

Depressive symptoms related to productivity of administrative employees

Abstract

The most prevalent pathologies in population are depressive disorders that produce significant impact on the quality of life and productivity of affected individuals. This article aims to identify and describe the relationship between possible depressive symptoms and the productivity of administrative workers. This study is characterized as a descriptive and quantitative research. For data collection, the BECK II depression questionnaire and another self-assessment of productivity, specifically designed for this study, were applied. Among the 45 respondents of the BECK II questionnaire, there was a loss of 6% (n = 3), and of the 44 respondents of the self-assessment of productivity, there was a loss of 4% (n = 2) of the sample due to inadequate completion of the questionnaires. The final sample corresponds to 42 collaborators, most of them are male (= 23, however, it has been found that women, single, and in the age group of 26 to 35 years have higher prevalence to possible depressive symptoms. The results of some variables investigated in the self-assessment of productivity were more negative in the groups with possible symptoms of depression compared to the group without depressive symptoms.

Keywords: Depression, Productivity, Collaborator

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Introduction

The World Health Organization (WHO) defines health as a complete state of physical, mental and social well-being, apart from the sole absence of disease. It has also been defined as an individual right according to the Brazilian Constitution of 1988, section II, articles 196 to 199. WHO considers workers as people who practice formal or informal activity in order to provide for their own or their offspring, subjected to organizational models and Technologies which could lead to their own physical and psychic damage.¹

At the arousal of an unstable economic climate in Brasil, starting in 2014, companies have been forced to deal with reduction of expenses which lead to mass firing. This puts an extra load of work on those who are kept as collaborators, followed by increased responsibilities and interfering on the uprising number of anxiety disorders/depression.² Up to 2020, estimatives point that depression will be the second major cause of disability since it's morbidity has shown considerable increment.³

As Brazilian Legislation the collective business also considers, only on a superficial level, the causes of disease at workplaces and the influence of the administration, regarding occupational organization, such as the action taken which is more inclined to correction than preventive actions.⁴ Multiple studies have shown and confirm that when investments on public health at the workplace are applied there is a positive impact on its economics.⁵ The economy is generate through productivity. Thus, preventive actions regarding the coworkers health are an investment in the company own economy.

Productivity is the capacity of upcycling resources. Therefore it is possible to admit that it increases when its taken less demands to accomplish an equal result. It is also connected to the idea of execute a task in the least time as possible, which puts together both efficiency and efficacy concepts.⁶ The global Market demands high levels of competitiveness and productivity as the only way to make organizations

profitable and sustainable. Technology appears as a fundamental tool in this process, although it still demands very high level and committed performances from its coworkers, which is directly connected to motivation and the commitment to the organizational principles. The workplace demands a healthy environment in order to provide the coworkers satisfaction and an increased productivity.⁷

The most common pathologies that attack the working populations are the depressive disorders. Those cause a significant impact in the quality of life of the ones affected by and reducing in their productivity.⁸ Moral harassment, untangible goals and the excessive demands of coworkers could lead to a workplace-related depression.⁹

Depression is a psychiatric, chronic, recurrent disease that can affect people of any age or gender. Females are considered more prone to its development on grounds of their hormonal changes. One of the most common symptoms is an unexplainable sadness. Physical symptoms include loss of appetite, alterations in the sleeping patterns, fatigue and loss of vital energy.⁸ A broad spectrum of symptoms of depression includes suicidal ideation and suicidal attempts but also feelings like discouragement and self-image questioning which could lead to suicidal attempts.¹⁰ Therefore, it is required to identify the correlation between depression and the productivity of the coworkers looking forward to promote prevention programs and active lookout, avoiding more advanced stages in which suicide could appear as a possibility.

