

Research Article

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Depression and Anxiety at Work: Pilot Study Regarding Employees' Self-perceived Job Efficacy and The Psychological Impact of Global Economic Crisis in Two Romanian Private Organizations

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Abstract

Background: Depression and anxiety have both been receiving increased attention during the past decades research initiatives.

Aim: The current study examined the influence of self-perceived job efficacy and of the economic behavior of the employer concerning depression and anxiety at workplace. Our aim was to investigate the relationship between these concepts by taking into account the unequal psychological impact of economic crisis over the employees from two different fields: food industry and production sector.

Method: In this cross-sectional study, a total of 109 employees (mean age of 39.9 years, 53.2% males) from two Romanian private organizations were assessed for depression and anxiety manifestations and self-perceived job efficacy. There were analyzed the differences between groups with high and low depression and anxiety levels.

Results: Data indicated that both depression and anxiety manifestations at work had significantly different correlations with self-perceived job efficacy and the economic behavior of the employer. Depression and anxiety manifestations had a strong positive correlation with neutral and/or positive economic behavior of the employer ($r = .488$, $p < 0.01$ for depression, $r = .520$, $p < 0.01$ for anxiety) and a strong negative correlation with self-perceived job efficacy ($r = -.614$, $p < 0.01$ for depression, $r = -.509$, $p < 0.01$ for anxiety). We also found a significant relationship between the self-perceived job efficacy level and the type of economic behavior displayed by the employer.

Conclusions: The economic behaviors of the employer, induced by the economic depression context, have a significant influence over the depression and anxiety manifestations at the workplace and over the self-perceived job efficacy level. Moreover, self-perceived job efficacy seems to influence the occurrence rate of depression and anxiety manifestation.

Keywords: Depression; Anxiety; Economic depression; Self-perceived job efficacy

Introduction

Recent awareness regarding the impact of psychopathological elements at work of both researchers and practitioners indicates that depression often affects the most active socio-professional groups [1]. However, despite of the amount of studies conducted in the clinical field, little has been made to understand depression and anxiety manifestations in a professional context. In the occupational field, recent research initiatives have showed that anxiety and depression together with psychosocial impairment may have workplace related determinants [2-4]. In East European countries, such as Romania, and in a context of economic depression, the researches on this theme are scarce although we admit that this last aspect is determined by non-replicable, rare, and real-life economic phenomena that cannot be subject to an experiment.

Depression is a common mental disorder that manifests itself through depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration (World Health Organization, 2011). Studies have showed that depression is the most frequent disorder, with up to 15% prevalence among adult population [5]. Anxiety is a psychological disorder characterized by a physiological activation state, with cognitive, somatic, emotional and behavioral aspects [6]. A series of studies have showed a high level of comorbidity between anxiety and depressive manifestations [7].

The economic context from the last two years, already qualified as an unprecedented crisis [8] brought complex effects in the Romanian private organizational environment. From the banking and credit sector gaps to the cash flow reduction and price inflation, all these effects had a strong impact on Romanian economic entities. Many companies have been forced to face the reality of no longer being able to survive in the market or to fulfill their employer duties.

Present study

In the above context, the present research aims to investigate the occurrence rate of depression and anxiety manifestations in two groups of employees from the private sector, taking into account the influence of self-perceived job efficacy and the psychological impact of crisis induced by economic organizational behaviors. The objective of this study is to investigate, post factum, how often employees reported

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psychopathological elements related to depression and anxiety at work in the last 6 months. The particular choice to examine the food industry and production sector relies on the statistical data published by the Romanian National Institute of Statistics for the financial year of 2009. According to this information, food industry was one of the fewer fields less affected by the crisis in 2009. As opposite, the production field was, beside the automotive industry, the hardest hit field by financial crisis. Based on these facts, the employers in the food industry field showed neutral or positive economic organizational behaviors (e.g. production peaks, no cutting-offs or salary reduction), while most of those in the production field developed negative economic organizational behaviors (e.g. activities restructuring, collective layoffs, technical unemployment).

