Levels of anxiety and depression among early childhood education and primary education teachers¹

Níveis de ansiedade e depressão entre professores do Ensino Infantil e Fundamental

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Abstract: Teaching nowadays has become a profession, which leads to illness. Taking this aspect into consideration, the aim of this article is to verify teachers’ levels of anxiety and depression and their possible association to the level of satisfaction at work and factual data such as age, educational level and religiousness. To do so, 150 professionals teachers, who taught Public Early Years Education and Primary Education levels in a school in the state of São Paulo, were given a questionnaire, based on the Beck Scales (depression and anxiety) on the factual data and work satisfaction and it could be seen that 50% of the subjects presented levels of anxiety and/or depression which were harmful to the educational act. Thus it was possible to conclude that it is necessary to promote educational policies that take teachers’ mental health into account.

Keywords: mental health; teachers; anxiety; depression.

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What are the levels of anxiety and depression among teachers who teach classes in Public\textsuperscript{2} Early Years schools and Primary\textsuperscript{3} schools?

This question was raised based on our professional experience, as school psychologists and researchers in public schools that have taught at Early Years Schools and Primary schools since 2005. Although our intention was to carry out work in schools whose motto was the appreciation of human relations, teachers’ mental health called our attention, as we found that a considerable number of them were suffering psychologically.

Socially, we were motivated by the data presented by organizations that are dedicated to defending teachers’ professional interests. Among these organizations, there is the Teacher’s Union of Official Teaching for the State of São Paulo (Apeoesp- Sindicato dos Professores do Ensino Oficial do Estado de São Paulo), which coordinated research developed in 2010, the main objective of which was to draw a panorama of teachers’ health in the public school network of the state of São Paulo. The data showed that, in the year prior to the research (2009), more than 40\% of the teachers had mental health impairments, with the main complaints being depression (29\%) and anxiety (23\%). According to Oliveira and Leite (2012), this result places psychological illnesses as the main reason for teachers’ sick leave.

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\textsuperscript{2} The word Public school refers to the use in the USA where it is funded by the state and therefore free of tuition fees. The term for this in the UK would be a State school. TN

\textsuperscript{3} The Early Years Foundation Stage is a framework for 0 - 5 year olds. Early Years Education relates to learning for 3 to 5 year olds. Primary school in this case here is referring to the lower grades of primary school. TN
The National Confederation of Education Workers (CNTE) published a survey in 2002, carried out with 52,000 educators from different regions of the country, and its results revealed that about 25% of them were suffering from Burnout Syndrome. The same research highlighted the physicians' lack of knowledge regarding this pathology, which prevent the setting up of diagnostic strategies to address it (Batista, Carlotto, Coutinho, & Augusto, 2011; Codo, 2002).

We were also motivated by the fact that teaching is currently considered a risk profession and, therefore, with a greater probability of causing illness and of leading to sick leave (International Labor Organization, ILO, 1984). It requires constant adaptation of the professional who performs it, since it demands dealing with people, especially those who are in the process of physical and psychological development.

Based on this, Gasparini, Barreto and Assunção (2005) cited studies carried out in other countries (for example those by Pithers and Fogarty, 1995), which highlighted a higher prevalence of psychological illness among teachers than the general average of the population.

Psychological suffering, in addition to generating disillusionment and demotivation, can also lead to physical complications, as shown by Souza et al. (2011).

Another reason that led us to question the levels of anxiety and depression among teachers was the fact that we found that the work carried out by these professionals, when ill, compromises the educational act, as it interferes directly with the teacher-student relationship, as portrayed by Pedro-Silva (2005), among other scholars dedicated to the investigation of the teaching-learning relationship. Goulart Júnior and Lipp (2008) came to the conclusion that this is one of the reasons why students drop out of school.

Despite not having found studies that relate a greater proportion of people with depression and/or anxiety and professional practice related to Education, compared to other careers, we can assume that many aspiring teachers do not fit the expected profile of an educator, namely: marked emotional and physical balance. For Souza and Leite (2011), it is the resilience capacity of the teacher, that is, their power to adapt to the moments of adversity that will guarantee the maintenance of their mental health. And, as a result, it will increase the possibilities for them to develop the teaching-learning process.
It is worth adding that, together with the teacher's sickness, the school as a whole becomes ill, and its social function – that of forming citizens to live in a democratic regime – ends up not materializing. Thus, it is essential to carry out further studies to help overcome the illness of educators.