An incredibly competitive marketplace demands companies to improve their productivity at the same time as they cut costs of production. Productivity brings on the idea of someone being able to built something profitable. The capability is recognized as the virtue of making something real, which associates to the concept of efficacy.¹¹ The health-disease process developed at the workplace demands an incredibly high level of analyses and a broad evaluation, since not always physical symptoms are shown.¹² Health is the balance between every single variable that affects and individual and as a consequence psychic disorders interfere on the physical capability of one, being

the mind so the main responsible for a perfect functioning of the human being. Amongst unnumbered initiatives, laboral gymnastics has demonstrated itself to be an important tool, improving various aspects such as coworkers' productivity, and generating better outcomes for the companies.⁵

Females are considered more vulnerable to the developing of depressive disorders due to its hormonal fluctuations.⁸ Besides the hormone query, the modifications on its paper family and society-wise throughout history but without accomplishing an assertive identification of the aforementioned paper and also facing an unrecognition of their capacities, limiting those to "female activity". The overaccumulation of activities, such as: providing financially to the family as still housekeeping, taking care of children while getting social demands, amongst others, commonly leads to an overwhelming feeling.¹³

Studies have established correlations between working individuals and depression. This can be attributed to the fact that the workplace has a considerable amount of influence over the individual's personal life. Most of its daytime at work and therefore start most of its relationships with other individuals at the workplace. As a consequence, this is an environment that favours the developing of disorders, having depressive disorders as its most common example. One of the most common symptoms is an unexplainable sadness. Physical symptoms include loss of appetite, alterations in the sleeping patterns, fatigue and loss of vital energy.⁸ According to the author,¹³ the single women group has the highest prevalence of depression.

The insertion of women at a contemporary marketplace is a complex process due to multiple factors that come up in the face of it: lower paygrade for equivalent posts when compared to men, long working journeys and less affirmative politics. Aside to that there is a lower income with less professional capacitation opportunities in higher and more profitable positions, since they are naturally inclined to hire men; women also face resistance in their participation in the decision-making process, including the collective work agreements, due to inequities even in the unions.¹⁴

Previous studies have proven the insatisfaction of coworkers regarding the lack of opportunities for upgrades in their posts and paycheck, which tend to interfere on their own development and productivity and as a consequence in the company's economy. This turns it fundamental for companies to affirmative care about factors that impact their coworkers mental health.

The balance between demands and physical and psychic compensation has to be a goal of any company.¹⁵ Therefore, research regarding this subject is a necessity for social knowledge gain and for its repercussions in company's afterall. This research aims to identify and establish the relation between depressive symptoms and productivity on individuals in administrative workplaces. Moreover, it aims a) Define whether or not depressive symptoms affect their productivity; b) Identify differences between groups with and without possible depressive symptoms; c) Introduce the administrative ensemble the insatisfactions in order to alert to signs of depression at the workplace.

Methods

The research was built over the following steps: a) identification of the theme; b) definition of the company's selection criteria in which was considered the amount of coworkers and their relevance

to the region; c) definition of inclusive and exclusive criteria for the participants of this research.

The chosen company is a private equity with a current amount of 168 active workers. The inclusive criteria for this research are: administrative coworkers, of any gender, age, income or serving time. The definition of administrative coworkers for this research was based on the existence of pre-defined weekly work hours that possibilitated an easy assessment of its productivity, corresponding to 89 coworkers in this company. Excluded from this research were 36 individuals that were active in external services, classrooms, hired by contract, amongst others.

The second step included a data collection by the application of two questionnaires, as described below:

- BECK'S Depression Inventory II: a questionnaire composed of 21 groups for selection between 0 and 3 points, in which 0 – 13 points means a minimum grade of depression; 14 – 19 means a mild grade of depression; 20 – 28 means a moderate grade of depression; and 29 – 63 meaning severe depression.
- A questionnaire elaborated specifically for the means of this research including a self-evaluation regarding productivity, for posterior comparison with the grade of depression.

The personal data utilized for the means of this research were: a pre-defined code for each coworker (in substitution to its name identification), age, gender, marital status, education, and for a productivity analysis we aimed to identify the frequency of respect to deadlines; satisfaction with the workload; daily worked hours; reaching the conclusion of mandated workload; tiredness compared to amount of workload, amongst others.

