-Mumford model scales

Active	Reflexive	Theorist	Pragmatic	Scale
13-20	18-20	16-20	17-20	Very strong preference
11-12	15-17	14-15	15-16	Strong preference
7-10	12-14	11-13	12-14	Moderate preference
4-6	9-11	8-10	9-11	Low Preference
0-3	0-8	0-7	0-8	Very low preference

- The questionnaire of the eight types of intelligence has 80 items (Bernat, 2003; Dediu, 2010) and aims to frame the subjects in one of eight types of intelligence (Bernat, 2003) proposed by Howard Gardner (Gardner, 1991), namely: verbal / linguistic intelligence; logical / mathematical intelligence; visual / spatial intelligence; body / kinesthetic intelligence; musical / rhythmic intelligence; interpersonal intelligence; Intra-personal Intelligence and Naturalistic Intelligence (Gardner & Moran, 2006). Depending on the score, the subjects are framed by the

dominant intelligence type, with no interpretations of scores within each type of intelligence, but only the predominance of a certain type of intelligence. Multiple intelligences can also be understood as different ways of learning. In general, the education system tends to favor two of these ways: the logical / mathematical and the verbal / linguistic. Each of the learning modalities involves specific abilities (Bernat, 2003).

3.3. EXPERIMENTAL DESIGN

The design of the research consisted in the application of the questionnaire and later the data obtained were processed in SPSS v.22.

4. RESULTS

Spearman correlations between the models of Kolb and Honey-Mumford, on one hand, and Gardner's intelligence, on the other hand, were designed to determine the possible correlations between ranks between learning styles and types of intelligence.

Tabel 2 – Synthesis of intelligence types and measured styles based on which Spearman correlations were made

The type of intelligence	Style measured
Verbal / linguistic intelligence	Divergent style (CE / RO)
Logical / mathematical intelligence	Asimilator style (AC / RO)
Visual / Space Intelligence	Convergent style (AC / AE)
Body / kinesthetic intelligence	Acomodor style (CE / EA)
Musical / Rhythmic Intelligence	Active
Intelligence inter-personal	Reflexive
Intra-personal Intelligence	Theorist
Naturalist intelligence	Pragmatic

According to Spearman's correlation analysis, types of intelligence correlate with various styles in different proportions as follows:

Verbal-linguistic intelligence has a positive correlation (median proportional relation between values) of mean intensity with Reflexive (Honey-Mumford) ($r_o = 0.445$, $p = 0.000$, $N = 101$).

The logic-mathematical intelligence has a positive correlation of low-intensity correlation with Reflexive (Honey-Mumford) ($r_o = 0.382$, $p = 0.000$, $N = 101$) and with Theoretician (Honey-Mumford) ($r_o = 0.296$, $p = 0.003$, $N = 101$). Visual-space intelligence has a positive correlation of low intensity with Reflexive (Honey-Mumford) ($r_o = 0.300$, $p = 0.002$, $N = 101$).

Inter-personal intelligence has a positive correlation of low intensity correlation with Reflexive (Honey-Mumford) ($r_o = 0.391$, $p = 0.000$, $N = 101$) and Pragmatic (Honey-Mumford) ($r_o = 0.255$, $p = 0.010$, $N = 101$).

Intra-personal intelligence has a positive correlation of mean intensity with Reflexiv (Honey-Mumford) ($r = 0.412$, $p = 0.000$, $N = 101$), positive intensity correlation with Active (Honey-Mumford) ($r = 0.014$, $N = 101$) and with Pragmatic (Honey-Mumford) ($r = 0.224$, $p = 0.024$, $N = 101$).

Naturalist intelligence has a positive average intensity correlation with Reflexive (Honey-Mumford) ($r = 0.526$, $p = 0.000$, $N = 101$); positive correlation of low intensity with Theoretician (Honey-Mumford) ($r = 0.228$, $p = 0.022$, $N = 101$).

Otherwise, the 8 types of intelligences had insignificant positive or negative correlations and varied intensities with other learning styles.

5. CONCLUSIONS

In constational research and in relation to the assumed objective, the results obtained have shown that in Kolb we do not have any type of intelligence that correlates with the learning styles. For the Honey-Mumford model three medium intensity correlations and eight low intensity correlations were obtained between six types of intelligence and four learning styles. Thus, we can conclude that the assumed hypothesis has been validated.

Received at: 13.09.2017, Accepted for publication on: 25.09.2017

REFERENCES

- Armstrong, T. (2009). *Multiple intelligences in the classroom* (3rd ed.). Alexandria, Virginia: ASCD.
- Bernat, S. E. (2003). *Tehnica învățării eficiente*. Cluj-Napoca: Presa Universitară Clujeană.
- Cassidy, S. (2004). Learning Styles: An overview of theories, models, and measures. *Educational Psychology*, 24(4). doi:10.1080/0144341042000228834
- Coffield et al., F. (2004). *Should we be using learning styles? What research has to say to practice*. London: Learning and Skills Research Centre.
- Dediu, M. (2010). *Planul operațional. Comisia pentru evaluarea și asigurarea calității*. Constanța: Colegiul tehnic de marină „Al. I. Cuza”.
- Duff, A. (2001). A note on the psychometric properties of the Learning Styles Questionnaire (LSQ). *Accounting Education*, 10(2). doi:10.1080/09639280110095764
- Focșă-Semionov, S. (2009). *Învățarea academică independentă și autoreglată*. Chișinău: USM, Fac. de Psihologie și Șt. ale Educației.
- Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences* (Tenth-anniversary edition ed.). New York: BasicBooks.
- Gardner, H. (1991). The tensions between education and development. *Journal of Moral Education*, 20(2). doi:10.1080/0305724910200201

- Gardner, H. (2006). *Multiple Intelligences. New Horizons*. New York: Basic Books.
- Gardner, H. (2011). *Frames of Mind. The Theory of Multiple Intelligences*. New York: Basic Books.
- Gardner, H. (2011). *The Unschooled Mind: How Children Think and How Schools Should Teach* (2nd ed.). New York: Basic Books.
- Gardner, H., & Moran, S. (2006). The Science of Multiple Intelligences Theory: A Response to Lynn Waterhouse. (I. Lawrence Erlbaum Associates, Ed.) *Educational Psychologist*, 41(4).
- Kolb, D. A. (1981). *Learning Styles and Disciplinary Differences*. San Francisco: Jossey-Bass Publishers.
- M.A.N și A.N.F.P. (2012). *Minighid pentru formarea de formatori. Document elaborat în cadrul modului de formare „Formarea de formatori”*. București.
- Pasaniuc, J. (2014). Metode creative folosite în activitățile de tineret: suport de curs. *Revistă de biblioteconomie, științe ale informării și de cultură, editată de Biblioteca Municipală „B.P. Hasdeu” din Chișinău*, 55(5 (ediție specială)).
- Penger, S., & Tekavčič, M. (2009). Testing Dunn & Dunn's and Honey & Mumford's learning style theories: The case of the slovenian higher education system. *Management*, 14(2).
- Rizeanu, S. (2016). Consilierea și orientarea în carieră a elevilor. *Revista de studii psihologice nr 4/2016, issue 25, p 209-214. Universitatea Hyperion din București*.
- Semionov, S. (2011). Model al dezvoltării autoreglării academice pe dimensiunea strategică. *Studia Universitatis*, 5(45).
- Serea, A. (2006). *Ghid de educație nonformală pentru persoanele aflate în detenție*. Iași: Asociația Alternative Sociale.
- weebly. (n.d.). *nursingmidwifery.weebly.com*. Retrieved 04 12, 2012, from <http://webcache.googleusercontent.com/search?q=cache:NLda34eW230J:nursingmidwiferyweebly.com/uploads/6/5/1/9/65196591/learning-styles-questionnaire-honey-and-mumford11.doc+&cd=2&hl=ro&ct=clnk&gl=ro>



MINDFULNESS AND DISTAL INFLUENCE OF SOCIAL GROUPS

ALIODOR MANOLEA ^a

^a *Hyperion University, Faculty of Psychology and Educational Sciences
Department of Psychology*

Abstract

There are several levels at which distal influence action can be made to influence behavior, a more direct one- the “Emotionally Based Strategic Communications” as a an appropriate communications strategy for “transforming negative dominant emotional maps into more positive ones”, and the other more subtle - psihoinformational distal influence. The cerebral connectivity studied in the experiment testing the psihoinformational distal influence was defined as the link, without physical mediation. The experiment consisted of exposing inducer subjects to visual stimuli with affective significance and simultaneous measurement of the effect of distal social influence on receiver subjects. There is a significant positive relationship between specific skills and the number of the brain connections performed by psihoinformational distal influence. This information transfer by distal influence can be done by any normal healthy subject, but the most effective ones are found to be those who have a specific training, namely mindfulness. Emotion has been identified as the distal influence mediator.

Keywords: *mindfulness, eeg, psihoinformational distal influence, brain connectivity*

1. INTRODUCTION

The concept of mindfulness is taken from the ancient techniques of Buddhist meditation, but today it is a technique of intentional concentration of attention on the present moment and the acceptance, without judgment, of the thoughts, emotions, and sensations that define us. Mechanisms through which mindfulness meditation techniques help alleviate symptoms are not well known, but evidence (Dickenson et al, 2013), suggests that mindfulness meditation may be associated

Corresponding author: Aliodor Manolea

E-mail address: aliodor@glide.ro

with changes in brain structure and functioning in the areas responsible for attention (Pagnoni, 2012, Dickenson et al, 2013), emotional regulation (Lutz et al, 2014) and self-awareness. Recently, with increasing scientific support, mindfulness meditation has become a self-contained therapeutic technique introduced in various therapies such as cognitive-behavioral psychotherapy (Marchand, 2012). With the help of mindfulness meditation techniques, it can be reached a deeper understanding of ourselves, learn to live now and here. In other words, mindfulness would be the state of mind that involves active attention, a clear perception of what is happening at each moment with the individual and with the environment, an intentional attitude to keep focus focused at every moment.

1.1 TECHNIQUES FOR INFLUENCING SOCIAL GROUPS, CRITICAL POINTS

The methods for influencing the dynamics of group behavior are operational in different contexts. There are several levels at which action can be made to influence behavior, a more direct one-Emotionally Based Strategic Communications (Ćosić et al, 2012) as an appropriate communications strategy for transforming negative dominant emotional maps into more positive ones, and the other more subtle - psihoinformational distal influence. Distal Psiho-informational Influence (DPsiI), was shown to be real and effective at the individual level or small groups of people (Manolea, 2015). Training methodology involves methods and techniques of psychology, validated in practice, among which are hypnosis, cognitive-behavioral methods, methods of transpersonal psychology and mindfulness. The ultimate goal of specific training is to achieve the mind control, as a means of manifestation of DPsiI (Manolea, 2017).