We were also impelled to carry out this study, for scientific reasons, considering that literature is scarce on the subject in Brazil. We base our assertion on a survey carried out in February 2016 in the Scielo, Cathedra (Unesp), SIBi (USP) and SBU (Unicamp) databases, on research developed from 2011 to 2015, based on the "mental health" "Anxiety," "depression," "stress," "teacher(s)," and "professor(s) uniterms."

Among the studies, we found work that focused on the following aspects: a) medical reasons for the removal of teachers from their functions; b) prevalence of psychological and/or physical disorders; c) aspects of teaching professional practice that generate illnesses; d) professional satisfaction and quality of life; e) knowledge on the subject of mental health; f) influence of the teacher's illness in the teaching-learning process, among others.

For example, Silva (2015) verified the prevalence of psychiatric diagnoses in teachers from a federal university. Based on the analysis of sick leave records for 2000 and 2012 and the application of interviews about teachers’ expectations and frustrations related to work, the author verified that, in those years, 30% of the medical reports were issued with a diagnosis of anxiety and mood disorders.

Other studies were carried out to investigate the prevalence of organic and/or psychological illnesses in the teaching staff of a given city.

With regard to this, Carraro (2015) verified that working conditions influenced the onset of psychological disorders in teachers of the Early Years Education network of Bauru, the state of São Paulo - Brazil. This result was based on a questionnaire, answered by 374 subjects, on factual data; a Job Content Questionnaire (JCQ); a block with 30 complaints on physical health and the Self-Reporting Questionnaire (SRQ-20), showing the prevalence of psychological disorders in 36%. The profile of this group was made up of people aged between 25 and 39 years with dependents, who did not believe it was possible to remain on the job, if the current conditions were maintained, without facing many difficulties, nor remain for many years. In this sense, the researcher indicated that one of the strategies for health promotion is to reduce the overload of
activities and provide greater teacher autonomy regarding the setting up of strategies to carry out the educational act.

The highest proportion of psychological illness was found by Baldaçara, Silva, Castro and Santos (2015), who analyzed the prevalence of psychiatric symptoms in teachers from the public school system in Palmas, the state of Tocantins - Brazil. Based on the SQR-20, 109 teachers from Palmas indicated which symptoms they were suffering from. Out of these 109 subjects, 54 (49.5%) had a prevalence of psychological symptoms that required treatment.

The study of some psychological pathologies was more noteworthy, such as Burnout Syndrome. Costa, Gil-Monte, Possobon and Ambrosano (2013) verified the prevalence of this syndrome in 169 teachers of the Piracicaba Higher Education – the state of São Paulo - Brazil. Data were collected through the "Burnout Syndrome Assessment Questionnaire", which revealed that 15% of the subjects presented a high level of indicators related to the syndrome. Although this result was below that expected by the researchers, the data pointed towards the need of creating public policies aimed at addressing it, since it is an illness that affects both the psychological and the physical health of those suffering from it.

The correlation between psychological illness and physical disorders, such as muscular pain, problems related to the vocal and hearing apparatus, hair loss and sleep disorders were also investigated.

Regarding the physical effects, Ceballos and Santos (2015), for example, verified the prevalence of musculoskeletal pain in stressed teachers (73.5% of subjects). They reached this result, through the survey of socio-demographic data, general health and well being at work in 525 teachers of public Early Years and Primary education schools in Jabotão dos Guararapes, the state of Pernambuco - Brazil. The data also showed that this pain occurred more among those who were older in age and had been teaching longer, apart from these subjects presenting a poor perception of well being at work.

As the voice is one of the teachers’ main work instruments, researchers investigated the prevalence of problems in the vocal apparatus and its relation with the mental health of these professionals.
Giannini, Latorre and Ferreira (2013) found that there is a relationship between the voice and stress disorder in teachers of the municipal network of São Paulo – the state of São Paulo - Brazil. They arrived at these results through the application of questionnaires about the "Teacher Vocal Production Condition"; Job Stress Scale, and the "Job Capacity Index".