To avoid any ethical embarrassment, a Consent Form was added to the questionnaires, for online acceptance. This research is registered to a Research and Ethics Committee under the CAAE number: 23709719.6.0000.5017. Among the 89 coworkers, 45 responded to the BECK' Depression Inventory II and 44 responded the productivity questionnaire. Although, 5 forms were excluded for not having meet the criteria of filling, making it impossible for their results to be analysed. Therefore, there were 42 forms for analysis by reuniting both questionnaires. This is a descriptive and quantitative research. The results were organized by using Microsoft Excel in tables and graphics. Rounding off methods were applied to the percentages, which could lead to data varying in a range from (-) to (+1).

Results and discussion

Forty-five coworkers were analysed by the BECK'S Depression Inventory II, with a 6% (n = 3) loss of samples, due to incorrect filling out of the questionnaire. Forty-four coworkers were analysed by the self-assessment productivity questionnaire, with a 4% (n = 2) loss due to incorrect filling out of the questionnaires. In this sample (n = 42), 45% of the individuals were feminine (n = 19) whilst 55% (n = 23) were masculine. Table 1 exhibits the sociodemographic profile obtained through the self-assessment productivity questionnaire.

Graphic 1 – Minimum and Mild grades of depressions according to BECK'S Depression Inventory II, by gender.

The greater amount of coworkers without possible depression symptoms belongs to the masculine group (graphic 1). Among those with probable mild symptoms of depression (graphic 1), 14% of the coworkers, mostly belong to the feminine group.

In the correlation between the data in Graphic 1 and the one obtained through the self-assessment productivity questionnaire (Table 2), it is shown that gender, marital status and serving time might have correlation with the setting of depressive symptoms as

single women, from 26 – 35 years-old, with a 6 to 10 range of serving time are majority in this group. It is important to highlight that age and marital status have shown relevancy for analysis apart from gender.

Table 1 Sociodemographic profile assessment by the productivity questionnaire

Sociodemographic profile		
Sex	n	Percentage
Feminine	19	45%
Masculine	23	55%
Age		
Até 25	9	21%
26-35	24	57%
36-45	5	12%
46-55	4	10%
56+	-	-
Marital status		
Single	28	67%
Married	12	29%
Divorced	1	2%
Widowed	1	2%
Education		
Basic education	1	2%
High school education	9	21%
Undergraduate studies	19	45%
Graduate studies	13	31%
Serving Time		
< 1	4	10%
1 – 3 y	7	17%
3 – 5 y	10	24%
6 – 10 y	16	38%
> 10 y	5	12%

Source: Authors, 2019

Table 2 Mild and severe depression groups versus their demographic profile

Mild Depression/demographic profile					
Sex	n	percentage	Age	Marital Status	Serving Time
Feminine	(=4)	10%	26 - 35	Single	6 – 10 y
	(=1)	2%	46-55	Widowed	1 – 3 y
Masculine	(=1)	2%	26 - 35	Single	1 – 3 y
Severe Depression/demographic profile					
Sex	n	percentage	Age	Marital Status	Serving Time
Feminine	(=2)	5%	Up to 25	Single	1 – 3 y
			26-35	Divorced	6 – 10 y

The following data was obtained through the analysis of the data in Graphic 1 and the one obtained from the self-assessment productivity questionnaire (Table 2): Out of 42 coworkers, 19% (n = 8) are in the group with depressive symptoms with 14% of those in the age group between 26 and 35 year-old, the majority is single and one woman declares herself as divorced. Amongst the remaining 5% (n = 2), 1 is a single woman up to 25 year-old and the other one is a widow inbetween 46 and 55 year-old.