The common feature thereof is the use of emotions as a means of inducing a change in the behavioral pattern of individuals (Taylor et al, 2011), having as physical support the neuroplasticity process, which designates the change of neuronal network connections in response to stimuli of the same type (Manolea, 2017). These brain-acting mechanisms of both methods are governed by the theory of chaos, which involves bringing the group of people whose behavior is desired to be modulated, at a critical point that generates a bifurcation of behavior. This action allows, through a relatively insignificant maneuver, to act on the level of the unconscious, so that the group is influenced in a controlled manner (Manolea, 2015). In order to reveal the basic idea of chaos theory, that any dynamic system is characterized by a fundamental instability phenomenon called "sensitivity to the initial conditions", the metaphor of "butterfly wings" has become emblematic as the butterfly effect (Lorenz, 1993). Sensitivity to initial conditions determines the impossibility of making long-term predictions, being the engine of changing the status of any system. These changes of order occur in some critical points of system evolution, called bifurcation points (Prigogine and Stengers, 1984). This is, in short, a possible mechanism of social influence.

2. OBJECTIVES AND HYPOTHESES

2.1. OBJECTIVES

The objective of the study was to demonstrate that skills for distal influence exist even in non-trained subjects, while subjects with a specific training (mindfulness) have better performances in the practice of distal influence.

2.2. HYPOTHESES

The assumption was that there is a significant correlation between the subjects' skills and performance in the distal social influence. After applying the specific activation procedure of their own potentials, the subjects show greater efficiency in the action of distal psycho-informational influencing (IPsiD).

3. METHOD

3.1. PARTICIPANTS

The distribution of the 48 subjects was done in six experimental groups. Each two groups, one of the inducers and the other of the receptors, participated in each experiment. The first experiment was attended by 16 subjects aged between 18 and 23 ($m = 19.6$, $SD = 1.3$), students of the Faculty of Psychology of the University of Bucharest. The participants were randomly selected from the students of the first year and were unaware of the purpose of the experiment, thus implementing the first experiment, the unintentionally distal psycho-informational influence (IpsiD-IngI1 and IpsiD-IngI2). In the second experiment, 16 subjects aged between 18 and 24 ($m = 19.8$, $SD = 1.5$) participated in the distal, Intentional Psycho-Informational Influence (IPsiD-I1 and IPsiD-I2) students of the Faculty of Psychology of the University of Bucharest. The participants were randomly distributed to the two inducer and receptor groups, having knowledge of the purpose of the experiment. The third experiment was attended by 16 subjects aged between 22 and 56 years. A number of eight participating students of the Faculty of Psychology from the University of Bucharest aged between 22 and 30 ($m = 26$, $SD = 3.6$) were randomly selected from the students of the first year and were aware of the purpose of the experiment, thus implementing the experiment on Intentional Distal Psycho-information Influence (IPsiD-IA2), constituting the group of subjects without specific training. The other eight subjects (IPsiD-IA1), aged 41 to 56 years ($m = 48$, $SD = 4.01$), had specific training in attention and mental concentration.

3.2. INSTRUMENTS

The following instruments and software have been used in the study:

1. GDV Camera Pro, instrument produced by KTI Co.
2. Aura Video Station 5.1 produced by Inneractive Aura Video Systems, USA.
3. EEG MindWave - MindWave Mobile Headset

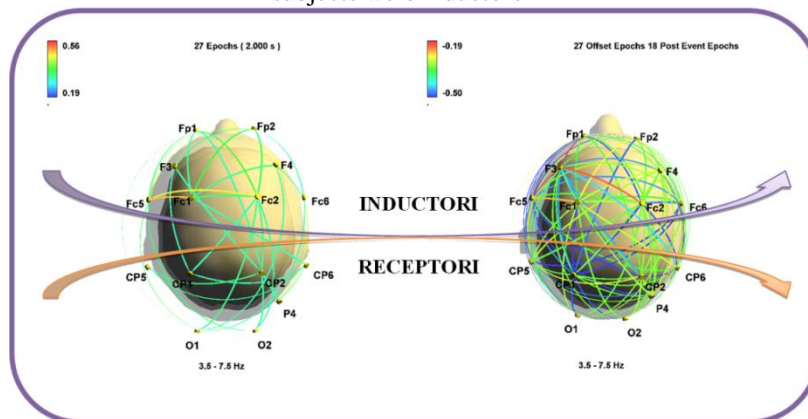
Data were processed in “GDV SciLab”, SPSS 20, EDFBrowser, MATLAB, EEGLAB, ASAEED and “MS Excel” software.

3.3. PROCEDURE

The experiment consisted of exposing inducer subjects to visual stimuli with affective significance and simultaneous measurement of the EEG signals as the effect of distal social influence on receptor subjects. Each experiment has had 25 sessions attended by groups of subjects distributed after Fibonacci's string. The cerebral activity of the subjects was monitored using a wireless EEG headset with one channel each. They communicated with a data acquisition system with synchronized internet time. There were eight spatially and sensory isolated subjects by means of a reinforced concrete wall. The brain activity of the induction and receptor subjects was measured, synchronized over time, and the data obtained was processed with several signal and data analysis packages: EXCEL, EDFBrowser, MATLAB, EEGLAB, ASAEED for extracting packed information in the EEG structure (Manolea, 2017).

The cerebral connectivity studied in this experiment was defined as the link, without physical mediation, between two neural networks belonging to two different brains. The method that has been highlighted is the one commonly used to show the connectivity of different neural networks belonging to the same system, namely studying the coherence between two EEG signals.

Figure 1 The amplitude of the achieved coherence, for the session in which the trained subjects were inductors



They achieved 14 connections (the green lines) with receivers subjects (Manolea, 2015, p. 159). A data set with a structure similar to that of figure 1 it was obtained, meaning the number of brain connections made by the subjects.

3.4. EXPERIMENTAL DESIGN

Defining variables

In order to collect the data, GDV Camera Pro and AV 5.1 were used. These devices generate a large number of data grouped into a considerable number of parameters, namely 39 for GDV and eight for AV5.1. Not all of these parameters can be interpreted in order to obtain useful information for defining the ability of the subjects to produce distal influence. In order to be able to make such an analysis, it was necessary to apply a statistical technique for reducing the number of variables, namely the factorial analysis, and the method of extracting the variables was the Analysis of the Principal Components (PCA). This method involves studying the correlation between the values of the measured variables, in order to associate a larger number of them on the basis of the correlation between them and the significance of the studied dimensions, so that we can obtain a clearer and simpler explanation of the availability (potential) of subjects with regard to distal social influence. The factors found in this way are called somewhat arbitrary, but with names that describe as meaningfully their significance in the experiment (Manolea, 2017).

An analysis of the principal components was performed based on the correlations between of the 47 variables. There were six groups of variables whose correlation coefficient was greater than 0.65. Thus, a number of six more suggestive variables have been introduced, which can more intuitively describe the groups of subjects in terms of the skills needed to practice IPsiD with maximum performance. These are Physical Availability, Psychic Availability, Emotional Availability, Psychic Balance, Mental Availability, and Spiritual Availability. In other words, a system of variables was created to describe different subjects in terms of the potential to produce distal influence.

4. RESULTS

4.1. FIGURES AND TABLES

Testing the hypothesis was done by applying the statistical method of studying how sets of scores of variables resulting from the factorial analysis are or not similar for the six groups of subjects of the experiment, ie by applying ANOVA variance analysis. After ANOVA was found to be statistically significant for the variables Physical Availability ($F(5)=9.307$, $p<.05$), Psychic Availability ($F(5)=3.862$, $p<.05$), Psycho-emotional Balance ($F(5)=4.278$, $p<.05$), Mental Availability ($F(5)=8.468$, $p<.05$), and Spiritual Availability ($F(5)=8.556$, $p<.05$), and not

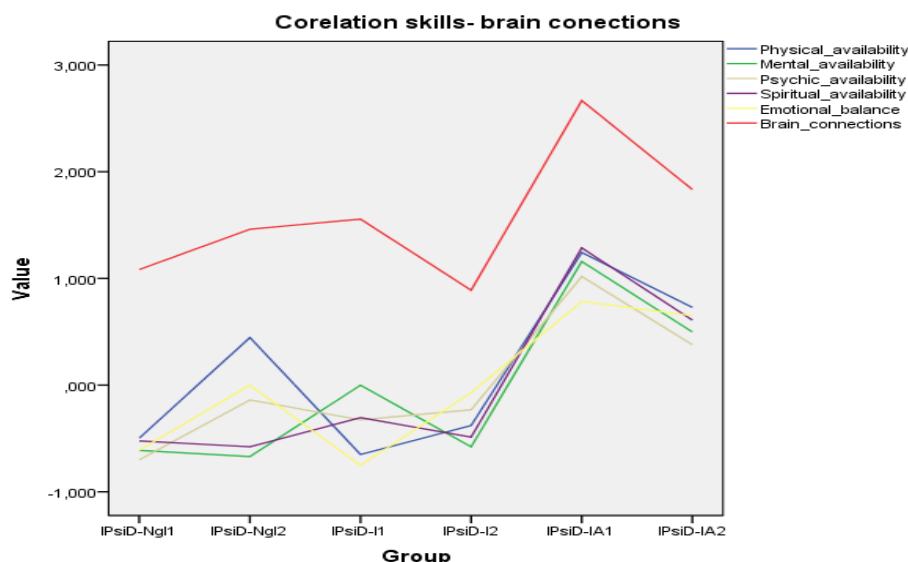
statistically significant for the variable Emotional Availability ($F(5)=1.706$, $p=0.15>.05$), an analysis of how these variables differed was done.

This was possible by performing a multiple comparison test, which shows that for the variables Physical Availability, Mental Availability, Spiritual Availability and Psycho-emotional Balance, differences between groups are statistically significant.

After checking that the data are normally distributed (Shapiro-Wilk and Kolmogorov-Smirnov test), the statistical analysis (Pearson correlation) also revealed that is a strong correlation between the results obtained in the IPsiD experiments (figure 1) and the distribution of the variables parameters characterizing the skills of the subjects in the field of distal influence IPsiD.

Thus, there is a significant positive relationship between the Physical Availability and the number of the Brain connections ($r=0.83$, $df=4$, $p<0.05$), the Mental availability and the number of the Brain connections ($r=0.93$, $df=4$, $p<0.01$), the Psychic availability and the number of the Brain connections ($r=0.91$, $df=4$, $p<0.05$), the Spiritual availability and the number of the Brain connections ($r=0.92$, $df=4$, $p<0.01$), the Emotional balance and the number of the Brain connections ($r=0.70$, $df=4$, $p<0.05$) (figure 2). The subjects with the higher Physical Availability, Mental availability, Psychic availability, Spiritual availability, Emotional balance get better results in distal influence activity.