Therefore, we expect to see that the occurrence rate of depression and anxiety manifestations varies due to the type of economic organizational behavior of the employer and also due to the self-perceived level of job efficacy reported by employees. In this study, we refer to self-perceived efficacy as beliefs of a person regarding his/her own capacity to act in a certain way in order to reach the set targets and goals [9,10]. In other words, an individual has a high level of self-perceived job efficacy if he believes that he has the ability to solve future professional or situational tasks.

Although there is a body of research underlying each of these constructs, they have never been previously examined together, as to investigate their interaction in a Romanian organizational context of economic depression. The statistic analysis took also into account some socio-demographic variables (such as gender, status in organization). Accordingly, we formulated two hypotheses:

Hypothesis 1: The economic organizational behavior of the employer and the status in organization will negatively predict the occurrence rate of depression and anxiety manifestations at work.

As an operational hypothesis, we intend to test the previous findings resulted from clinical studies suggesting that the occurrence rate of depression and anxiety among males is lower than the one reported among females (reported occurrence risk in males is 5% up to 12% during lifetime, while the risk for females is reported between 10% and 25%; [5]).

Hypothesis 2: The self-perceived job efficacy will positively predict a low level of depression and anxiety manifestations at work.

Method

Sample

The employees group of two medium size Romanian based companies was invited to participate in the study. The group comprised 150 employees of which 109 participated in this study (participation rate was 72.6%, 25 employees refusing to participate and other 16 completing the questionnaires in an invalid manner). Involvement in the research project was endorsed and encouraged by senior management, but participation was voluntary and the participants were not monitored by the organizations. Of 109 participating employees, 58 were males and 51 were females. The sample had a mean age of 39.9 years. 50 of them were employed in a production Romanian based plant and 59 were employees from the food industry sector.

Procedure

Letters of invitations were sent to all participants by e-mail. The invitation included a brief study explanation and a description of the

associated benefits for participants. There were collected ratings for depression, anxiety, and self-perceived job efficacy. Two persons from each company's human resources department helped with the data collection.

Measures

Depression and anxiety manifestations were measured with help of two instruments: Beck Depression Inventory (BDI-II, Beck, 1996) and Costello–Comrey Depression and Anxiety Scales (CCDAS, Costello and Comrey, 1967).

Depression

Beck Depression Inventory is a scale designed for the patient self-assessment of depression symptoms. This instrument has known 3 versions. In our study we used the third version (BDI-II, 1996), which has the structure designed after the DSM-IV depression diagnosis criteria. It has 21 items, its application is easy, with an average completion time of 5 to 10 minutes. This instrument has a high internal consistency ($\alpha=.91$) and has the advantage to allow the assessment of atypical depression symptoms. The main limitation consists in the fact that self-assessment can favor the patient's tendency to minimize or supersize the symptoms (Bowling, 2005, apud Gheorghe, 2007). Each item has several alternatives for describing manifestations of each symptom that vary in intensity, each answer being scored on a scale value from 0 to 3. The used cutoffs are: 0–13: minimal depression; 14–19: mild depression; 20–28: moderate depression; and 29–63: severe depression. Higher total scores indicate more severe depressive symptoms. For every BDI-II item, a subject can choose an alternative depending on the severity of the symptom manifestation that is selected as being self-descriptive, as seen below:

- E.g.: BDI-II item no. 2: Pessimism:
- 0 I am not discouraged about my future
 - 1 I feel more discouraged about my future than I used to be
 - 2 I do not expect things to work out for me
 - 3 I feel my future is hopeless and will only get worse

For measuring depression we also used the depression sub-scale of the Costello-Comrey Depression and Anxiety Scales (CCDAS). This subscale has 14 items and a high internal consistency of ($\alpha=.90$). Scores for depression subscale could range from 14 to 126, with higher scores representing greater depression manifestations. Each item is scored on a 1 to 9 scale, as seen below:

E.g.: CCDAS Depression scale item no. 4: I feel that there is more disappointment in life than satisfaction.

