THE ATTRIBUTIONAL STYLE OF ADULTS STUDIED BY THE EXPERIMENTAL INDUCTION OF NEGATIVE MOOD

Mihai Marian [*]
University of Oradea, Romania

Abstract
The work is aligned to relatively recent preoccupations regarding the involvement of causal attributions in the evolution of depression. We investigate the impact of negative mood experimentally inducted in the modification of psychopathological reactivity, of self esteem and the causal attributions. The steps proposed shall investigate the status of the causal explanations as a vulnerability factor in psychopathological reactivity and the extent to which these are causal factors in psychopathology or on the contrary, they are just a consequence. The lot was formed out of 345 participants, 82 participants were evaluated both in pre and post test. The induction of depressive mood surprises the modifications between T_1 and T_2 of the way in which the participants make causal attributions in the case of negative scenarios. In the next stage there are presented comparisons between psychiatric depressive persons, non-psychiatric depressive persons with experimentally inducted depression and non depressive persons according to the socio-cognitive variables. The study claims the modification of negative causal attributions according to the symptom model and vulnerability. The experimental situation acted as a trigger of the disadaptive attributional style, which might indicate the activation of some answer modalities to confirm the actual mood of the participants.

Keywords: negative mood, induction, attributional style, vulnerability

Introduction

The research generally claim the idea of a tendency for making internal, stable and global causal attributions for negative events associated

Correspondence concerning this paper should be addressed to:

[*] Ph.D., University of Oradea, Faculty of Socio-Humanistic Sciences, Psychology Department, University street, no. 3, Oradea, Bihor, 410087, Romania. E-mail: *mmarianster@gmail.com*

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with depression. A "critical" problem of the helplessness model is related to the dispute created around the assignments and if they represent a causal factor in depression or on the contrary a post invasion, so a consequence of the depression. Some researchers suggested that the cognitive models of the attributional reformulated model type of learned helplessness was not adequately tested and consequently, the conclusions regarding its validity are premature (Abramson, Alloy, & Metalsky, 1989; Marian, 2004, 2008).

Peterson and Seligman (1984, p. 371) concluded that "the results of the researches support the model of the learned helplessness", on the other side Coyne and Gotlib (1983, p. 500) considered that "less support was obtained for the affirmations of Beck`s and Seligman`s model". The original model of learned helplessness shows that the expectances of an individual regarding the independence of the resulted answer (uncontrollability) precipitate the depressive reactions to negative events.

There are only few studies which demonstrate the connection between the dysfunctional attributional style and the negative life events and they prove the weakest point of the theory. In the case of non clinical subjects, when important events were experienced again as being controllable, the subjects manifested internal causal attributions, stable and global at a lower quotation, while in the case of the subjects who reported a deficit of event control, the causal attributions corresponded to the reformulated helplessness theory (Brown & Siegel, 1988).

Low self esteem was investigated as an aspect of the cognitive style which can increase the apparition of depression in the presence of life events. Parry and Brewin (1988) indicated that low self esteem leads to a generalization of hopelessness from the immediate event to other events from the individuals` life. Negative self evaluation precedes the beginning of depression by the exposure to threatening life events. Beck (1976) showed that the pre-morbid depressive is an individual who makes logical errors in interpreting the reality and this brings his results near the reformulated learned helplessness theory which indicates that the attributional dysfunctional style predisposes to depression (Brewin, 1985; Marian & Filimon, 2011). Another factor is the perception of negativity represented by the fact that depression attracts the mainly the processing of negative information, respectively a more facile access of it.

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Proves that the attributional patterns are a symptom of clinical state of depression can be obtained from the longitudinal studies where the patterns could be measured before, during and after a depressive episode. In practice, the studies tend to recruit depressive patients and to re-examine their cognitions along the remission. The persistence of maladaptive cognitions after a depressive episode are considered as specific variables and not as a simple specific state.

One modality for examining the *symptom model* is to induce the depressive mood and to analyse changes in the attributional pattern. Three studies tried this with students (Mukharji, Abramson, & Martin, 1982; Brewin & Harris, 1985; Brewin, 1985) not succeeding to register the attributional change as a function of inducted mood. On the other side, Abramson, Seligman, and Teasdale (1978) mentioned the fact that the affective component of depression results from the expectance according to which negative results shall not take place due to the uncontrollability they expected. On other words, not all depressive people are "helplessness" depressive and the induction of a transitory depressive mood does not simply allow the production of motivational deficits (or others) associated with depressive attributional style; these deficits take place most probably in natural depression.