Figure 2 Variation of the skills variables mean compared with performance in distal influence (red line)



These graphs show the same variation for all skills variables (Physical Availability, Psychic Availability, Emotional Availability, Psycho-emotional Balance, Mental Availability, and Spiritual Availability) indicating, in addition to the superiority of the IPsiD-A1 group (the trained group - mindfulness), and the superiority of the IPsiD-A2 group, that benefited from only a temporary psychological support. The support technique remains undefined, highlighting only the effect obtained, namely an improvement in distal influence IPsiD performance. It can say that the hypotheses mentioned were validated by the experiment.

5. CONCLUSION

EEG records can be a useful, viable and safe tool to highlight the distal psycho-informational influence. Extracting information packed into the EEG record structure is an activity that involves an adequate interpretation of the dynamics of neural networks involved in the subliminal transfer of information (Manolea, 2015). This information transfer (IPsiD) can be done by any normal healthy subject, but the most effective ones are identified to be those who have a specific training. Emotion has been identified as the IPsiD mediator. The cerebral connectivity between an inductor subject and a receiver subject, mediated by emotion is manifested in the theta band of brain waves specific to this type of activity, the phenomenon taking place without awareness from the receiver and sometimes from the inductor. The magnitude of the effect in this experiment is small (0.20) (Manolea, 2015), in agreement with other studies in the field, but considering what we are talking about, it is significant.

Received at: 1.09.2017, Accepted for publication on: 10.09.2017

REFERENCES

- Ćosić, K., Popović, S., Kostović, I., Judaš, M. A., Srblijinović, M., Vukšić, E. (2012). Extreme Political Attitudes and Emotionally Based Strategic Communications (EBSC), *Journal of US-China Public Administration*, Vol. 9, No. 6, pp. 637-653.
- Dickenson, J., Berkman, E.T., Arch, J., Lieberman, M.D. (2013). Neural correlates of focused attention during a brief mindfulness induction. *Soc Cogn Affect Neurosci*, 8: pp. 40–47.
- Falk, B.E. (2014). Mindfulness and the Neuroscience of Influence. In Amanda Ie, Christelle T. Ngnoumen, Ellen J. Langer (Eds), *The Wiley Blackwell Handbook of Mindfulness*. DOI: 10.1002/9781118294895 (pp. 387–403). Ed. Wiley Blackwell.
- Lorenz, E. N. (1993). *The essence of chaos*. University of Washington Press, p.179.
- Lutz, J., Herwig, U., Opialla, S., Hittmeyer, A., Jäncke, L., Rufer, M., Grosse, Holtforth M., Brühl, A.B. (2014). Mindfulness and emotion regulation-an fMRI study. *Soc Cogn Affect Neurosci*, 9:pp. 776–785.

Manolea, A. (2015). Brain to brain connectivity during Distal Psycho-informational Influence sessions, between spatially and sensory isolated subjects. *Procedia - Social and Behavioral Sciences*, ELSEVIER, pp. 250-255.

Manolea, A. (2017). *Stări amplificate ale conștiinței. Acțiunea beligenă și influențarea psihoinformațională distală*. Universitară: București.

Marchand, W.R. (2012). Mindfulness-based stress reduction, mindfulness-based cognitive therapy, and Zen meditation for depression, anxiety, pain, and psychological distress. *J Psychiatr Pract*, 18:pp. 233–252.

Pagnoni, G. (2012). Dynamical properties of BOLD activity from the ventral posteromedial cortex associated with meditation and attentional skills. *J Neurosci*, 32:pp. 5242–5249.

Prigogine, I., Stengers, I. (1984). *Order out of Chaos*. Bantam: New York.

Taylor, V.A., Grant, J., Daneault, V., Scavone, G., Breton, E., Roffe-Vidal, S., Courtemanche, J, Lavarenne, A.S., Beauregard, M. (2011). Impact of mindfulness on the neural responses to emotional pictures in experienced and beginner meditators. *Neuroimage*, 57: pp. 1524–1533.

TEACHING GROSS MOTOR IMITATION SKILLS TO CHILDREN DIAGNOSED WITH AUTISM

DANIELA DOINA BOLOLOI^a, STELIANA RIZEANU^b

^{a, b} Hyperion University, Faculty of Psychology and Educational Sciences,
Department of Psychology

Abstract

Children diagnosed with autism spectrum disorder experience a difficulty in the ability to imitate spontaneous behavior and actions seen to others. This study reveals that children with autism can learn generalized imitation behavior with an intensive intervention, therefore the paper examines the effectiveness of motor imitation teaching by using gestures, games and songs with 10 children diagnosed with autism. The study demonstrates the fact that a child with autism can learn the imitation behavior when using other additional procedures during a certain period of time. The approach was general in order to find which method of prompt, games and songs were efficient in facilitating the generalization. Teaching motor imitation can be challenging because it needs a special attention to the process and is a very important step in the behavioral evolution of children with autism. The results showed an imitation behavior to certain actions that weren't present at the beginning in the experiment.

Keywords: *imitation, autism, behavior, applied behavior analysis*

1. INTRODUCTION

Children with autism spectrum disorder (ASD) experience difficulties with imitation from a very early age (Dawson and Adams, 1984; Groșanu, 2015). They don't have the natural skills for imitation, therefore this kind of behavior must be learned. One of the types is motor imitation, a very important step in learning behavior which has been related to language behavior, social development and communication (McDuffie, Yoder and Stone, 2005).

Previous research showed that in early intervention to a child with ASD it is

Daniela Doina Bololoi: daniela.bololoi@helpautism.ro

Steliana Rizeanu: stelianarizeanu@yahoo.com

very important to introduce motor imitation, because the skills learned by the child are related to improvement of other skills needed in the treatment of children with autism (Whalen, Schreibman, Ingersoll, 2006). The deficit in imitation can be observed in the first years of the child's life, if there is a close evaluation and can be seen also in adolescence (Laine, Rauzy, Gepner, Tardif, 2011). Imitation can lead to future social abilities and as well, can predict how communication skills can be developed to children with autism. The deficit of imitation to children diagnosed with autism was considered the result of the lack of a symbolic representation and later was discovered to be the first manifestation of a disorder in the self-other mapping, creating a cascading effect in subsequent social skills (Laine, Rauzy, Gepner, Tardif, 2011). Later studies showed that the deficit in imitation is related to a gap between perception-action coupling due to a disorder of the mirror neuron system which might lead to a self-other mapping deficit in autism (Oberman and Ramachandran, 2007). Some studies showed a comparison between a typical child and one with autism which revealed the fact that a child with autism is imitating facial expression if they were showed slowly and not at a normal speed, there had to be a delay in order to capture the gesture and imitate it (Garcia, Baer, Firestone, 1971). If we speak about the traditional method in teaching motor imitation to children with autism, then we can say there is a one to one session with the adult and the child, where the child is taught using the discrete trial teaching, where is used a very structured adult directed sessions. Motor imitation is considered the most important component of the profound social and intellectual development that occurs over the first several years of life. A child increases the capacity to imitate starting from the second year of life, when the need to meet the world is taking shape. To a child with autism, this need must be taking care of as he cannot learn by himself actions, sounds, gestures (Kleeberger, Pat, 2008). Giving this importance, I chose to teach motor imitation behavior to 10 children diagnosed with ASD, who were showing no signs of imitation. Previous research show that imitation is developing progressively, starting from the most simple self observing actions on object that produce a prominent effect, to more complex actions like complicated gestures. Studies also showed that early ruptures in the imitation process "could be partly responsible for shaping the early behavioral phenotype of autism" (Young, Gregory, Sally et. all, 2011).

2. OBJECTIVE AND HYPOTHESES

2.1. OBJECTIVE

The objective of this study is teaching functional gross motor imitation behavior to children diagnosed with autism, using a structured method of functional behaviour

analysis. The goal is to teach imitation behaviour to children with autism who don't have this ability, but need it for future interactions.

2.2. HYPOTHESES

The applied behaviour analysis method is showing results in teaching functional behaviour of gross motor skills to children diagnosed with ASD if there is applied daily and intensively.

3. METHOD

The participants in the study were 10 children, with masculine gender, who had a diagnosis of autism with a scoring of 11 points (the medium score was 11 points) at the psychological evaluation when applied the ADOS test (Lord, Rutter, Dilavore, Risi, 2008) and who didn't have the gross motor imitation behaviour. During the evaluation process they didn't respond to any of my verbal requests and made eye contact only twice or once each child, they didn't show any sign they can imitate naturally. All children received the same intervention in order to see how they react. Let's take one of them for example: I have chosen D. because he is at the beginning of the training, therefore it is the best moment to teach the imitation behaviour, given the early age of intervention (2-3 years old). In the evaluation session D. showed no sign of imitation behaviour. He also couldn't coordinate himself and was very oppositionist. Because he was for the first time in a one to one session I had to manage how to catch his attention in order to start the process of therapy.

1. Materials

For the study there were used songs for gross motor imitation, motor distractors and tokens. The materials were chosen so we can shape motor imitation behaviour and to help the participant during the intervention. The materials were used as support for the actions that were requested from the children and helped them to learn faster actions that they were taught. Also, some of the materials were used as reinforcement in order to reach the goal of teaching imitation. The materials found in the room of the study were: a table, two seats, a locker full of toys, musical instruments (eg. toy xylophone) and songs.

2. Procedure

Through all the baseline and the intervention phases probe sessions were held in a therapy room, in one-to-one sessions, every day, 5 days a week to assess the occurrence of the imitation behaviours. The children are receiving an immediate reward after a correct answer. The materials used were put somewhere near the therapist, so it can be easily reached. The gross motor songs, finger play, standing up and down requests were introduced in the baseline to see the level of imitation in children's behaviour. The toys, musical instruments and the activities were

available to children only during probe session.

The items used in the study were: clap the hands, tramp, stand up, stand down, hands on the head, stand up, hands on the belly, stand down, hands on the knees, spin and tap in the table. The gross motor examples were selected from the general case matrices because they were present in songs and other frequent actions, therefore, they had to imitate a set of actions. The songs used in the process were: “Today Grivei is happy”, “In the forest with peanuts”.

The actions hands on the head, hands on the belly and hands on the knees were used not only to see the imitative action that the children do, but their knowledge about body parts. Along with these actions they could also learn body parts and how to show it.

In the baseline there were introduced 2 items to see the level of imitation that the children have. There were 5 days of baseline with 3 trials for each session for 5 of the children and 2 days of baseline for the other 5 children. In order to do the request the therapist ensured that he had eye contact with the child, so there can be maintained the level of attention and the visual contact. The trial session had a duration of 3 minutes for each item. After catching the child’s attention, the therapist makes the request and does himself a gesture that is wanted to be imitated. The child has 5 seconds to imitate the therapist’s gesture and immediately receives a verbal upshot to show whether it was a positive or negative response. The next request comes in 5 seconds after the response. The table bellow shows that before intervention children were having no imitation skills for the items *Clap the hands, Tramp, Hands on the head, Stand up and Hands on the belly* shown in the middle column for five days of trial.