According to the data observed, individuals who reached out enough points to be considered on the severe grade of BECK's Depression Inventory II were women whilst those on the mild grade group were majority women and only one man. Therefore, most of those coworkers are single, between 26 and 35 year-old, and the only man in the group matches both age and marital status of the women in the same group. Even though there have been different age groups affected by depression in this research, there were no married coworkers, but mostly single and widowed women, which points to the correlation of those features to the possible setting of depressive symptoms. These results are in accordance with others obtained from research done before the present one.^{8,13}

In this case, even though most of the coworkers were in the masculine group (above 50%), it is shown that women are more prone to develop depressive symptoms, which could be explained by the double-workload both from their actual jobs and their activities as housekeepers, children-care, while subjected to social judgement, and, despite all of those listed still face a lack of recognition in multiple aspects, such as paygrade when compared to male paygrade for same level posts.¹⁵

Besides those social determinants, biology contributes to the higher prevalence of depressive disorders in women due to hormone fluctuations, menopause and pregnancy. It is undeniable that those are prone to interfere on the general performance of women in the marketplace. Table 3 exhibits the responses to the self-assessment productivity questionnaire. It displays the most relevant questions with four different options of response were defined according to the items of the questionnaire. The first response always points towards a negative/unfavourable evaluation, while the last one always points to a positive/favourable evaluation of the coworker or the company's performance.

Table 3 General results for the productivity assessment questionnaire

Fields of Productivity	n	Never	n	Rarely	n	Usually	n	Frequently
Assiduity	(=4)	10%	0	(=4)	10%	(=34)	81%	
Satisfaction with deadline commitment	(=1)	2%	(=5)	12%	(=22)	52%	(=14)	33%
Tiredness compared to the amount of workload	(=1)	2%	(=8)	19%	(=26)	62%	(=7)	17%
Risks while developing the activities	(=12)	29%	(=12)	29%	(=12)	29%	(=6)	14%
Encharging for mistakes made	(=3)	7%	(=14)	33%	(=21)	50%	(=4)	10%
Work hours	(=3)	7%	(=8)	19%	(=16)	38%	(=15)	36%
Demand conclusion		0	0	(=1)	2%	(=41)	98%	
Enough information given to permit the execution of the tasks given	(=1)	2%	(=1)	2%	(=17)	40%	(=23)	55%
		Very Unsatisfied		Unsatisfied		Satisfied		Very satisfied
Satisfaction with their workload	(=4)	10%	(=3)	7%	(=20)	48%	(=15)	36%
Satisfaction regarding possibility of promotions or increase in paycheck	(=5)	12%	(=13)	31%	(=19)	45%	(=5)	12%
Satisfaction with resting time	(=2)	5%	(=10)	24%	(=26)	62%	(=4)	10%
	n	Bad	n	Reasonable		Good	n	Very good
About the productivity level		0	(=4)	10%	(=23)	55%	(=15)	36%

Source: Authors, 2019

Most observed responses were:

- a) Usually: are satisfied with deadlines; feel tired with the amount of workload; are at risk while developing their activities; are charged by mistakes made during work process; work long hours without an interval;
- b) Frequently: are assiduous; conclude their own demands; are given enough information to execute the workload assigned to them;
- c) Satisfied: workload, opportunities of promotion or upgrades on their paycheck and resting time;
- d) Good: productivity level;

In the non-depressive group, when analysed the responses to the self-assessment productivity questionnaire, in which most are men, there is a small group associated to dissatisfaction with their workplaces, bringing up a positive evaluation of most coworkers

regarding their workload, resting time amongst other items. If it is considered that those coworkers are depressive disorders-free, we can associate their increased productivity to the mental well-being and general satisfaction with work place conditions. The psychiatric disorders interfere in the individuals' global health, being the mind the main responsible for the body's proper functioning. Therefore, a mental ill person has its physical features impacted, lowering their productivity.⁵

The assessment between the non-depressive group and the depressive group were different (Table 4) which could impact in the productivity of the coworkers that belong to the depressive group. Within both groups, most coworkers answered that usually feel satisfied with their deadlines even though amongst the ones who responded frequently to this item, most were part of the non-depressive group (n = 12 in the non-depressive group; n = 2 in the depressive group). About the exposure to risks at work, most of the depressive group (50%) declared usually being at risk whilst in the non-depressive group 32% declared rarely being at risk while executing their activities.