The "symptom" model receives only partial support. And besides that, the designs of the studies do not exclude the possibility that these maladaptive cognitions are activated by the trigger events before the beginning of the depression – insufficiently examined possibility.

The identification of the psychological factors which may cause the depression proves to be a difficult task; depression vulnerability derives from a habitual style of explaining the life events, known as attributional style (Peterson, Mayer, & Seligman, 1993). The beginning of the depressive episode is precipitated by the production of a negative event which triggers the expectance of uncontrollability of future negative events.

Great majority of studies avoided to examine the role of individual dimensions in favour of the try to foretell the depressive mood. Not only most studies failed in trying to test the specific predilections related to individual dimension, but they also abandoned in most cases the examination of the relationship between the dimensions.

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In spite of the relatively long period of research, the studies lead to a variety of results, the conclusions being different according to the method used (the experimental tasks, the subjects category etc.).

Objectives

In this study we are about to investigate the impact of depressive mood experimentally inducted in the modification of psychopathological reactivity, of the self esteem and causal attributions. The steps suggested shall investigate the status of the causal explanations as a vulnerability factor in psychopathological reactivity and the extent to which these are causal factors in psychology or on the contrary a post invasion, a consequence.

The experimental steps shall investigate the interaction between the type of the group where the participants are included (psychiatric patients, depressive patients without hospitalisation, participants who were inducted the depressive mood and non-clinical patients) and the psychopathological manifestations. We also investigate the interaction between the four samples and the dysfunctional causal explanations which are at the basis of learned helplessness; other interactions aim at the self esteem and the social support.

Specifically we consider that: 1. Experimental induction of depressive mood leads to the amplification of causal dysfunctional attributions and of the helplessness feelings in post test phase and 2. Psychopathological manifestations at cognitive and social level are different according to the inclusion of the participants in the experimental lots (experimentally inducted depressive mood presents a similar pattern with the one of the depression).

Method

Participants

The initial lot was formed out of hospitalised psychiatric patients who had never been previously hospitalised in psychiatric hospitals (N=345).
The hospitalised participants diagnosed with depression

The study included a number of 89 patients diagnosed with depression and hospitalised in neuropsychiatric hospitals from Bihor and Arad counties, Romania. The patients were aged between 19 and 66 years old (m=44,96;

σ=11,45) out of which, 38 (42,7%) men and 51 (57,3%) women. In most of the cases the previous diagnosis was undertook at a new hospitalisation; consequently 67 (75,3%) patients were diagnosed with depression and 22 (24,7%) patients did not have a previous diagnosis, being at the first hospitalisation in a neuropsychiatric clinic.

Depressive participants non-hospitalised

Depressive participants included in the study, without previous hospitalisations, were 81, aged between 19 and 67 years old (m=33,67; σ=16,31) out of which, 28 (34,6%) men and 53 (65,4%) women. The participants were selected according to the results obtained at SCL-90, DEP scale (depression) by using C Norm for psychiatric patients.

Participants with negative mood experimentally inducted

The lot was made of students (N=82) in the first year at The University of Oradea, aged between 19 and 39 years old (m=23,47; σ=5,25) out of which 35 (42,7%) men and 47 (57,3%) women. The participants have been selected selected according to the results obtained at SCL-90, DEP scale (depression) by using B Norm for non-patients.

Non clinical participants

The selected participants to the study have been randomly selected from the population; there were a number of 93 persons aged between 19 and 52 years old (m=23,95; σ=5,95) out of which 18 (19,4%) men and 75 (80,6%) women. The participants have been selected selected according to the results obtained at SCL-90, DEP scale (depression) by using B Norm for non-patients.

Measures

Attributional Style Questionnaire (A.S.Q.) devised by Peterson, Semmel, von Baeyer, Abramson, Metalsky, and Seligman (1982); it is a measure of explanatory style patterns which in turn reflects one's tendency to select certain causal explanations for favorable or unfavorable events. The internal consistency reported by Marian (2010) was α= .82 for positive events, and α= .72 for negative events. This moderate internal consistency is supported by other findings.