Table 1 – The generalization of motor imitation behavior through item

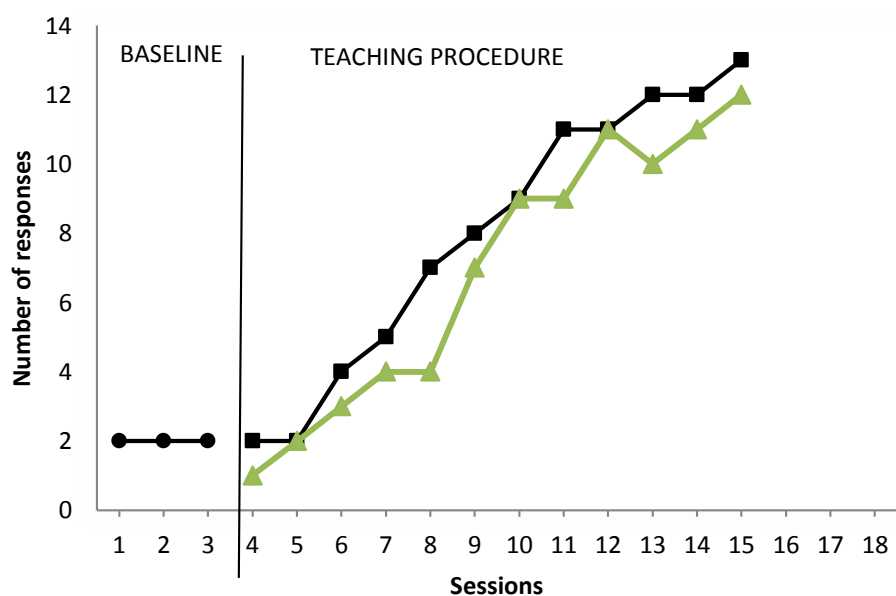
Day 1	Clap the hands	No imitation
Day 2	Tramp	No imitation
Day 3	Hands on the head	No imitation
Day 4	Stand up	No imitation
Day 5	Hands on the belly	No imitation

3. Intervention

The intervention consisted of giving children the same requests like in the pre-test sessions, but in a more structured way. In the first trial they didn’t manage to imitate “clap the hands!”, therefore the therapist helped them with physical guidance and prompt to complete the item. After this procedure, children received social and food rewards in order to reinforce them into correct answers. The tokens used while the intervention helped them to increase their level of attention and concentration, because after using the token they knew they had finished the session. We used pencils, toy circles as tokens, even little bagels used at the same

time as a reward and token, giving a faster growing in imitation behaviour in some cases. In the intervention sessions, when children showed no sign of imitation, they had been prompted, this way they were helped to learn the move they were requested to do. In the first sessions they needed the prompt at every request until they started to respond correctly. When that happened, we used fewer prompts and 5 of the children, the ones with intensive intervention slowly started to develop their imitation behaviour. The prompts were actually used until they reached 6 correct answers of 6 requests. During the intervention, for some of the items like clap the hands, tramp or tap the table, there has been used gross motor songs. When the therapist stopped the song the child must give a response to the request. After the first 3 sessions he had an average of response of 4 out of 6, knowing that the song will play again if they will give the correct response. When the children mastered the “clap the hands!” request the therapist moved to the next item working with the child in a structured way. In the next sessions the therapist introduced a new item, when the previous was mastered, but also kept the previous one learned so far. The other 5 children who had sessions only once a week could not learn imitation behaviour.

Graphic 1- Development of imitation skills



4. RESULTS

As the graphic above shows, the study had a very good result, all five children who had intensively and repetitive intervention were very receptive and learned the gross motor imitation behaviour during sessions of therapy. The results are discussed with regard to generalization. Like the studies conducted by Cooper in imitation behaviour showed, a structured procedure reveals good results in the progress of children with autism (Cooper, Heron, Heward, 2011). We can see the first sessions of baseline where the therapist observed no imitation behaviour. During intervention, we can observe the increase of correct answers that children gave during sessions shown with the black square line which means they mastered the items introduced for them to learn some of the skills of gross motor imitation. The green line shows that responses of children who mastered the imitation skills were a little different, but were developed well. At first they couldn't master the "clap the hands" request, but after prompting and playing songs to help them in mastering it, they were able to understand the imitation they needed to do.

This study also has limitations regarding to the other 5 children who didn't master the gross motor imitation skills, therefore, the result that came out was that they had less sessions of interventions, so less time to master it, therefore, it can be a beginning for future and more complex studies.

This study attempted to demonstrate that a child with autism can learn gross motor imitation using prompting and reinforcement procedures, if they are done correctly, intensively and repetitively. Another limitation of this study is that the generalization process should be investigated with a further study.

The applied behaviour analysis method is proven to have results in recovery for children with autism and in learning gross motor imitation skills, the basis for the future interaction with other children. The obtained results show us that through perseverance and repetition in a well-defined framework the children with autism have real chances to recover, especially if they start therapy at early age.

Received at: 12.09.2017, Accepted for publication on: 22.09.2017

REFERENCES

- Cooper, J.O., Heron, T., Heward, W.L. (2014). *Applied Behavior Analysis*. Harlow: Pearson Education Limited.
- Dawson, G., Adams, A. (1984). Imitation and social responsiveness in autistic children. *Journal of Abnormal Child Psychology*. Springer, Vol. 12, p. 209-226.
- Garcia, E., Baer, D.M., Firestone, I. (1971). The development of generalized imitation within topographically determined boundaries. *Journal of Applied Behavior Analysis*. 4 (2), p. 101-112.

Groșanu, S.E. (2015). Lumea în culori și umbre, in Rizeanu, S. coord. (2015). *Evaluare clinică și psihoterapie. Studii de caz*. București: Universitară.

Kleeberger, V., Pat M. (2008). Teaching generalized imitation skills to a preschooler with autism using video modelling; *Journal of positive behaviour interventions*, Vol. 2, p 116-127.

Lainé, F., Rauzy, S., Tardif, C., Gepner, B. (2011). Slowing down the presentation of facial and body movements enhances imitation performance in children with severe autism, *PubMed*, Vol. 41, p. 983-996.

Lord, C., Rutter, M., Dilavore, P. and Risi, S. (2008). *Autism Diagnostic Observation Schedule Manual*. Los Angeles, CA: Western Psychological Services.

McDuffie, A., Yoder, P., Stone, W. (2005). Prelinguistic predictors of vocabulary in young children with autism spectrum disorders. *Journal of Speech, Language and Hearing Research*, 48(5):1080-9, Vol. 48, p.112-125.

Oberman, L.M., Ramachandran, V.S. (2007). The simulating social mind: the role of the mirror neuron system and simulation in the social and communicative deficits of autism spectrum disorders. *Psychol Bull* 133(2):310-327.

Whalen, C., Schreibman, L., Ingersoll, B. (2006). The collateral effects of joint attention training on social initiations, positive affect, imitation, and spontaneous speech for young children with autism. *J Autism Dev Disord*, 36 (5):655-64.

Young, G. S., Gregory, Rogers, S. J., Hutman, T., Rozga, A., Sigman, M., Ozonof, S. (2011). Imitation from 12 to 24 months in autism and typical development: A longitudinal Rasch analysis. *Journal of Applied Behavior Analysis* Vol. 47, p. 1565-1568.

STRESS, DEPRESSION AND DYSFUNCTIONAL ATTITUDES AMONG ELDERS. A NON-EXPERIMENTAL APPROACH

MIRCEA BRATU^a, RADU EMANUEL RIZEANU^a

^a National University of Physical Education and Sports

Abstract

The present paper aims to identify the extent in which stress is associated both to dysfunctional attitudes and depression among elder people. In a non-experimental design 60 participants aged between 60 and 74 years old ($M= 67.4$, $SD=11.02$) from Bucharest and Ploiești were investigated using the instruments Geriatric Depression Scale (GDS, Yesavage, 1986), The Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) and The Dysfunctional Attitude Scale (DAS - Weissman, 1979; Weissman & Beck, 1978). The results indicate that the research hypothesis regarding the correlation between stress and depression on one hand and high level of stress and dysfunctional attitudes on the other hand were according to expectations. The hypothesis regarding the possible correlation between depression and dysfunctional attitudes was not confirmed by results of statistical tests.

Keywords: *elders, stress, depression, dysfunctional attitudes, personality.*

1. INTRODUCTION

Inner dimensions of personality, which are studied in relation to aging include psychological dependence, dogmatism, Ego strength, risk taking, introversion, hope, need for savings (Neugarten, 1980). First of all, studies focusing on the topic of personality and adult development emphasize a continuity, through which thoughts, motives and typical emotions tend to maintain in time; the second brings to discussion an interior dimension which changes systematic along with aging and which seems to be – in most of studies – recognized as introversion, in the sense of a reversion of interest and an inner-focused attention.

Stability of personality at old ages is connected to two elements. One of them is the fact that individuals are expected to respond in a conscious manner, according to

Corresponding author: Radu Emanuel Rizeanu

E-mail address: radu.rizeanu@yahoo.com

their past (Crăciun, 2014). On the other hand people build around themselves familiar social networks (schemas) which facilitate their contact to society in a known, typical manner (Knight & Satre, 1999).

Aging affects the identity stability in several important ways. First, the more mature somebody is on an identity level, the more that person's theory of one's self can be tested in various experiences. The picture of these experiences results in a stable personal identity which resists well to everyday requests (Bosma, de Levita, Graafsma & Grotevant, 1994; Coulston, Bargh, Tanious et al, 2013, Rizeanu, 2016).

Secondly, the reduction of social responsibilities related to old age may reduce the potential conflict between different aspects of identity. Third, for most individuals, getting old has the meaning of continuing familiar activities around the home. Generally people have developed their schemas as made acquisitions for long periods of time (Greenglass, Fiksenbaum, Eaton, 2006; Sadavoy, 1994).

The more they age, individuals have a wider view on how they are, how they would like to be, how they should be in a variety of roles and situations. It has been demonstrated that it is more important for elders to live a moral life avoiding doing things which are not suitable, compared to younger people who are more concerned with obtaining high social positions and status (Baumeister, 1991). In other words, self-esteem may depend at older ages to moral qualities compared to social acquisitions (Joung & Miller, 2006). Interpersonal relationships in the case of family present a wide meaning for the psychological balance of elder people. Aging reduces extra-familiar social interactions (as they are more frequent during the active period of life), professional and cultural, as in this context intimate relations in family become more important (Tesauro & Pianelli, 2010).

The simple belonging to family environment represents a positive factor in maintaining mental health. Statistical data has shown a higher prevalence of psychological disorders among single, divorced and widowed people (Gove, 1972; Gove & Shin, 1989; Grimby, 1993).