Absolutely	Very definitely	Definitely	Probably	Possibly	Probably not	Definitely not	Very definitely not	Absolutely not
9	8	7	6	5	4	3	2	1

Anxiety

Costello–Comrey Depression and Anxiety Scales (CCDAS) is a 23-item self-report questionnaire consisting of two subscales: depression subscale and anxiety subscale. To measure the anxiety manifestations we used the anxiety sub-scale of CCDAS, with 9 items and a fair internal consistency ($\alpha=.70$). Scores could range from 9 to 81, the higher scores indicating the tendency of individuals to develop an anxiety state, with cognitive, emotional and behavioral aspects, doubled by a physiological activation state. Each item is scored on a 1 to 9 scale, as seen below:

E.g.: CCDAS Anxiety scale item no. 1: I get rattled easily.

Always	Almost always	Very frequently	Frequently	Fairly often	Occasionally	Rarely	Almost never	Never
9	8	7	6	5	4	3	2	1

Self-perceived job efficacy

Self-Efficacy Scale (SES; Sherer, Maddux, Mercandante, Prentice-Dunn, Jacobs, & Rogers, 1982) is a 30-item instrument measuring self-efficacy expectations. The SES consists of two subscales (general self-efficacy and social self-efficacy) and has a fairly good internal consistency ($\alpha=.86$ for general subscale and $\alpha=.71$ for social subscale). Of the total number of items 7 are filler items which are not scored. Each item is presented in a 5-point Likert scale, ranging from 1 (strongly agree) to 5 (strongly disagree). Higher scores indicate greater levels of self-efficacy.

E.g.: SES item no. 9: I like to cook.

- 1 = Disagree strongly
- 2 = Disagree moderately
- 3 = Neither agree nor disagree
- 4 = Agree moderately
- 5 = Agree strongly

The collected data were statistically analyzed with SPSS 17.0 for Windows. There were analyzed the differences between groups with high and low depression and anxiety levels. We used correlation analysis to investigate the relationships between depression and anxiety manifestations, economic organizational behaviors of employer, and self-perceived job efficacy.

Results

Table 1 reveals the mean differences analyzed for testing the first hypothesis. According to the statistical analysis, this hypothesis was partially confirmed. There is a significant statistical difference ($t = 5.78$; $p < 0.01$, for BDI and $t = 4.49$; $p < 0.01$, for CCDAS, depression subscale) between the employees from food industry field compared to those from the production sector. Thus, the first group obtained lower means for depression and anxiety manifestations, fact suggesting that the company's neutral and/or positive economic organizational behaviors (e.g.: production peaks, no cutting-offs or salary reduction) were perceived as psychological security by employees. Opposed to this, the group of employees from the production field obtained significant higher means for both depression and anxiety manifestations. From a clinical point of view, the results obtained in this group can be associated with slight depression (most individuals acquiring total scores between 14 and 19 on BDI). The same aspect was observed when we analyzed the scores for the anxiety subscale. There is also a significant statistical difference between these two groups of employees ($t=6.29$, $p<0.01$) with the employees' mean from the production sector overcoming the clinical level of slight anxiety.

Variables	Food Industry	Production	t
	M	M	
Depression	.20	.96	5.78**
	.83	1.46	4.49**
Anxiety	.76	1.64	6.29**

* $p<0.05$; ** $p<0.01$

Table 1: Employees' means differences on depression and anxiety based on work group industry.

Variables	M	SD	1	2
1. Status in organization	1.76	.428	.176	.084
2. Economic behaviors of employer-company	1.54	.501	.488**	.520**

* $p<0.05$; ** $p<0.01$

Table 2: Means, standard deviations, correlations.

Variables	Food Industry		Production	
	Male	Female	Male	Female
Depression and anxiety manifestations	.13	.28	.50	1.55

Table 3: Employees' means differences on depression and anxiety manifestations based on gender.

Variables	M	SD	1	2	3
Self-perceived job efficacy	1.74	.439	-.614**	-.509**	-.083

* $p<0.05$; ** $p<0.01$

Table 4: Means, standard deviations, correlations.

Variables	High self-perceived job efficacy	Low self-perceived job efficacy	t
	M	M	
Depression	.27	1.36	8.05**
Anxiety	.91	1.86	6.11*

* $p<0.05$; ** $p<0.01$

Table 5: Employees' means differences on depression and anxiety based on self-perceived level of job efficacy.