Current Thoughts Scale (C.T.S.) devised by Heatherton and Polivy (1991); it consists of 20 items loaded on three factors: a. performance self-esteem, b. social self-esteem, and c. appearance self-esteem. This instrument was designed to asses one's thoughts at certain times. Marian (2009) reported a

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.84 alpha coefficient for this scale. The C.T.S. aims to uncover the real effect of the variance of self evaluations on thoughts, emotions and behaviour.

Multidimensional Scale of Perceived Social Support (M.S.P.S.S.) devised by Zimet, Dahlem, Zimet, and Farley (1988); it consists of 12 items loaded on three factors: a. family, b. friends, and c. significant others. Each item is structured according to the three factors. Internal consistency is .91 (12 items). Test-retest trust quotient of the two testing phases (T_1 and T_2) is between .67 and .80 (Marian, 2006).

Profile of Mood States was accepted as an efficient way of measuring psychological stress. This study evaluated the psychometric properties of a shorter, 20-item version of the P.O.M.S. Data were provided by 209 respondents. For all samples, internal consistency estimates for the P.O.M.S. subscales were comparable to those for the original P.O.M.S. (internal consistency is .90 for negative emotions and .88 for positive emotions; test-retest trust quotient is between .32 and .56) (Marian, 2007). The P.O.M.S. is considered an alternative to the original P.O.M.S. when a brief measure of psychological distress is desired.

Symptom Check List 90-R (Derogatis, 1994) is an instrument which evaluates the gravity of the symptoms reported by patients. *The internal consistency* of its subscales is situated between .75 and .86 and for ISG it is .97. *Test-retest trust quotient* of the two testing phases (T1 and T2) is between .77 and .87 (see Marian, 2008).

Survey of Recent Life Experiences. Kohn and Macdonald (1992) proposed Survey of Recent Life Experiences (SRLE) which they validated starting from 92 items. In our study we use the short version of SRLE which is formed of 41 items meant to measure the hassles accumulated during a period of time. The internal consistency of the total score was .90 (41 items). Test-retest trust quotient of the two testing phases is between .66 and .78 (see Oprea, Marian, Filimon, & Banciu, 2011).

Procedure

Considering the fact that hospitalised depressive patients are submitted to specific treatment an evaluation in two times (T_1 – at the hospitalisation and T_2 – at the externalisation) was not possible and besides that the specific literature mentioned the fact that the answers of the participants are modified in time after the administration of medication and this might modify the result at

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the psychological tests that we applied. Consequently, the evaluations were longitudinal only in the case of the participants with inducted depression where there was applied the two times evaluation (T_1 before and T_2 after the experimental induction of depressive mood).

All the participants filled in A.S.Q. and in the next stage the participants were asked to answer on a Likert scale from 1 to 7, three items concerning the degree to which they consider they would have had the control if the event had taken place, the importance of the event and the helplessness feeling.

The evaluation procedure in the case of the participants cu experimentally inducted depression

In the *first stage* of the research (T_1) the participants filled in the scale set previously presented. The initial evaluation was implemented a month before the main experimental phase and the participants were not informed that a second experimental phase would follow (T_2). The participants noted a code or a pseudonym on the answer documents in order to keep secret their identity and on the basis of the basis of voluntary action.

In the *second stage* (T_2), the participants were presented a concrete situation of a depressive person. In order to produce a dispositional modification by persuasion we were interested to influence the quality of processing the information by asking the participants to focus on the arguments oriented on the arguments included in the message. The evaluator accentuated the elements specific to uncontrollability, to negative assignments and to repeated failures regarding the assignment of realizations and the affiliation starting from apparent irrelevant situations to situations connected to important losses such as the loss of the work place, of the affective support and the lack of future perspective.

The presented situations also included the effectively behaviour of the subject (eg: I haven`t left the house all day; I did not defend myself even when I should have had; I abandon what I do in the middle of the action; I did not compete when I had the chance etc.) and the consequences of learned helplessness.

The duration for presenting the situation was roughly 20 minutes.

The *third stage* (T_3) followed the second one and the participants were asked to fill in the set of scales presented at T_1 with the specification to respect

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the initial coding. Besides that, the participants were told to fill in the scale according to their current mood.