Three would be the conditions mentioned by Fontaine which grant successful senescence: a weak probability for health issues (especially those which lead to losing one's autonomy), maintaining a high functioning level on the cognitive and physical areas (in which case we speak of optimal aging) and third, maintaining social involvement (sustained involvement, active in social and productive activities) and subjective wellbeing (Fontaine, 1999). These three conditions are reunited only in variable proportions, according to specific influences.

Margaret Baltes and Paul Baltes (1990) distinguished between three categories of influences:

- Peers-related: events associated to the chronological age, upon which the individual does not have control on (starting school, retirement);

- Historic events (or the cohort effect): aspects regarding the historic context individuals find themselves in are inherent to the historic process, and individuals cannot control them;
- Personal life-related: or non-normative, are specific and unique in the history of an individual, and are under the individual's control.

It seems that people dispose of a set of physical and cognitive capacities which is utilized according to their motivations and environment requests. The older adults could dispose of high latent backups, although could never concur to a younger person. Baltes (1997) spoke of two kinds of resources: basic backup capacities and developmental backup capacities. The first refer to an optimal use of resources in a given situation and they could be activated and grown, which leads to the capacity for development and thus leads to the developmental backup capacities (long and medium term acquisitions and practiced skills).

A longitudinal study conducted by the MacArthur Foundation which included 1189 subjects has shown that the best predictor of optimal aging on a cognitive plan is the level of education, regarding inserting leisure activities such as reading and cross-words (Seeman, McEwen, Rowe & Singer, 2001). Another predictor refers to the capacity of pulmonary expiration (which significantly correlates to the maintenance of cognitive activities), and a third predictor consisting in tiring physical activities, without excess, at home and around it and a fourth which is a personality factor: the perception of one's self-efficacy and self-trust. Such positive trust (in one's own capacities of organizing and executing actions in diverse life situations) is necessary for maintaining intellect on a higher level (Fontaine, 1999).

2. OBJECTIVE AND HYPOTHESES

The present research proposes to verify the extent in which stress is associated both to dysfunctional attitudes and depression among elder people.

The general hypothesis proposes the existence of a significant positive association between a high level of stress, dysfunctional attitudes and a high level of the elder's age.

The specific hypothesis proposes the existence of a connection between dysfunctional beliefs and a high level of stress. It is also assumed that there is an association between dysfunctional beliefs and depression. Thus it is expected that the level of depression to positively correlate to stress, and, on the other hand, to components of dysfunctional attitudes.

The present research presents a non-experimental design, considering that the general purpose was to extract through the questionnaire-based enquiry, a series of psychological characteristics, as they are concretely found among the elders, without intervening upon them.

3. METHOD

Participants

The sample utilized for the present research was built upon the pseudo-random selection applied among non-institutionalized elderly aged over 60, in Romania. The participation was volunteered, the only conditions of inclusion referring to age (above 60 years old) and maintaining an active lifestyle (not being institutionalized). Thus, a sample was built consisting of adults (N = 60) aged between 60 and 74 years old (M= 67.4). On a group level there were 30 participants aged between 60-70 years old and 30 aged over 70 years old; 25 male participants and 35 female, 40 from Bucharest city and 30 from Ploiești.

Instruments

Geriatric Depression Scale (GDS, Yesavage, 1986) was initially created by Yesavage et al., being extensively tested and utilized in communities of elders, along with institutionalized people. The original scale is found in the public domain. GDS is part of the gerontopsychiatric functional scales category and contains 30 self-administered items for people over 60 years old. Participants are asked to respond to the 30 questions with “yes” or “no” regarding the way they felt the day of administration. The scale can be administered either orally or by writing and intentionally omits somatic complaints. It is utilized for depression scanning for the elder population and for the assessment of treatment results. Scores between 0 and 9 are considered normal, between 10 and 19 they indicate moderate depression, while between 20 and 30 they indicate severe depression.

The Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) is a self-report questionnaire, containing 10 questions. The PSS is a measure of the degree to which situations in one's life are appraised as stressful (Cohen et al., 1983).

The Dysfunctional Attitude Scale (DAS - Weissman, 1979; Weissman & Beck, 1978) is an instrument which allows the assessment of attitudes which may constitute a predisposition for the depression onset. The DAS-A scale indicates the extent in which dysfunctional attitudes are considered to belong to the subject's thinking: the higher the score, the more the level of dysfunctional attitudes is higher.

Procedure

Participants who composed the elders sample had the freedom to respond to questions according to the personal availability, considering they received the questionnaires during meetings at the Senior Clubs in Bucharest and Ploiești. Participants received instructions from a team of two psychologists who conducted this activity and the completion duration was of 30 to 45 minutes.

4. RESULTS

In order to analyze the existent association on the level of studied variables, the Pearson correlation test was applied. In the following Tables (1-3) the resulting correlation coefficients are presented.

Table 1. Pearson correlation for level of stress and depression

		PSS	GDS
PSS	Pearson Correlation	1	.436**
	Sig. (2-tailed)		.001
	N	60	60
GDS	Pearson Correlation	.436**	1
	Sig. (2-tailed)	.001	
	N	60	60

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2. Pearson correlation for level of stress and Dysfunctional Attitude

		PSS	DAS
PSS	Pearson Correlation	1	-.337*
	Sig. (2-tailed)		.024
	N	60	60
DAS	Pearson Correlation	-.337*	1
	Sig. (2-tailed)	.024	
	N	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

From tables 1 and 2 results that there are statistically significant correlations between the high level of the perceived stress and the GDS score ($r=.436$, $p=0.001$) and also between the perceived stress and dysfunctional attitudes ($r=-.337$, $p=0.024$).

Table 3. Pearson correlation for level of Dysfunctional Attitude and depression

		PSS	DAS
DAS	Pearson Correlation	1	.219
	Sig. (2-tailed)		.056

	N	60	60
GDS	Pearson Correlation	.219	1
	Sig. (2-tailed)	.056	
	N	60	60

From table 3 results that there is no significantly statistic correlation between dysfunctional attitudes (DAS) and the GDS score ($r=.219$, while for this correlation to be significant the p value should have been $p=0.056$).

5. CONCLUSIONS

Obtained results show that the research hypothesis regarding the correlation between stress and depression on one hand and high level of stress and dysfunctional attitudes on the other hand were according to expectations. However, the hypothesis regarding the possible correlation between depression and dysfunctional attitudes was not confirmed by results of statistical tests. This fact could be explained by that the elders, even if they self-describe as having a depressive state they do not automatically communicate a tendency towards loneliness and withdrawal (Ong, 2010).

It should be mentioned that there is a series of limits of the present study. These are given by the correlational design of the research, by the reduced degree of representativeness of the sample and the fact that only self-report instruments were applied in assessing the participants. From this point of view, an important suggestion for possible further studies referring to the elders would be that researchers consider diverse external criteria of estimating the participant's performance, criteria to compare with answers offered by participants to the PSS, DAS and GDE scales. Also, in the study of the elders, along with applying psychometric instruments, it is also recommended to test the participants in diverse experimental situations, projected with the purpose of obtaining authentic reactions and behaviors, specific to the old age, which could be observed and quantified (Rizeanu, Gatej, Ciolacu, 2017).

Received at: 13.09.2017, Accepted for publication on: 22.09.2017

REFERENCES

Baltes, P. B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American psychologist*, 52(4), 366.

- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. *Successful aging: Perspectives from the behavioral sciences*, 1(1), 1-34.
- Baumeister, R. F. (1991). *Meanings of life*. Guilford Press.
- Bosma, H. A., de Levita, D. J., Graafsma, T., & Grotevant, H. D. (Eds.). (1994). *Identity and development: An interdisciplinary approach* (Vol. 172). SAGE Publications, Incorporated.
- Coulston, C.M., Bargh, D.M., Tanious, M., et al. (2013). Is coping well a matter of personality? A study of euthymic unipolar and bipolar patients. *J Affect Disord*. 145(1):54–61.
- Crăciun, B. (2014). *Dimensiunile perfecționismului. Implicații și intervenții psihologice*. București: Pro Universitaria.
- Fontaine, R. (1999). *Manuel de psychologie du vieillissement*. Editeur: Dunod.
- Gove, W. R. (1972). The relationship between sex roles, marital status, and mental illness. *Social forces*, 51(1), 34-44.
- Gove, W. R., & Shin, H. C. (1989). The psychological well-being of divorced and widowed men and women: An empirical analysis. *Journal of Family Issues*, 10(1), 122-144.
- Greenglass, E., Fiksenbaum, L., Eaton, J. (2006). The relationship between coping social support, functional disability and depression in the elderly. *Anxiety, Stress and Coping*. 19(1):15–31.
- Grimby, A. (1993). Bereavement among elderly people: grief reactions, post-bereavement hallucinations and quality of life. *Acta Psychiatrica Scandinavica*, 87(1), 72-80.
- Joung, H. M., & Miller, N. J. (2006). Factors of dress affecting self-esteem in older females. *Journal of Fashion Marketing and Management: An International Journal*, 10(4), 466-478.
- Knight, B. G., & Satre, D. D. (1999). Cognitive behavioral psychotherapy with older adults. *Clinical Psychology: Science and Practice*, 6(2), 188-203.
- Kuroda, Y. (2016). Dysfunctional Attitudes Lead to Depressive Symptoms by Generating Subjective Stress. *J Psychol*. 150(3):358-70.
- Neugarten, B. L. (1980). *Personality in middle and late life*. Arno Press.
- Ong, T. M. (2010). *Anxiety, depression, and spiritual well-being in older adults*. Northern Arizona University.
- Rizeanu, S. (2016). Mild Depression: The pharmacological and Psychotherapeutic Treatment. *Romanian Journal of Experimental Applied Psychology*, vol. 7, Special issue 1- (Psiworld 2015 Proceedings), p 242-245.
- Rizeanu, S. (2016). Stress, emotional intelligence and locus control over job satisfaction. *Romanian Journal of Experimental Applied Psychology*, vol. 7, Special issue 1- 2016 (Psiworld 2015 Proceedings), p 413-416.
- Rizeanu, S., Gatej, E.R., Ciolacu, M.V. (2017). Personal Development Through Defensive Driving Technique: Implications in the Field of Emotional Intelligence Regarding the Age Factor. *American Research Journal of Geriatrics and Aging*; VI, II; pp: 1-7.
- Sadavoy, J. (1994). Integrated psychotherapy for the elderly. *The Canadian Journal of Psychiatry*, 39(8_suppl), 19-26.
- Seeman, T. E., McEwen, B. S., Rowe, J. W., & Singer, B. H. (2001). Allostatic load as a marker of cumulative biological risk: MacArthur studies of successful aging. *Proceedings of the National Academy of Sciences*, 98(8), 4770-4775.

Tesauro, T., & Pianelli, L. (2010). The Elderly between the Needs for Care and Active Ageing. European Papers on the New Welfare. *The counter-ageing society*, 15, 7-28.