Table 4 General self-assessment of productivity correlated to depressive and non-depressive groups

Self-assessment of productivity correlated to the non-depressive grade								
Self-assessment of productivity	N	Never	n	Rarely	n	Usually	n	Frequently
Assiduity	(=4)	12%	-	-	(=3)	9%	(=27)	79%
Satisfaction with deadline commitment	(=1)	3%	(=3)	9%	(=18)	53%	(=12)	35%
Tiredness compared to the amount of workload	(=1)	3%	(=7)	21%	(=21)	62%	(=5)	15%
Risks while developing the activities	(=10)	29%	(=11)	32%	(=8)	24%	(=5)	15%
Encharging for mistakes made	(=3)	9%	(=10)	29%	(=17)	50%	(=4)	12%
Work hours	(=1)	3%	(=7)	21%	(=15)	44%	(=11)	32%
Demand conclusion	-	-	-	-	(=1)	3%	(=33)	97%
Enough information given to permit the execution of the tasks given	-	-	-	-	(=14)	41%	(=20)	59%
	N	Very unsatisfied	n	Unsatisfied	n	Satisfied	n	Very Satisfied
Satisfaction with their workload	(=3)	9%	(=2)	6%	(=17)	50%	(=12)	35%
Satisfaction regarding possibility of promotions or increase in paycheck	(=4)	12%	(=8)	24%	(=18)	53%	(=4)	12%
Satisfaction with resting time	(=2)	6%	(=6)	18%	(=22)	65%	(=4)	12%
	N	Bad	n	Reasonable	n	Good	n	Very good
About the productivity level			(=3)	9%	(=18)	53%	(=13)	38%

Self-assessment of productivity correlated to the depressive grade								
Self-assessment of productivity	n	Never	N	Rarely	n	Usually	n	Frequently
Assiduity							(=7)	88%
Satisfaction with deadline commitment			(=2)	25%	(=4)	50%	(=2)	25%
Tiredness compared to the amount of workload			(=1)	13%	(=5)	63%	(=2)	25%
Risks while developing the activities	(=2)	25%	(=1)	13%	(=4)	50%	(=1)	13%
Encharging for mistakes made			(=4)	50%	(=4)	50%		
Work hours	(=2)	25%	(=1)	13%	(=1)	13%	(=4)	50%
Demand conclusion							(=8)	100%
Enough information given to permit the execution of the tasks given	(=1)	13%	(=1)	13%	(=3)	38%	(=3)	38%
	n	Very Unsatisfied	n	Unsatisfied	n	Satisfied	n	Very Satisfied
Satisfaction with their workload	(=1)	13%	(=1)	13%	(=3)	5%	(=3)	38%
Satisfaction regarding possibility of promotions or increase in paycheck	(=1)	13%	(=5)	63%	(=1)	13%	(=1)	13%
Satisfaction with resting time			(=4)	50%	(=4)	50%		
About the productivity level	n	Bad	n	Reasonable	n	Good	n	Very Good
			(=1)	13%	(=5)	63%	(=2)	25%

Fonte: Autores, 2019

Most coworkers in the depressive group (50%) claim to be frequently working long hours without intervals, while a big part of those without depression claim to only usually work long hours with no intervals.

In the depressive group, 38% of the coworkers claim to be very satisfied with their workload, while in the non-depressive group 50% claim to be only satisfied. Nevertheless, 13% of the depressive group claim to be very unsatisfied against only 9% in the non-depressive group regarding their workload. In the depressive group, 63% responded to be unsatisfied with the opportunities of promotion and upgrade in paycheck, against 53% in the non-depressive group, whose claim to be satisfied. Assiduity, tiredness related to their workload, being charge by mistaken made off, conclusion of their own demands, and information level given that permits the execution of their workload there was shown no significant difference amongst the two groups.

Regarding the item tiredness related to their workload, event though the number of responses impossibilitated a significance analysis, it is remarkable that 25% of the depressive group and 15% of the non-depressive group shown tiredness related to their workload which impacts directly on their productivity.