At the end of the evaluation the participants were informed that the experimental task presented had the role to produce mood modifications and it does not compromise in any way the way in which they react in future, in different life contexts.

Design. We are interested in modifications of causal assignments, self esteem and receptivity to daily harassment as a consequence of inducting the depressive mood.

In order to verify the *hypothesis 2*, the independent variable is represented by framing the participants in 4 experimental lots: psychiatric patients, depressive patients without hospitalisation, participants with inducted depressive mood and non clinical participants. Dependant variables are represented by: dysfunctional causal explanations, self esteem, the perception of social support, recent life experiences and negative emotions.

Presentation and interpretation of the results

Experimentally included mood changes and their relationship with social cognitive variables involved in mood disorders

The lot submitted to mood modification was formed of 82 participants and they were selected according to the results obtained at S.C.L.-90, scale DEP (depression) by using Norm B for non patients so as they did not represent mood changes or light depression (reactive). None of the participants reported stressing events during the last month which hypothetically would have changed the answers as a consequence of the experimental task of mood induction.

Psychopathological changes

The induction of depressive mood produced many mood changes in the direction of mood disorder and of light depression at 53 participants while only 28 participants did not report any modification at DEP scale out of S.C.L.-90; between the test phase and post test phase we notice that the test t for pair samples [$t(81) = -4,910$, $p < .001$] is statistically significant ($r = .22$ indicates a high effect), which demonstrates the efficiency of the induction method used

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(Table 1). The distress measured by scale GSI presents a growth in the case of 25 participants [t(81) = -3,568 , p < .001] and the size of the effect r = .13 is over the average and this indicates an intensification of the reported symptoms and implicitly a growth of the psychological difficulties. Somatization as a result of the distress generated by the test of mood modification induction, indicates a growth of the reported symptoms at the scale SOM in the case of 32 participants who probably in stressing situations shall sooner manifest somatic symptoms and less psychical symptoms [t(81) = -4,074 , p < .001], increase of the effect r = .16 between the two evaluations being high. In case of anxiety measured with ANX scale, only 19 participants reported an increase of the symptoms [t(81) = -1,927 , p < .05] with reduced effect r = .04 which indicates the efficiency of the narrative induction technique for the depressive mood only in the case where the modifications in the area of depression are aimed at. Interpersonal sensitivity measured with I-S scale, respectively the discomfort which might be felt in interpersonal situations and the negative expectances in social plan does not significantly change from statistic point of view (Table 1), only 12 participants presenting a growth of the discrepancy and inferiority feeling. In the case of additional guilt feeling we can observe in table 1 a growth of the guilt feeling in the case of 26 participants who selected answers of the type "strong" and "extreme" [t(81) = -4,624 p < .001] which indicates a high effect r = .20 . The results support the idea of association between depression, somatization and guilt in the context of some stressing events with severe repercussions on the social functionality of the individuals.

Modifications of the self esteem

By using the C.T.S. scale we were observing the short term modifications of the self esteem (as a mood) respectively its fluctuations. We consider that C.T.S. was an appropriate instrument for surprising the immediate modification and as a consequence the collocation current thoughts surprises here the ongoing self esteem feelings [t(81) = 5,289 , p < .001] with a high efficiency .25 In the case of current thoughts related with the aspect [t(81)=3,203 , p < .002] there are medium effect modifications between T_1 and T_2 (r = .11) indicating a better appreciation before the induction, the situation being similar in the case of appreciating the personal performances [t(81)=3,174 , p < .002]. The most affected area of the self esteem is the social one [t(81)= 4,623 , p < .001] or in other words the way in which the participants

believe they are seen on social plan (the effect being high, r = .20). Experimental induction of depressive mood confirms (in the case of C.T.S. scale) the sensibility of the scale in appreciating the stressing situations but also in the evaluation of mood changes.

Modifications of causal attributions

A maximum interest in inducing the depressive mood had the surprise of modifications between T_1 and T_2 of the way in which the participants make attributions in the case of negative scenarios. We consider that negative causal attributions are a necessary cause, sufficient (as a etiological factor, the presence of which guarantees the production of the symptoms) increasing, as we see in table 1, the probability that the symptoms be produced in the case of depression. In the current experimental situation we prove that causal attributions act as proximal factors, so to say close to the moment of symptoms apparition.