Variable	Food Industry	Production	t
	M	M	
Self-perceived job efficacy	1.90	1.56	-4.32**

* $p<0.05$; ** $p<0.01$

Table 6: Employees' means differences on self-perceived level of job efficacy based on field of activity.

We also wanted to investigate if the status in organization influences the level of depression and anxiety manifestations. We hypothesized that individuals with management functions will report lower levels of depression and anxiety, independent of the employer's field of activity. Results showed no significant statistical difference between the managers' scores and the scores of the rest of the employees in this matter ($t=-1, 84$, $p - n.s.$, for depressive manifestations and $t=-1, 87$, $p - n.s.$, for anxiety manifestations).

As shown in Table 2, the high occurrence rate of depression and anxiety manifestations was significantly and positively correlated with the economic behaviors of employer. There was no significant influence of status in organization.

Finally, for the first general hypothesis, we investigated if the results based on gender differences obtained in the clinical researches (suggesting that the occurrence rate of depression and anxiety among males is lower than the rate reported among females), will replicate. Data showed that in both groups the male subjects reported a lower occurrence rate of depression and anxiety, compared with the females ($t=-2,70$, $p < 0.01$). However, the difference obtained between males and females is statistically significant only inside the group of employees from production sector. Moreover, there is no significant difference between the scores obtained by male subjects from production sector in comparison with those from food industry and, more surprisingly, there is no statistically significant difference between the scores obtained by male subjects (independent of the field of activity) and the scores

obtained by the women employed in the food industry. Results suggest that only the women from the production sector reported depression and anxiety manifestations having a pathologically significant level.

To provide a direct test of the second hypothesis, there were applied a series of statistical formulae. The results confirmed the negative relationship between depression and anxiety manifestations and self-perceived job efficacy ($r = -.614$, $p < 0.01$ for depression and $r = -.509$, $p < 0.01$ for anxiety). There was no significantly relationship between self-perceived job efficacy and the status in organization.

Data suggests that the employees with a reported high level of self-perceived job efficacy were scoring lower at the depression and anxiety scales. Thus, there emerged two groups of employees based on a statistically significant difference ($t=8$, 05 , $p < 0$, 01): in the first group are the employees with a high level of self-perceived job efficacy and low occurrence rate of depression manifestations; in the second one there are the employees with low reported level of self-perceived job efficacy and a high occurrence rate of depressive manifestations. From a clinical point of view, the scores obtained by the employees with a low level of self-perceived job efficacy would be translated as slight to moderate depressive clinical manifestations. The mean of the group is over 1, value associated with slight depression (equivalent of BDI-II interval scores from 14 to 19). Regarding the scores for the anxiety subscale, results showed a similar differentiation between groups ($t=6$, 11 , $p < 0$, 05).

Another point of interest was the examination of the causal relationship between the economic organizational behaviors of companies during the crisis and the employees' self-perceived job efficacy reported levels. The results confirmed this operational hypothesis, showing a significant statistical difference between the group of employees from production sector and the one from food industry ($t=-4$, 32 , $p < 0$, 01).

The results confirmed the fact that the employees from the production sector, under the impact of negative economic organizational behaviors imposed by the company in the crisis context, tend to have lower expectations regarding their own competencies and job performance levels. Furthermore, these negative beliefs and expectations about their capabilities have a major impact leading to a higher occurrence rate of depression and anxiety manifestations. On the other hand, the employees from the food industry, under the impact of neutral and/or positive economic organizational behaviors, even in an economic depression context, tend to report positive beliefs about their own competencies and capabilities, taking the shape of a high level of self-perceived job efficacy. Later on, the end state of this influential chain is reported as a low or non-existent number of depression and/or anxiety manifestations at work.

Other results

A secondary objective of this study was to investigate the influence of the seeking information behavior concerning the global crisis on the occurrence rate of depression and anxiety manifestations. Thus, in the last phase of research we introduced an additional item assessing the subjects' involvement in active seeking behaviors (the item evaluated if individuals were interested or felt the need to be updated with the latest news regarding the new economical context).