PSYCHOTHERAPEUTIC APPROACH OF ANXIETY DISORDERS - A FALSE PHOBIA, PHAGOPHOBIA.

CASE STUDY

CRISTINA-MIHAELA STOIAN, STELIANA RIZEANU ^a

^a *Hyperion University, Faculty of Psychology and Educational Sciences
Department of Psychology*

Abstract

*The case study presented in this paper has brought psychotherapists useful information about a rarely type of an anxiety disorder: **phagophobia**.*

Phagophobia belongs to the anxiety disorders category and represents the fear to swallow, of choking with food, pills or liquid, also known as psychogenic dysphagia. This type of phobia is more rarely encountered, but also more difficult to differentiate from other disorders due to similar symptomatology, specific phobia usually being accompanied by other pathologies. Thus, making a differential diagnosis, psychotherapeutic approach supported and highlighted triggers, maintenance and predisposing factors specific to patient, but also irrational and coping strategies used therein proved effective.

The conclusion is that a combination of eclectic psychotherapy techniques and tools, as well as making a differential diagnosis as realistic, can bring a positive influence upon the client towards resolving global problems and efficient functioning, the resource-orientation being a plus for this purpose.

Keywords: *phagophobia, anxiety, depression, borderline, psychotherapy.*

1. CASE HISTORY

The present work presents a case study concerning phagophobia, which highlighted the need for the eclectic approach in psychotherapy and anxiety disorders at the same time, making a differential diagnosis to assist in the psychotherapeutic process.

Ovidiu is a 26-year-old waiter, with secondary education, plus incomplete nurses post high-school studies. Religion is very important to him and he wishes to

Corresponding author: Cristina-Mihaela Stoian

E-mail address: psihotraining@gmail.com

mention that he is Catholic.

He has a younger sister and a brother who had died when he was 9 years old.

The patient came to the office, following certain discussions held on a medical website, where he participated under the protection of anonymity and where specialists provide information to interested parties. Once in the office, the patient described during this first meeting all the symptoms and provided a long list of problems, from which he chose to begin with phagophobia and the problems in his workplace. He diagnosed himself with phagophobia, reading the information on the internet and was startled to learn that the symptoms were getting worse instead of improving as expected, thus taking the decision to come to the office. Another motivator to request support was represented by his fear of not losing his girlfriend because of his permanent concerns and excessive interest for medical explanations.

3 years ago, while taking a walk one night with his friends, he needed to swallow and couldn't, he got scared and thought "*I'm afraid that I'll swallow my tongue and die, so how do I control it?!*" Ever since he's afraid to swallow, but at the same time, he developed a swallow compulsion that he can't restrain himself from doing.

The subject shows no significant pathologies in his history, but during the interview major depressive episodes come out, with less intensity than the current one, without being accompanied by a manic or hypomanic episode. Ovidiu is afraid to be by himself in his house, can't stand closed doors (during childhood and adolescence). At age of 20, when moving from his parents house, he had the first depressive episode, in which he consumed a large quantity of alcohol, maintaining the alcohol consumption after the depressive episode remission for about 2.5 years, followed by some untreated depressive episodes.

The patient's brother passed away following an oncological disease, and his father went to a few meetings with a psychiatrist (from the interview arises the information that his father suffered from depression). The patient's mother is very anxious (especially since his brother died) and suffered a surgery for herniated disc (she stopped having a job ever since).

The patient consumes alcohol in moderate amounts, 3-4 beers/weekend, or at every 2-3 evenings; no other substances were declared. The difficulties at work, the unfinished studies, living on rent conditions (in common with several people and his girlfriend), withdrawal from social environment resulting in the loss of his friends, represents the current major stressors.

2. DIAGNOSYS AND EVALUATION

The patient was diagnosed with phagophobia, using the criteria in DSM-V (APA, 2013). I used Leahy Scale (Leahy & Holland, 2012) to measure the level of

anxiety symptoms and comorbid disorders, and a very high score (45) was obtained, which indicates severe anxiety and confirms other diagnoses of anxiety disorders (phagophobia, social phobia, obsessive-compulsive disorder). For the same purpose I used the diagnostic criteria from DSM-IV (APA, 2000), but also the diagnostic Scheme for social phobia and for specific phobia (Leahy & Holland, 2012).

The major depressive episode has been confirmed by the criteria in the DSM-IV and depression inventory BDI-II (Beck, Steer & Brown, 1996) -52 score.

For Axis II, I used the diagnostic criteria from DSM-IV (APA, 2000) and Structured Clinical Interview for DSM-IV Personality Disorders - SCID-II (First, Spitzer, Gibbon, Williams, Benjamin, 1997) and the avoidant, obsessive-compulsive, borderline personality disorders can be confirmed, including accentuated signs of other personality disorders: paranoid, narcissistic.

We performed a differential diagnosis, considering the fact that, although phagophobia is similar in terms of avoiding social phobia, the reason of avoidance is different. Often, both disorders go together and are very hard to be differentiated; in phagophobia, as in social phobia, all sorts of irrational beliefs emerge regarding the way in which the person sees himself, excessively valuing the opinions of others and being very worried regarding the way he could be assessed or judged. Thus, anxiety is triggered every time the subject gets into social situations, such as eating in public, the subject having a low self-esteem (Mc Klintock, 2001).

The major difference between phagophobia and social phobia is represented by the subject's obsession toward behaviours and actions aimed at orality, while in social phobia, the fear of evaluation does not stop at it (such as the fear of speaking in public, aiming orality as well), but can be also extended towards areas concerning the body (I'm fat/skinny, short/tall), cleaning issues (e.g., fear of getting dirty and being humiliated by others), or the fear to show emotions being afraid to be considered as awkward.

Phagophobia should be also differentiated by another food disorder like anorexia, refusal of new foods, or expressing preferences for food by refusing other food, such as happens with children (Evans, Pechtel, 2011). One of the criteria for differentiation between phagophobia and food disorders such as bulimia and anorexia would be that the patient does not wish to drop weight, although this symptom appears in phagophobia. In phagophobia, a perception of distorted body image also appears, as in dysmorphia-phobias (Çiyiltepe & Türkbay 2006).

Phagophobia is a psychogenic dysphagia, and dysphagia represents a severe medical condition that is frequently encountered, and in physiological& pathologic terms, it is a syndrome (Shapiro, Franko, Gagne, 1997; Suraweera, Hanwella and de Silva 2014). The swallowing mechanism is composed of a complex set of reflexes, involving more than 25 muscles, as well as 6 phases of the

swallowing reflex. It is sufficient for one stage to be interrupted and the ineffective swallowing (dysphagia) and aspiration occurs (Evans, Pechtel, 2011).

3. CLINICAL CONCEPTUALIZATION

Following the interview and the assessment the following were recorded: predisposing factors (obsessive-compulsive and avoidant borderline disorders, together with his paranoid and narcissistic personality, but also with inherited anxiety feelings) combined with the stress of witnessing his brother death, led to the phagophobia and social phobia symptoms occurrence, which increased due to secondary benefits (parental attention) and irrational beliefs ("I need to be safe - I may die suffocated"; "No one can understand me"; "If anyone sees me swallowing, I will be laughed at and be perceived as a freak no one wants to be near with"; "I guess I'll never get rid of this problem!").

The locus of control is external (Rotter, 1990) and contributes to the maintenance of the patient's problems.

4. PSYCHOLOGICAL INTERVENTION

We chose an eclectic approach involving the use of strategies common to several schools of psychotherapy — Ericksonian hypnosis, modern forms of psychotherapy such as cognitive-behavioural or experiential psychotherapy — to make a contingency plan according to the client's needs, diagnosed with phagophobia. The psychotherapy has been carried out over a period of twenty-four sessions and pursued objectives such as: assessment schemes, automatic thoughts and negative beliefs (Beck, 1995; Rizeanu, 2013), identification of the client's resources and using them for cognitive restructuring, decreasing symptomatology, development of adaptive coping strategies, developing communication and correlation skills, resolute capacity, improving the quality of life.

During those 24 meetings, we considered as useful combining several psychotherapeutic techniques and tools, such as role playing, the technique of vertical arrow, prescribing the symptom, cost-benefit analysis, searching for evidence, pros-cons, suggestive and relaxing techniques, techniques for EGO – confirmation, experimental techniques, values, etc (Rizeanu, 2014; Stoian, 2015).

Examples of techniques and circumstances in which they were used: knowing that the patient has developed swallowing compulsion, we asked him to consciously perform that act for about 5 minutes and to observe himself in a behavioural, cognitive and emotional way. We discussed a similar situation in

which he could notice himself swallowing and in which he had some thoughts, emotions and behaviours, comparing them with those taken at the simulation from the office. The reflex act brought into conscious plan was used to prescribe the symptom, especially due to the cognitive restructuring. The cost-benefit analysis of the cognitive biases (Beck, 1995) used very frequently by the patient, but also exposure in vitro and in vivo, have brought very good results and increased his motivation. The client had improved his communication and correlation ability after drafting a letter to his parents, in which he mentioned what bothered him about their relationship, thus noting that such a catastrophic and anticipatory thinking is not an effective strategy for problem-solving and no one leaves him if he shows his needs.

The psychotherapeutic strategies were primarily used with the purpose of mitigating the symptoms, particularly the suicidal ideas, using the patient's religious beliefs, beliefs that don't approve suicide acts (values = resources, in this case) and secondly, to maintain the anxiety to a tolerable level, with the aim to firstly complete the cognitive restructuring (firstly in the suicidal ideas area).

In this case, phagophobia has represented only a *symptom* (even if clinically speaking, it is a disorder) for the client's attempt of adaptation.

The client's strong motivation for change was the main pawn which has led to rapid results. He managed to make and implement plans for changing his job and his housing; he improved his communication and bonding with others, also increasing his self-esteem.

5. CONCLUSIONS

The self-diagnosis may increase symptomatology and based on inadaptation coping strategies, the client may aggravate his condition, the pathology increases and recovery becomes more difficult achievable.

Blocking the therapist in "the reason for the consultation", as representing the basic diagnosis without performing a differential, may lead the therapeutic act in a wrong direction, especially if he doesn't have the needed training and expertise understanding of the pathology or issues faced by the patient. For this reason, for a good therapeutic approach, we can say that the collaboration of specialists in the field of mental health: psychiatrists, clinical psychologists, neurologists, psychotherapists, other specialists is very important and where a multidisciplinary team cannot be formed, the developing knowledge of the therapist in his field of activity will be a plus for his work, for the clients' benefit.

The use of multiple types of psychotherapeutic approaches (especially if the client refuses psychiatric therapy) may prove beneficial in the long term (Stoian, 2015).

A positively oriented psychotherapist, who seeks out resources and not deficits, can contribute to the achievement of a good therapeutic approach, focused on the client's needs.