Internal negative attributions [t(81) = -2,925 , p < .004] are associated with depressive mood (the increase of the effect being medium, r = .09) as long as the negative life situation is ongoing or immediately after which determines us to believe that internal attributions are rather associated with negative emotivity, low self-esteem, mood changes and less possible with medium intensity or severe depression. The statement is also supported by the results obtained in the case of this dimension in the other implemented studies. Stable negative attributions [t(81) = -5,155 , p < .001] and global negative [t(81) = -4,500 , p < .001] are substantially modified in the post test phase and the size of the effect is bigger (stable negative r = .24; global negative r=.19) which supports the learned helplessness theory attributionally reformulated (Abramson et al., 1978) according to which these contribute to the determination of depression chronicity and generality.

The induction of depressive mood generated an intensification of disadaptive attributional style [t(81) = -2,869 , p < .005] as an expression of internal, stable and global dimensions (the size of the effect, r = .09).

Out of the 28 participants who post experimental induction of the depressive mood did not register an increase of the scores at DEP scale, still 10 participants presented a negative attributional style while 18 participants did not. Out of the participants whose mood changed according to the experimental task and in the post test phase presented scores indicating a slight depression,

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32 participants presented a negative attributional style and 21 participants maintained their attributional style at the initial level. The differences observed in the post test phase determine us to consider the fact that the attributional style may be latent and in contact with a situation (stimulus) manifest itself, fact also supported by the frequency increase of the internal causal attributions for negative scenarios.

The helplessness felt by the induction of depressive mood $[t(81)=-4,141, p<.001]$ in comparison with the pre test phase (T_1) where the participants made this appreciation on the basis of S.R.L.E. proves a high effect (r=.16). Besides that it appears an accentuation of the negative emotions $[t(81)=-5,315, p<.001]$ and the decrease of the positive emotions $[t(81)=8,263, p<.001]$, the situation being in agreement with our expectances.

In the case of positive causal attributions (Seligman, 2004) we do not find any significant changes indicating rather a constant probably due to the evaluation with A.S.Q. which supposes imagining the causal situations which might act as a coping mechanism and implicitly as a contra task.

Table 1. Pretest – posttest comparisons for the participants with negative mood experimentally inducted

Variables	Pretest (T_1)		Posttest (T_2)		t	Sig.	Effect size r^2
	m	SD	m	SD			
Current thoughts (CTS)	76,74	5,28	69,71	12,43	5,289	.001	.25
Appearance (CTS)	17,35	2,09	15,97	3,16	3,203	.002	.11
Social (CTS)	34,24	3,94	30,12	8,07	4,623	.001	.20
Performance (CTS)	25,14	2,52	23,62	3,47	3,174	.002	.11
Internal negative	3,71	,96	4,13	,73	-2,925	.004	.09
Stable negative	3,17	,74	3,69	,57	-5,155	.001	.24
Global negative	2,86	,99	3,48	,65	-4,500	.001	.19
Composite negative (CN)	9,75	2,11	10,61	1,72	-2,869	.005	.09
Internal positive	5,47	,84	5,38	,92	,684	.496	-
Stable positive	5,15	,99	4,99	,95	1,252	.214	-
Global positive	4,73	1,31	4,35	1,18	2,065	.04	.04
Composite Positive (CP)	14,97	2,22	14,72	2,23	,751	.455	-
Distress (GSI)	,52	,24	,67	,26	-3,568	.001	.13
Somatization (SOM)	,46	,37	,68	,34	-4,074	.001	.16
Interpers. sensitivity (I-S)	,66	,39	,76	,38	-1,688	.09	.03
Depression (DEP)	,57	,28	,80	,25	-4,910	.001	.22
Anxiety (ANX)	,45	,33	,56	,34	-1,927	.05	.04

Table 1. Pretest – posttest comparisons for the participants with negative mood experimentally inducted - *continued*

Variables	Pretest (T₁)		Posttest (T₂)		t	Sig.	Effect size r^2
	m	SD	m	SD			
Guilt feeling	,46	,63	1,07	1,00	-4,624	.001	.20
Negative emotions	22,53	5,15	26,71	5,21	-5,315	.001	.25
Positive emotions	28,79	5,16	23,08	3,36	8,263	.001	.45
Importance of the event	5,29	,949	5,30	,951	-,076	.940	-
Helplessness in the event	4,47	1,24	5,28	1,14	-4,141	.001	.16
Personal control	3,65	1,54	3,26	1,50	1,542	.127	-

Comparisons between psychiatric depressive patients, non psychiatric depressive persons with experimentally inducted depression and non depressive persons according to social cognitive variables

In this stage of the research we tried to surprise differences between the four lots according the relevant psychopathological variables such as the distress, somatization, interpersonal sensitivity, depression, anxiety, guilt feeling and additionally the suicidal risk.