There was advanced a new operational hypothesis: seeking information regarding the crisis as an active behavior will limit the occurrence rate of depression and anxiety manifestations at work. The results infirmed this hypothesis ($t = 1.25$; $p > 0.05$), no difference

appeared as statistically significant between the subjects who were up to date with the newest information about the crisis and the rest of the employees, who had no such active information seeking behavior.

Finally, the last secondary objective was to see if the persons who reported a high occurrence rate of depression and anxiety manifestations at work intended to change the job in the next 3-6 months. Results infirmed this hypothesis, the subjects with a high level of psychopathological manifestations at work reported that they don't feel the need and do not intend to change jobs in the next period of time.

Discussions

This study has two main findings: first one refers to the significant influence the economic depression context, translated into economic behaviors of the employer, has over the depression and anxiety manifestation at the workplace. Thus, due to the related aspects of negative economic organizational behaviors (e.g.: job insecurity fuelled by collective layoffs and production stops), the employees from the production sector overcame the clinical level of slight anxiety and depression (the scores obtained could be associated with a clinical moderate level of depression and anxiety). On the other hand, the neutral or/and positive economic organizational behaviors (e.g.: production peaks, no technical unemployment) tend to be associated with a lower rate of occurrence of depression and anxiety manifestations at work. In this context, what can be done, at an organizational level, to prevent the occurrence of psychopathological manifestations related to the psychological impact of economic depression among employees?

The second major finding of this study refers to the fact that the employees from the production sector tend to see themselves as less effective in a future task at work when their company's activity reports downsizes, cash flow problems forcing the management to manifest negative economic organizational behaviors (e.g.: collective layoffs, technical unemployment). The employees from the food industry tend to accept the economic crisis context, without modifying their own perceptions about their level of job efficacy. In the absence of negative economic organizational behaviors developed by their employer, these employees report a high level of confidence and positive beliefs regarding their future ability to be effective in a situational or professional task. This finding raises a new research question: is the perceived organizational performance level mediating the relationship between the psychological impact of economic crisis and the individual job performance?

Secondarily to these findings, we found no evidence that a higher status in organization will prevent the appearance of depression and anxiety manifestations. In other words, higher incomes and a better understanding of the business context are not adjusting the scores for depression and anxiety, the employees with management positions employed in the production sector reporting the same occurrence rate of depression and anxiety manifestations as the rest of the employees from their company.

In accordance with the findings from the clinical studies we found evidence that confirmed a higher occurrence rate of depression and anxiety among women. A future direction of research should investigate the causes of this apparent high level of male subjects' resilience towards the negative economic organizational behaviors of employer.

Accepting the limitation of this research (e.g.: sample size, the simplicity of used methodology, the need for some various assessment

context), we underline two major strengths of this study, namely the opportunity to investigate in a real-time economic depression context the Romanian employees' reactions to the economic organizational behaviors of employers, translated into depression and anxiety manifestations at work and self-perceived job-related future capabilities. Second, the acknowledgement based on the evidence that psychopathological elements do not affect individuals only in a private and personal context, but do appear at work. In accordance with the findings of [4] who suggested that a low satisfaction with psychosocial working conditions is associated with an increased risk of any mental health disorder, including depression, the present study found, as well, that the occurrence rate of depression manifestations at work is influenced by another individual-related variable, namely self-perceived job efficacy. Moreover, due to the fact that depression and anxiety were negatively influenced by the negative economic organizational behavior, we think that future research should be focused on investigating both organizational/contextual and individual variables which may influence the occurrence rate of any mental disorder or psychopathological elements at work.

In conclusion, we see the present study's findings representing an alarm sign. First of all because the possible implication for clinicians, who would need to assess and to take into account the holistic context of a patient: namely personal, professional and contextual/societal aspects. Until this economic depression context, little attention was given to the contextual/societal factors which may be involved in the occurrence rate or related to any possible mechanisms of depression and anxiety. Secondly, these findings are worrying especially in the Romanian context, in relationship with the new released Romanian Labor Law (2011) stipulating that the dismissal of an employee should be based on a specific performance assessment. Thus, one major research question remains unanswered: What is the price to be paid (in terms of performance) at a personal and an organizational level, if we continue to ignore the presence of mental disorders and their determinants in the work environment?

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