Souza et al. (2011) found similar results when investigating the factors associated with the prevalence of medical diagnosis of vocal fold pathologies in 4,495 teachers of the public municipal education network in Salvador, the state of Bahia – Brazil, through the application of SRQ-20 and another instrument set up by the authors, whose aim was to collect sociodemographic and professional data. The results showed that subjects with a diagnosis of vocal fold pathology (18.9%), had a higher prevalence of psychological disorders and physical illnesses, apart from complaining more about the environment, work organization and interpersonal relations established at these places.

Brum et al. (2012) analyzed physical and psychological indicators of seven science teachers from a public school in the state of Rio Grande do Sul - Brazil. To do so, the subjects answered the following questionnaires: a) factual data; b) an adapted version of the Job Content Questionnaire; c) a block with 30 complaints on physical health; d) SRQ-20; e) questions related to medical diagnoses most referred to by teachers. The data showed that most of the subjects had health problems - body aches and tiredness, problems in the speech apparatus, hair loss, reduced vision, dizziness, nervousness and sadness. Among the conclusions reached, was the lack of institutional support or of public policies that assist the teacher in their health care.

Regarding sleep, Valle (2011) verified the prevalence of the disorder in this physiological state and its relation with mental health in 165 teachers of the public teaching network of Poços de Caldas, the state of Minas Gerais - Brazil. This conclusion was reached through the following instruments: "The Lipp Adult stress symptom inventory"; "The Pittsburg Sleep Quality Index"; and a structured questionnaire on teacher stress symptoms. The results showed that 60% of the subjects investigated showed stress symptoms, especially psychological. In addition to poor sleep quality, other factors such as lack of time, excess and the multiplicity of tasks contribute towards this. However, the author emphasized that the individual's low capacity for resilience had considerable influence on giving rise to psychological exhaustion.
In addition to these studies, others sought to analyze aspects of professional teaching practice that are generators of illnesses.

Ferreira et al. (2015) investigated the association between psychological disorders and stressors in 175 teachers from a private university in the state of Minas Gerais - Brazil. The authors identified a prevalence of psychological disorders in about 20% of subjects. This group also obtained a higher score regarding work effort and worse life quality in the physical domain, these results were obtained using the "General Health Questionnaire"; the "Effort-Reward and Excessive Commitment" model, and the sociodemographic; behavioral; occupational and general health variable measurement scales.

Regarding factors contributing to psychological illness, Pereira, Teixeira, Andrade, Bleyer and Lopes (2014) found that teachers judged the benefits and resources, offered by the profession, to be insufficient. To better understand this, the authors analyzed the perception of 349 teachers, from 18 schools of the public school network of Florianópolis, the state of Santa Catarina - Brazil, about their working conditions. Two questionnaires were applied: the first dealt with the establishment of the "Profile of Environment and Working Conditions" and the second was the WHOQOL-bref life quality assessment. In general, the results showed that these professionals were dissatisfied with regard to salary; structural working conditions; and the few opportunities offered by the institution for professional improvement.

The workload was considered the main factor contributing towards psychological exhaustion for the group studied by Pereira et al. (2014). The researchers reached this conclusion, when analyzing the labor characteristics and the stress related to teachers’ work in Basic Education in Florianópolis, the state of Santa Catarina - Brazil. They applied three questionnaires to a population of 349 teachers: one on general and sociodemographic information; another about the work situation; and the third with a short version of the Job Stress Scale. The results suggest that teaching stress is related to the greater time of professional teaching activities and the weekly workload. The authors have suggested that this burden be reduced and that the health promotion strategies be set up for those who have been teaching for a long time.

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4 Brazilian Basic education, as per the Brazilian Education Law - Lei de Diretrizes e Bases da Educação (LDB - 9.394/96) - is structured in teaching levels and modalities, comprising Early Years education, Primary education and Secondary education. TN
Silveira, Enumo and Batista (2014) investigated stress indicators and coping strategies in 21 teachers who taught "multi-grade" classes in rural schools in a city of Espirito Santo, the state of Espirito Santo – Brazil. The subjects answered a questionnaire with personal and work data; The Lipp Inventory of Stress Symptoms; Problem Coping Methods Scale; and the Beck Anxiety Inventory (BAI). The results reported that more than half of those surveyed presented harmful levels of anxiety for the educational act. Apart from this, they considered their work to be more stressful than other activities, such as housework. Among the most stressful factors, the authors pointed out students' lack of interest and behavioral problems (lack of discipline and violence); institutional difficulties, such as pressure for results; and the inadequate physical environment for the educational act.