The experimental design imposed in this case is unifactorial and as a work technique it was used ANOVA unifactorial. We came from the idea according to which hypothetically there are differences between the lots with regards to psychopathological manifestations. The literature of speciality noted the existence of differences between the hospitalised depressive patients and the "normal" population but it did not clearly note the existence of differences between non hospitalised depressive patients, the healthy ones and those who were submitted to mood changes. The depressive mood induction techniques were frequently used (such as Kwiatkowski & Parkinson, 1994) but as we have seen so far they did not have the purpose to modify the attribution way but a comparison with depressive or anxious participants as a consequence of etiological factors experimentally uncontrolled.

Comparisons according to semeiology

In case of distress (see Table 2) we register differences between the lots [$F(3, 341) = 165,463$, $p < .001$; the increase of the effect $r = .32$], consequently psychiatric depressive persons accuse the distress at a higher level as compared to non-hospitalised depressive persons (Games-Howell = ,61, $p < .001$), non-

depressive (Games-Howell = 1,27, p < .001), or compared to those having an inducted depression (Games-Howell = 1,12, p < .001). The lot of the subjects with negative inducted mood manifest a higher degree of distress as compared to the lot of the non-depressives. (Games-Howell = ,14, p < .001).

We also observe differences in the case of somatization [F(3, 341)=104,665 , p < .001; the size of the effect r = .23]; the subjects who were inducted the negative mood manifest a medium increase of the somatization (Table 2) as compared to the no-depressive lot (Games-Howell = ,14, p < .001).

Interpersonal sensitivity and the discomfort on social plan [F(3, 341)=70,868 , p < .001; the level of the effect r = .17] are significant in the case of depressive patients as compared to non-depressive or non-hospitalised depressive persons (Table 2); this accredits the idea according to which the hospitalised depressive persons either do not have negative expectances regarding the interpersonal relations, or when they do compare themselves with others they feel inferior and/or inappropriate.

Table 2. ANOVA unifactorial in the case of the four lots evaluated according to psychopathological manifestations

Source	Sum squares	df	Mean square	F	Sig.	Effect size r^2
Distress (GSI; SCL-90)	88,077	3	29,359	165,463	,001	.32
	60,505	341	,177			
	148,582	344				
Somatization (SOM)	83,743	3	27,914	104,665	,001	.23
	90,945	341	,267			
	174,687	344				
Interpersonal sensitivity (I-S)	76,453	3	25,484	70,868	,001	.17
	122,626	341	,360			
	199,079	344				
Depression (DEP)	116,694	3	38,898	163,396	,001	.32
	81,179	341	,238			
	197,873	344				
Anxiety (ANX)	109,850	3	36,617	124,285	,001	.26
	100,465	341	,295			
	210,316	344				
Suicidal risk	134,796	3	44,932	57,723	,001	.14
	265,436	341	,778			
	400,232	344				

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Table 2. ANOVA unifactorial in the case of the four lots evaluated according to psychopathological manifestations - *continued*

Source	Sum squares	df	Mean square	F	Sig.	Effect size r^2
Guilt feeling	124,873	3	41,624	39,911	,001	.10
	355,637	341	1,043			
	480,510	344				

Measuring depression by DEP scale (Table 2) indicates the differences between the lots [$F(3, 341) = 163,396$, $p < .001$; the size of the effect $r = .32$); in the case of the lot with negative inducted mood, the difference of the averages is significant as compared to the non-depressive lot (Games-Howell = ,19, $p < .001$) and as we saw in the previous section, the method for modifying the mood generated only a slight depression. We were interested in surprising the suicidal risk in the studied lots [$F(3, 341) = 57,723$, $p < .001$], so the average of the differences in the post hoc test indicates the higher risk in the case of hospitalised patients, then in the case of non hospitalised ones as compared to the not of non-depressive persons (the induction of the mood did not increased the suicidal risk of the subjects as compared to the non-depressive lot). Besides, we evaluate the guilt feeling [$F(3, 341) = 39,911$, $p < .001$] which is associated to depression and suicidal risk; this is obvious in the case of hospitalised patients as we expected, but also in the case of the non-hospitalised subjects as compared to the non-depressive lot; it is surprising the fact that the average of the differences in the post hoc test indicates an increase even in the case of the subjects whose mood was modified by the experimental assignment (Games-Howell = ,63, $p < .001$).