Considering the above, it's shown that coworkers with depressive disorders are more unsatisfied regarding the opportunity of promotions or upgrade in their paygrade, an important factor of motivation between coworkers when compared with their workloads since a coworker who is unsatisfied with their paycheck tends to be less productive. Previous data confirms those observations⁷. It is notable as

well that coworkers part of the group that works longer hours without intervals feel more prone to risks while developing their workloads.

It is possible to assume that the productive in the depressive group is aggrieved when compared to the ones without depressive disorders, even though both had Good and Very good productivity self-assessments, since the self-evaluation tends to be biased.

This research faced some challenges on its production, such as: the own coworker's perception of its productivity, fear of retaliation when facing results that pointed to depressive disorders or low productivity. Moreover, despite the secrecy of the intel being explained in detail to the coworkers, this could have influenced the observed results, once there was no significant difference between the groups on most of the variables. However, previous studies detected similar results. Contudo, em estudos prévios sobre depressão foram detectados resultados semelhantes. Another query regards the power of BECK'S Depression Inventory II alone as a tool with diagnostic power which would require from the researchers to provide medical evaluation for the coworkers in order to increase the liability of the results.

In spite of those limitations, this research brings advances for society and for the company that served as object of the study. This has an important paper since there is few or no data regarding the assessment of depressive disorders on the productivity of administrative coworkers. Most studies are limited to a single occupation, like nursing, policemen, banking workers, amongst others, in which the impact on productivity of those affected by depressive disorders was not the main focus.

This research suggests as mechanisms of prevention of depressive disorders in the work place that the company start talks, resting moments, laboral gymnastics, physical activity, educational games and psychological support, as those improve the physical and mental health of coworkers and could stimulate the search for proper treatment. Moreover, they stimulate the coworkers potential, providing means to confront the challenges brought by their workloads. All of the above has not only the power to improve the physical and psychological health but have a positive impact on the occupational environment and company's economy overall.⁵

Final considerations

With a total sample compound of 42 individuals, 19 (n = 8) are in the depressive group. Among those, 14% (n = 6, being 5 women and 1 man) figured between 26 and 35 year-old, with one divorced individual and the others all being single. Amongst the remaining 5% (n = 2), 1 is in the age group up to 25 year-old and single and the other is a widow inbetween 46 and 55 year-old. Women shown a higher index of depressive symptoms (88%, n = 7). It feels important to enlight that the only man in this group is inbetween 26 and 35 year-old and is single. So gender, age and marital status presented themselves as important features regarding their correlation with depressive symptoms, in agreement with other studies.

Those coworkers with more depressive symptoms are more unsatisfied with their opportunities of promotion and upgrade in paygrade whilst in the non-depressive group most defined themselves as satisfied. It was observed, in agreement with previous studies, that satisfaction regarding their paychecks is fundamental for stimulating the development of the coworkers. Paycheck non-satisfaction lead to a trend of lower productivity.

Most of the coworkers that claimed to work long hours without intervals belongs to the group with depressive disorders and also claimed they are more exposed to risks during their working hours. On the other group, most consider the long hours represent no more risks during work. The following variables shown no significant difference between the groups: assiduity, tiredness related to their workload, being charged by mistakes made, conclusion of demands, being provided enough information to execute their workload, level of productivity and self-assessment.

There were researches regarding depression's correlation to productivity of administrative coworkers, by analysing national databases. In the city of Castanhal there is no registers of any research regarding that theme, which supports the execution of this study whose theme is also an important one for the society as whole.

It is expected that this research alerts the management on the determinants that impact the correlation between depressive symptoms and coworker productivity, as well as start preventive actions or ones to reduce the impact over the depressive symptoms.

We suggest new studies on this same theme to be developed in order to expand the scope on its field, enlarging the strategies for improvements in the work place, making it a better environment, supporting both the physical and mental health of coworkers. Also, to bring up a reflexion about depressive disorders in the occupational field, whose symptoms could impact directly on the results obtained by the companies.

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