Macaia and Fisher (2015) analyzed 20 teachers, from the public school network in São Paulo who had been away on sick leave due to psychological and behavioral disorders and who were returning to teaching activity. In order to do the analysis, they interviewed the aforementioned teachers about the reasons for their sick leave and requested the completion of a form referring to socioeconomic and work data. The most common medical diagnoses were: depressive episodes; anxiety; adaptive disorders and reactions to severe stress.

The feelings in terms of resuming work for teachers who were returning to teaching were different from those who went on to perform other functions (in rehabilitation). The first group referred to the fear of having the same symptoms as those felt during the period of illness. The second expressed a feeling of impotence and identity crisis, because they did not feel they had a role at the school. There was the perception, on the part of the majority, that the return to school occurred in an undesirable or unfavorable situation to health. The authors concluded that readaptation is a process in which all actors should participate, aiming at the psychological strengthening of the teacher.

Elias (2014) investigated the difficulties faced in the teaching practice by five university professors who taught classes in private institutions in Uberlândia, the state of Minas Gerais - Brazil. In addition to obtaining demographic and professional data, five interviews were carried out, in which the professors reported anxieties and frustrations regarding labor market demands that affect the professional practice and the mental health of these subjects. In the conclusions, the author warned of the transformation of Private Higher Education into merchandise, which makes excessive demands on students and administrators, in addition to creating an
environment of fear and submission, making work a producer of disease and of character corrosion.

Souza and Leite (2011) analyzed 24 theses and dissertations produced between 1997 and 2006, which were related to the main forms of suffering at work to which Primary Education teachers are submitted. They verified that the work pointed to the school's difficulty in adapting to the current demands, leading its professionals to a situation of constant demands and conflict. In addition, the authors indicated the greater prevalence of suffering and psychological illness in those who had been teaching for longer.

Other studies focused on teachers’ quality of life and professional satisfaction. Silveira, Reis, Santos and Borges (2011) evaluated the quality of life of 23 teachers who taught classes in a public school of Early Years Education and Primary Education in Uberaba, the state of Minas Gerais – Brazil, where the levels of social vulnerability were higher. The Shot Form Health Survey-36 (SF-36); a multidimensional questionnaire (physical, psychological and social capacity) was applied together with a question of comparative evaluation of the current state of health compared to that of a year ago. The results indicated that the teachers from the night period had a better quality of life. For the authors, this occurred because they were younger in years and had worked for less time and therefore did not suffer the wear and tear experienced by those who had been working in the profession for a longer time. The authors concluded that structural problems and coexistence are responsible for the loss of quality of life.

Souza and Costa (2011) assessed the quality of life of 200 Physical Education teachers from public schools in Campo Grande, the state of Mato Grosso do Sul, Brazil, using a sociodemographic and SF-36 questionnaires. The results showed that women, those who had children; more years of teaching; and were older; presented a worse functional capacity. They also verified that there was a better level of general state of health in schools where there was a multi-sports court. In the conclusions, they stated that one of the contributing factors to professional satisfaction is related to the provision of an adequate infrastructure for the practice of teaching.

Pereira (2015) analyzed the occurrence of psychological suffering in seven teachers from a state public school in Franca, the state of São Paulo - Brazil. Based on interviews, the author noted that the dynamics of the capitalist production format created working conditions that lead to psychological suffering, which is expressed in physical and psychological symptoms. The
author concluded that there are no public policies not even at the schools themselves to deal with this situation, and it is up to the teacher to face it individually.

Some studies carried out an intervention in the school, aiming to improve the mental health of the professionals who worked there.