Comparisons according to causal explanations

As we saw along the study, internal negative adjudgements do not seem to be obvious in the case of hospitalised depressive patients [$F(3, 341)=4,617$, $p<.004$; the effect is low $r = .01$)]. The results for stable negative adjudgements [$F(3, 341) = 56,488$, $p < .001$] and globally negative [$F(3, 341)=19,083$, $p<.001$] are presented similarly to internal causal adjudgements (Table 3).

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Table 3. ANOVA unifactorial in the case of the four lots evaluated according to causal attributions

Source	Sum squares	df	Mean square	F	Sig.	Effect size r^2
Internal negative	12,534	3	4,178	4,617	,004	.01
	308,584	341	,905			
	321,118	344				
Stable negative	129,655	3	43,218	56,488	,001	.14
	260,896	341	,765			
	390,550	344				
Global negative	97,282	3	32,427	19,083	,001	.05
	579,444	341	1,699			
	676,726	344				
Attributional style	552,337	3	184,112	32,412	,001	.08
	1937,031	341	5,680			
	2489,368	344				
Personal control	312,163	3	104,054	55,571	,001	.14
	638,504	341	1,872			
	950,667	344				

In our study, the lack of hope makes the difference between the four lots of participants [F(3, 341) = 50,012, p < .001] and the depresongenic or disadaptive attributional style [F(3, 341) = 32,412, p < .001]. Personal control of events seems to be more obvious in the case of non-hospitalised participants as compared to the hospitalised ones; non depressive participants have a better control of events than non-hospitalised depressive participants and those with negative inducted mood. We do not detect differences of the averages between non-hospitalised depressive participants and with negative inducted mood, which demonstrates according to self control theory elaborated by Rehm (1977), that the three categories of depressive participants consider they do not have anymore the chance to reach the desired purpose, becoming helpless in the control of their own behaviour.

Comparisons according to socio-cognitive variables

Measuring recent file experiences in [F(3, 341) = 45,317, p < .001] proved to be useful indicating a medium effect (r = .11) considering the fact that we indentify aspects related to social and cultural difficulties, work, time

pressure, financial or budget related problems, social acceptance and aspects related to persecution/social victimization (Table 4).

Table 4. ANOVA unifactorial in the case of the four lots evaluated according to social cognitive variables

Source	Sum squares	df	Mean square	F	Sig.	Effect size r^2
Survey of Recent Life Experiences (SRLE)	30424,705	3	10141,568	45,317	,001	.11
	76313,005	341	223,792			
	106737,71	344				
Current thoughts (CTS)	16444,650	3	5481,550	51,748	,001	.13
	36121,600	341	105,928			
	52566,249	344				
Appearance (CTS)	466,324	3	155,441	14,344	,001	.04
	3695,386	341	10,837			
	4161,710	344				
Social (CTS)	5026,013	3	1675,338	39,106	,001	.10
	14608,845	341	42,841			
	19634,858	344				
Performance (CTS)	1366,003	3	455,334	40,163	,001	.10
	3865,986	341	11,337			
	5231,988	344				
Perceived Social Support (M.S.P.S.S.)	73,309	3	24,436	15,091	,001	.04
	552,155	341	1,619			
	625,464	344				
Family (M.S.P.S.S)	129,661	3	43,220	21,194	,001	.05
	695,392	341	2,039			
	825,053	344				
Friends (M.S.P.S.S.)	136,450	3	45,483	22,048	,001	.06
	703,460	341	2,063			
	839,910	344				