Received at: 15.09.2017, Accepted for publication on: 25.09.2017

REFERENCES

- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. Washington DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author
- Beck, J.S. (1995). *Cognitive therapy: Basics and beyond*. New York: Guilford Press.
- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.
- Çiyiltepe, M. & Türkbay T. (2006). Phagophobia: a case report. *Turk J. Pediatr*, 48:80-84.
- Evans, I. M., Pechtel, P. (2011). Phagophobia: Behavioral Treatment of a complex Case Involving Fear of Fear. *Clinical Case Studies*, XX(X) 1-16. Sage DOI: 10.1177/1534650110391085
- First, M.B., Gibbon, M., Spitzer, R.L., Williams, J.B.W., Benjamin, L.S. (1997). *Structured Clinical Interview for DSM-IV Axis II Personality Disorders*, (SCID-II). Washington, D.C.:
- Leahy, R.L., Holland, S.J. (2012). *Planuri de tratament și intervenții pentru depresie și anxietate*. Cluj-Napoca: ASCR.
- Mc Klintock, E. (2001). The underlying psychopathology of eating disorders and social phobia. A structural equation analysis. *Eating Behaviors* 2, 247–261.
- Rizeanu, S. coord. (2014). *Psihoterapie și consiliere; Studii de caz*. București: Universitară.
- Rizeanu, S. (2013). *Introducere în psihoterapie*. București: Universitară.
- Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*, Vol. 45(4), 489-493.
- Shapiro, J., Franko, D.L., Gagne, A. (1997). Phagophobia: a form of psychogenic dysphagia. A new entity. *Ann Otol Rhinol Laryngol*, 106:286-290.
- Stoian, C. (2015). Cazul Robin sau copilul „Angry birds” In Rizeanu, S. coord. (2015). *Evaluare clinică și psihoterapie. Studii de caz*. București: Universitară.
- Suraweera, C., Hanwella, R. and de Silva, V. (2014). Phagophobia: a case report. *BMC Research Notes*, 7:574.

DIFFERENCES BETWEEN THE SELF-ASSESSED AND OBSERVED LEVEL OF AGGRESSIVITY OF YOUNG DRIVERS IN TRAFFIC – A PILOT STUDY

EMIL RAZVAN GÂTEJ^a, STELIANA RIZEANU^a, GEORGE URSACHI^b

^aHyperion University, Faculty of Psychology and Educational Sciences,
Department of Psychology; ^bRoad Safety Analysis, Banbury, UK

Abstract

The aim of this research is to show that the level of self-reported aggressive behavior may differ significantly from the real level of the aggressive behavior in traffic. After developing this pilot study we agreed that a much more complex research should be conducted. After considering previous research we decided to explore the gender variable to identify the differences between what the subjects reported and the real level observed in the experimental group. The hypothesis that implies gender differences was denied, confirming the null hypothesis. The results of this pilot study lead to the conclusion that statistically there are significant differences between what is reported and the more severe than that, perceived, and the real level of risk that drivers generate in the social environment of road traffic. We are proposing a broader exploration of these hypotheses in a study that encompasses a more varied context and whose results can be more prominent.

Keywords: fake good, aggressiveness, driver behavior, empathy, road safety

1. THEORETICAL FRAMEWORK

1.1. BRIEF DESCRIPTION OF AGGRESSIVE DRIVING

Aggressive driving is one of the most severe problems of modern traffic (Foundation AAA for Traffic Safety, 1997; NHTSA, 1998). The Omnibus study provided by the Statistics Office for Transportation in August 2000 shows that aggressive driving was considered the highest concern regarding safety behind the steering wheel (Shinar & Compton, 2004).

Corresponding author: Emil Razvan Gatej

E-mail address: emilrgatej@gmail.com

NHTSA (2000) offers a different definition which sees aggressive driving as the use of a motor vehicle in a manner which jeopardizes or can jeopardize people and goods. Tasca (2000) too considers that aggressive driving means that the act is intended, that it can increase the risk of collision and that it is motivated by lack of patience, frustration, hostility or wish to save time.

Aggressive driving refers to behaviors such as flashing the headlights (Diekmann et al., 1996; Ellison-Potter et al., 2001), raising the voice to other drivers (Hennessy & Wiesenthal, 1999), obscene gestures (Ellison-Potter et al., 2001). There are authors who underline that beside aggressive behaviors could appear as well certain behaviors called trans aggressive (Ellison-Potter et al., 2001). Trans aggressive behaviors are speeding above the legal limit (James & Nahl, 2000), crossing on the red light (James & Nahl, 2000; Tasca, 2000) and not observing the required distance from the vehicle ahead (Diekmann et al., 1996; Ellison-Potter et al., 2001).

Shinar (2007) makes the distinction between “hostile aggression” and “instrumental aggression”. The first category comprises hostile reactions aimed at other participants in the traffic without having a good reason, such as verbal abuse, physical attack and obscene gestures. Instrumental aggression on the other hand comprises behaviors focused on the purpose of finishing the journey sooner, for example changing the lanes too many times, not keeping the distance from the vehicle ahead, excessive speed and not observing the red lights.

Galovski și Blanchard (2005) consider that intention is the key element to differentiate between aggressive driving and driving mistakes. Overall, the majority of researchers can't make the distinction between these two behaviors, those which are clearly motivated by the intention of harming others and those which are not. It is possible for the drivers to look at the observed behavior, if it looks or not as an aggressive manoeuvre (Vanlaar, Simpson, Mayhew & Robertson, 2008; Rizeanu, Gatej, Ciolacu, 2017), especially taking into account the idea that driving is more than just operating a motor vehicle and is seen as a factor that contributes to self-respect, independence and quality of life, especially in the developed countries where driving is the main means of mobility (Liddle, Turpin, Carlson & McKenna, 2008; Mezuk & Rebok, 2008).

The research done by Parker, Lajunen și Stradling (1998) show that 89% of 270 drivers admit they are occasionally behaving aggressively and underlines the magnitude of aggressive driving.

1.2 AGGRESSIVE DRIVING AT YOUNG DRIVERS

The underestimation of risk, lack of fear, aggression and lack of consideration to the negative consequences are among the factors that determine young drivers to be dangerous in traffic. These characteristics are inherent to the development

period of youth but they are as well personality traits which appear in the normal population. People of all ages that possess a high degree of these characteristics can be aggressive drivers. Among young male drivers, those who have particular emphasized traits of personality have as well an increased risk to commit traffic accidents (Tsuang et al., 1985). Such traits include: aggressiveness, impulsiveness and quest for strong sensations (Rimmö & Åberg, 1999).

Young drivers, especially males, have a higher risk to be involved in a traffic accident compared to other categories of age (Massie et al., 1995, Panayiotou et al., 2008). This is a significant social problem as traffic accidents are the main cause of youth death and invalidity in many parts of the world, Europe included (Cvijanovich et al., 2001).

1.3 GENDER DIFFERENCES IN AGGRESSIVE DRIVING

Perhaps the reason behind the lack of studies focused on female driving is due to the increased driving behaviors, accidents and deaths among men. Despite all these, there are more women driving today than anytime (NHTSA, 2005).

On gender differences, majority of evidence indicate that men are more aggressive than women (Hyde, 1984). Men register higher scores when it comes about the search for strong sensations (Jonah, 1997) as well as about committing unsafe acts of driving such as excessive speed (Harre et al., 1996). That is men underestimate the danger of such actions and consider themselves better drivers than women (Dejoy, 1992).

Evidence suggests as well that women feel stronger about observing the law and have the tendency to evaluate positively the laws regulating traffic while men tend to overestimate their driving capacity and underestimate the risks associated to not complying with the rules (Yagil, 1998).

However, a study conducted by the Medicine and Public Health School in John Hopking, Baltimore, showed that female drivers are involved in more traffic accidents than men (Lennon & Watson, 2011).

2. OBJECTIVE AND HYPOTHESIS

The main objective of this study is to reveal a significant difference between the level of traffic aggressiveness showed by a self-report instrument and the level of traffic aggressiveness observed with a special safety device and evaluated by a road safety specialist.

2.1. OBJECTIVE

The aim of this research is to analyses to what extent young drivers perceive the real level of their own aggressive behavior behind the steering wheel.

2.2. HYPOTHESIS

We assume there are statistically significant differences between the level of aggressiveness measured by self-report and the one observed in the traffic among young drivers. We assume there are statistically significant differences between the level of aggressiveness measured by self-report and the one observed in the traffic among young drivers according to gender.

3. METHOD

3.1. PARTICIPANTS/SUBJECTS

60 participants of Romanian nationality were tested, 30 males and 30 females, ranging between 18 and 35, students at two universities in Romania.

3.2. INSTRUMENTS/APPARATUS/STIMULI/MATERIALS

We used the AVIS Test (Vienna Tests System, 2012) to measure the level of self-reported level of aggressiveness. The standard form of this questionnaire contains 36 items. This instrument contains six factors as follows: instrumental aggression, anger, enjoyment of violence, negativism, acting out, social desirability. Each item has eight response options (1-very often, 8- frequently). The Cronbach Alpha coefficient reported by author is .96. The measurement of the real behaviors in traffic was conducted by a road traffic safety evaluator aided by a context test and an observation sheet.

To observe the driver behavior in traffic situations we used DVM 750 ally device produced by Digital. Video sequences were analyzed by a road safety specialist. The observation scale was based on four concepts: hostile attitude, aggressive behavior generating dangerous situations (acting with no politeness in traffic situations, flashlights, tailgating) verbal aggressiveness.

3.3. PROCEDURE

The procedure used was selected to allow the comparison of two samples similar as age, genre, level of education and a high homogeneity. 30 participants received a self-report test about aggressiveness behind the steering wheel test while other 30 participants were monitored in traffic with a special device (DVM-750). They had been informed our research focused on the urban traffic. The distance

across which the digital observation was done was 10 km in urban traffic. The analyzed images were transcribed on the same sheet as the self-reporting instrument.

Previous studies regarding the aggressive driving and the use of AVIS questionnaire were conducted by Chraif, Aniței, Burtăverde & Mihăilă (2015) regarding the link between personality, aggressive driving, and risky driving outcomes and Chraif, Aniței, Dumitru, Burtăverde & Mihăilă (2015) regarding the development of an English version of the aggressive driving behavior test.

4. RESULTS

In order to observe significant differences, the T test for dependent samples was used.