Self-esteem as a mood [F(3, 341) = 51,748, p < .001] is not different amongst the hospitalised patients with depression and non hospitalised depressive participants (Table 4). A decrease of self-esteem is highlighted in the case of the participants with inducted depression as compared to non depressive participants; the task for inducing the mood modified the self-esteem or the current thoughts about self in a lower proportion as compared to non hospitalised with depression, which proves that the procedure rather

created fluctuations and not a permanent modifications (according to our expectations). In the case of self-esteem related to the aspect [F(3, 341)=14,344, p < .001], to the social self-esteem [F(3, 341) = 39,106, p < .001] and related to performance [F(3, 341) = 40,163, p < .001] the size of the effect is at the medium level, which indicates an important impact amongst the population; the difference between the environment being similar to the one presented in the case of global self-esteem.

The perception of global social support seems to be strongly affected in the case of psychiatric depressive patients [F(3, 341) = 15,091, p < .001] and the support of the family [F(3, 341) = 21,194, p < .001] or friends [F(3, 341)=22,048, p < .001]. According to speciality literature (Cioară, 2011), depressive patients frequently accuse loss or damage of social support which shall also bring the self isolation or loneliness and the formation of a dysfunctional cognitive and/or explicative style.

Conclusions

The negative scenario presented confirms the fact that negative attributions are a necessary cause increasing the probability that the symptoms are produced in the case of depression and somatization and as a plus we claim that causal attributions act as proximal factors.

In the case of the participants with inducted depressive mood, the negative attributional style leads us towards the idea that the experimental task modified the orientation of short term cause attribution and if an important trigger event (or set) important for the subject has not yet been available, the negative causal explanatory style shall not be stabilised. The personal control of events seems to be more efficient in the case of non hospitalised depressive participants as compared to the hospitalised ones but not as compared to the non depressive ones. Although the non hospitalised depressive patients can cope with daily requests it is possible they do not get engaged in task which do not offer immediate rewards, as a consequence the behaviour "conduction" in order to reach the distant purposes being the subject of deterioration.

Mood induction modified internal, stable and global attributions or at least it amplified them. It is possible that the attributional style be latent and in

contact with a situation (stimulus) to manifest itself, fact also affirmed by the frequent increase of internal causal attributions for negative scenarios.

We also surprise the way in which the participants see the exposure to daily harassments and the hospitalised depressive patients present most of the harassing life experiences as compared to the non hospitalised depressive lot or with those having inducted depression.

Global social support seems to be seriously affected in the case of psychiatric depressive patients. Depressive patients accuse more the loss or the damage of social support which shall lead to isolation or solitude and hypothetically to the formation of a cognitive and/or explanatory dysfunctional style. Depressive persons lose an important part of the backup sources for the adaptive behaviour. Besides that, negative and positive emotions are affected rendering evident rather the drastic decrease of positive emotions and in a smaller measure the increase of the negative emotions average (Marian, Borza, Filimon, & Mărginean, 2011).

The testing of the symptom model by the induction of depressive mood and the analyse of the change in attributional causal style in the case of the investigated clinical lots, determine us to consider the fact that the affective component of the depression results from the expectance according to which the negative results shall happen again and not as a result of expected uncontrollability. The results obtained show that not all depressive persons are "helpless" depressive persons and the induction of a transitory depressive mood does not simply allow the production of motivational deficits associated with the depressive attributional style; these deficits are likely to be produced in natural depression (which constitutes a significant and inherent limit in the implemented study).

The intensification of inadequate feelings reduces the affiliation wish and the patients diagnosed with depression were found to have a reduced number of social contacts as compared to non depressive persons. These observations suggest the presence of a vicious circle where the persons: (a) perceive a reduced probability that other persons share the same thoughts and experiences, (b) avoid social contacts and (c) receive in a smaller measure feedback from the others.

By the induction of depressive mood and by the analysis of change in the attributional pattern we examine the *symptom model* of learned helplessness. Other studies tried this with students` lots (Mukherji,

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Abramson, & Martin, 1982; Brewin & Harris, 1985; Brewin, 1985) and did not succeed to identify the attributional change as a function of inducted mood.

The study supports the modification of internal, stable and global attributions in concordance with the symptom model and vulnerability. Hypothetically, the experimental situation acted as a trigger factor of the disadaptive attributional style, which indicates the activation of learned answer patterns (at pre-requisite level) being extracted those reaction modalities which confirm the current mood.

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