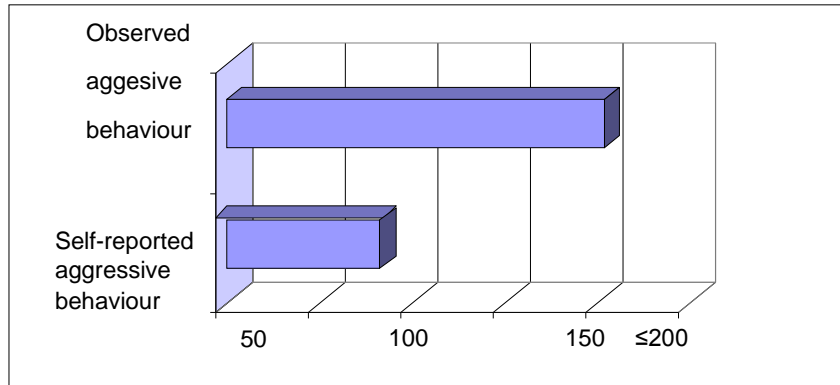
Table 1. Description of values for averages of the two sets of data collected from the experimental sample in which the parameter “driving aggressiveness” is regarded

		Average	N	SD*	Standard deviation of the average
Pair 1	Gr1	150.430	60	.23015	.03721
	Gr2	80.031	60	.24012	.04515

According to the T-test for pairwise samples, the average level of the first group ($m = 150$, $N = 60$, standard deviation = 0.03) is higher than the median level of the second group ($m = 60$, Standard deviation = 0.04), thus demonstrating that the level of aggressiveness at the wheel is visibly different between the two assessed samples, namely, the level of observable aggression is much higher than the aggressive behavior self-reported by the participants.

This difference is also highlighted by the figure below, where the presented indicators show a very large discrepancy between the level of aggressive behaviour at the observed and self-reported steering wheel. In order to make the difference reliable we assumed a system of ranking the scores in traffic situations from 1 to 8 points taking into consideration 36 reactions that occurred in driver's behaviour. The 10 kilometres route was divided into parts relevant for each factor of the self-report instrument. The marks on the special camera device were analysed and the values were counted for describing the observed behaviour. Young drivers seem to not be aware almost at all of their real level of aggressiveness in traffic. The high difference between the levels of the two variables show there is a severe lack of real perception about their own behaviour.

Figure 1. Observed and self-reported aggressive behavior



To see to what extent these results are statistically significant, we used T Test for independent samples.

Table 2. Independent Samples Test

		F	Sig.	t	df	t-test for Equality of mens				
						Sig. (2 – tailed)	Mean Diferen ce	Std. Error Differen ce	95% interval of the Difference	Confidence of the
Scor									Lower	Upper
	Equal variance s assumed	12.70 1	.000	3.701	58	.000	5.359	.384	.573	5.951
	Equal variance not assumed			3.471	27.227	.001	5.359	.387	.573	5.004

Given that $p = 0.001 < \alpha = 0.05$, the rejection of the null hypothesis can be stated.

These results lead to the conclusion that there is a significant difference between the level of self-reported level of aggressive behavior and the observed in-traffic behavior as the participants rated their level of aggressive behavior in traffic lower than the observed behavior.

Regarding the hypothesis of gender differences, this is invalidated in this first part of the pilot study, confirming the null hypothesis according to which there are no significant gender differences in self-reported aggression and the observed level of aggressiveness.

Table 3. Gender differences in self-reported aggression and the observed level of aggressiveness.

		Levene Test		T test					
		F	Sig.	t	df	Sig. (2 tailed)	Dif. mean	Std. Error Dif.	95% Confidence interval
Gen der	Equal variances assumed	.731	.394	.549	58	.772	.05467	.12733	Inferior
									Superior
									.7285
									7.83 54

The results showed that both female and male drivers have deficits in recognizing their own aggressive behavior, being more aggressive in driving than perceived, but there were no differences at the level of aggressiveness between genres.

5. CONCLUSIONS

Young drivers declare a much lower level of aggressiveness compared to the level indicated by their real behavior. The perception of the level of aggression is a challenge in the context of a traffic that shows 5 deaths a day as in Romania. As seen in previous studies (Gatej, Rizeanu, Ciolacu, 2016) young drivers in Romania consider that the most important thing in traffic is to have distributed attention and be able to drive doing more things at the same time. The limits of perceiving aggressive behavior reside in the lack of road education as well as in a low level of personal development, whose presence would lead to empathy and full awareness of the consequences of aggressive conduct.

A limit of this research is that subjects were analyzed just in urban traffic situations. Also in this pilot experiment we used a procedure for observing DVM - 750 recording that will be standardized in future research.

ACKNOWLEDGMENT

This research was made with the technical support of Academia Titi Aur research facility, the technical support of Safety Camera Systems and in cooperation with Road Safety Analysis Ltd. – UK.

Received at: 15.09.2017, Accepted for publication on: 25.09.2017

REFERENCES

- AAA Foundation for Safety. (2009). *Aggressive Driving Research Update*. Washington D.C.
- AAA Foundation for Traffic Safety. (1997). *Aggressive Driving: Three Studies*. AAA Foundation for Traffic Safety. Washington, DC.
- Aberg, L., & Rimmo, P. A. (1998). Dimensions of aberrant driver behaviour. *Ergonomics*, 41(1), 39-56.
- Chraif, M., Aniței, M., Burtăverde, V., Mihăilă, T. (2015). The link between personality, aggressive driving, and risky driving outcomes - testing a theoretical model. *Journal of Risk Research*, DOI: 10.1080/13669877.2015.1042500,
- Chraif, M., Aniței, M., Dumitru, D., Burtăverde, V., & Mihăilă, T. (2015). Developing of an English Version of the Aggressive Driving Behavior Test (Avis) Improving the Construct Validity of Aggressive Driving. *Current Psychology*, DOI: 10.1007/s12144-015-9353-7.
- Cvijanovich, N. Z., Cook, L. J., Mann, N. C., & Dean, J. M. (2001). A population-based study of crashes involving 16-and 17-year-old drivers: the potential benefit of graduated driver licensing restrictions. *Pediatrics*, 107(4), 632-637.
- Diekmann, A., Jungbauer-Gans, M., Krassnig, H., & Lorenz, S. (1996). Social status and aggression: a field study analyzed by survival analysis. *Journal of Social Psychology* 136, 761-768.
- Ellison-Potter, P., Deffenbacher, P.B., & Deffenbacher, J. (2001). The effects of trait driving anger, anonymity, and aggressive stimuli on aggressive driving behaviour. *Journal of Applied Social Psychology* 31, 431-443.
- Galovski, T. E., & Blanchard, E. B. (2005). Understanding and treating the aggressive driver. In D.A Hennessy & D.L Wiesensthal (Eds.), *Contemporary Issues in Road User Behavior and Traffic Safety* (pp. 47-60). New York, Ny: Nova Science Publishers, Inc.
- Gatej, E.R., Rizeanu, S., Ciolacu, M.V. (2016). Effects of aggressiveness on performance in handling of a swerve vehicle. *Romanian Journal of Experimental Applied Psychology*, vol. 7, issue 4, p 16-22.
- Harré, N., Field, J., & Kirkwood, B. (1996). Gender differences and areas of common concern in the driving behaviors and attitudes of adolescents. *Journal of Safety Research*, 27(3), 163-173.
- Hyde, J. S. (1984). How large are gender differences in aggression? A developmental meta-analysis. *Developmental psychology*, 20(4), 722.
- James, D. L., & Nahl, D. (2000). *Road Rage and Aggressive Driving: Steering Clear of Highway Warfare*. Prometheus Books, Amherst, NY.

- Jonah, B. A. (1997). Sensation seeking and risky driving: a review and synthesis of the literature. *Accident Analysis & Prevention*, 29(5), 651-665.
- Lajunen, T., Parker, D., & Stradling, S. G. (1998). Dimensions of driver anger, aggressive and highway code violations and their mediation by safety orientation in UK drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, 1(2), 107-121.
- Lennon, A., & Watson, B. (2011). "Teaching them a lesson?" A qualitative exploration of underlying motivations for driver aggression. *Accident Analysis & Prevention*, 43(6), 2200-2208.
- Levy, D. T. (1990). Youth and traffic safety: the effects of driving age, experience, and education. *Accident Analysis & Prevention*, 22(4), 327-334.
- Liddle, J., Turpin, M., Carlson, G., & McKenna, K. (2008). The needs and experiences related to driving cessation for older people. *British Journal of Occupational Therapy*, 71(9), 379-388.
- Marsh, P. E., & Collett, P. (1986). *Driving passion: The psychology of the car*. Boston: National Academy of Sciences.
- Massie, D. L., Campbell, K. L., & Williams, A. F. (1995). Traffic accident involvement rates by driver age and gender. *Accident Analysis & Prevention*, 27(1), 73-87.
- Mezuk, B., & Rebok, G. W. (2008). Social integration and social support among older adults following driving cessation. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 63(5), 298-303.
- NHTSA. (1998). Aggressive drivers view traffic differently Capital Beltway focus groups find. *US Department of Transportation Traffic Tech*. no 175, April.
- NHTSA. (2000). Aggressive Driver Enforcement: Strategies for Aggressive Driver Enforcement.
- NHTSA (2005). *Turning the Corner and Still Driving: A Review of Law Enforcement Programs Involving Older Driver Safety*. South Deerfield: Channing L. Bete Co.
- Panayiotou, G., Constantinou, E., Loutsiou-Ladd, A., Kapardis, A., & Konstantinou, N. (2008). *Personality Factors as Predictors of Driving Outcomes*. Poster Presented at the European Personality Conference, Tartu, Estonia.
- Parker, D., Lajunen, T., Stradling, S. (1998). Attitudinal Predictors of Interpersonally Aggressive Violations on the Road. *Transportation Research Part F Traffic Psychology and Behaviour* 1(1):11-24. DOI: 10.1016/S1369-8478(98)00002-3.
- Rimmö, P. A., & Åberg, L. (1999). On the distinction between violations and errors: sensation seeking associations. *Transportation Research Part F: Traffic Psychology and Behaviour*, 2(3), 151-166.
- Rizeanu, S., Gatej, E.R., Ciolacu, M.V. (2017). Personal Development Through Defensive Driving Techniques: Implications in the Field of Emotional Intelligence Regarding the Age Factor. *American Research Journal of Geriatrics and Aging*; VI, 11; pp: 1-7.
- Sagberg, F., Selpi, Bianchi Piccinini, G. F., & Engström, J. (2015). A review of research on driving styles and road safety. *Human factors*, 57(7), 1248-1275.
- Shinar, D. (2007). *Traffic safety and human behavior*. Amsterdam, Netherlands: Elsevier.
- Shinar, D. & Compton, R. (2004). Aggressive driving: an observational study of driver, vehicle, and situational variables. *Accident Analysis & Prevention*, 36(3), 429-437.

Tasca, L. (2000). *A review of the literature on aggressive driving research*. Ontario, Canada: Ontario Advisory Group on Safe Driving Secretariat, Road User Safety Branch, Ontario Ministry of Transportation.

Tsuang, M. T., Boor, M., & Fleming, J. A. (1985). Psychiatric aspects of traffic accidents. *Am J Psychiatry*, 142(5), 538-546.

Vanlaar, W., Simpson, H., Mayhew, D., & Robertson, R. (2008). Aggressive driving: A survey of attitudes, opinions and behaviors. *Journal of Safety Research*, 39(4), 375-381.