Coelho (2012) carried out a quasi-experimental quantitative study with six teachers from the Ourém Primary and Secondary School (Portugal), with the objective of verifying the mental health of these professionals, as well as knowing whether there was an increase in the emotional competence of these subjects, after intervention by the researcher. The results based on the Mental Health Inventory - 5 (MHI - 5) and the Veiga Branco Emotional Intelligence Capabilities Scale (VBEICS©) showed that after the intervention, there were statistically significant improvements in the levels related to self-awareness and emotion management (personal and in group). The data led to the conclusion that by qualifying the teachers in the field of emotional competencies provided them with more internal resources to deal with the demands of the profession.

Maranda, Viviers and Deslauriers (2014) analyzed the suffering and defensive strategies used by teachers at two high schools in Quebec, Canada. In addition to this, they carried out actions to promote mental health, by training the employees to identify potential illness situations in the work environment. The subjects were teachers and other professionals linked to the educational area who, through work psychodynamics, carried out eight intervention sessions. With the data in hand, they identified the existence of risk situations: the weight of work; its intensity; the complexity of educational reforms; the violence; the bureaucracy and the job disorganization. In order to deal with such adversities, staff members ended up using defensive strategies - restorative action - in which the teacher takes on the responsibility of solving the students’ problems which are outside of their professional scope and with physical and affective distancing from the issues faced daily. At the end of the interventions, despite their good acceptance, the school administration created obstacles for their continuity.

Ribeiro, Martins, Mossini, Pace Junior and Lemos (2012) reported an intervention performed at a state school in Assis, the state of São Paulo - Brazil. The above-mentioned intervention - made up of 22 teachers and other employees - comprised of participant observation, aiming at organizational diagnosis and three meetings in which the authors discussed subjects related to interpersonal relationships with the subjects. The authors noted
that the work organization hindered the health of these subjects, especially regarding function deviations; the expanding of the work limits beyond the pedagogical subjects; the lack of autonomy; and the fear of losing their job because of the school coming under municipal control.

The comparison of teachers' mental health with other realities was also researched by Vilas Boas and Morin (2014). They analyzed the differences in indicators of mental health and well being among university teachers from Brazil and Canada. The sample consisted of 354 Brazilian teachers and 317 Canadians. By using an on-line questionnaire, indicators of mental health were verified, such as anxiety and depression. As for the emotional aspects, the results had no significant differences. However, Brazilian teachers presented a better balance between personal and professional life, leading them to conclude that, even in countries with a considerable HDI, the teaching practice is a psychological illness factor.

There were also studies that sought to verify the level of information that the teachers had on the subject of mental health.

Soares et al. (2014) analyzed the perceptions of 31 teachers from public schools in the city of São Paulo, on mental health and the means of obtaining this information. To do so, they administered a questionnaire, aiming at recording the knowledge and interest about mental health and the means of obtaining such information. They used the Collective Subject Discourse technique and Qualiquants software, which helped identify ideas and key expressions. The results showed psychological illnesses. The prevalence of subjects who showed interest in obtaining more information on the topic reached 80%, of which 60% researched it mainly on TV.

Finally, we verified a study about the influence of teachers' illness while carrying out the educational act.

Lyra, Assis, Njaine and Pires (2013) analyzed the difference in the vision of 139 teachers in relation to students. They answered the SRQ-20, the Teacher's Report Form, adding up to a set of socioeconomic and work questions. They also carried out a qualitative interview with 10
teachers (half with and the other half without psychological suffering). The results showed that teachers who were ill had a more negative outlook of work and students, as well as fewer resources to deal with conflict situations. However, in both groups, indiscipline was attributed to factors outside the school (especially those occurring in the family).

Summarizing, the studies, carried out in the mental health area of teachers who teach in Brazil, revealed the following results:

a) high prevalence of psychological illness symptoms among these professionals;

b) psychological illness as a factor that negatively influences the teacher's ability to resolve conflicts;

c) high occurrence of professional sick leave, resulting from psychological illness;

d) little information on the most common psychological illnesses of those working in schools;

e) presence of teachers' lack of motivation and dissatisfaction with working conditions;

f) shortage of scientific studies with the objective of ascertaining teachers' level of anxiety and depression.

Objectives

Considering these aspects, the main objective of the present research is to verify and to analyze the level of anxiety and depression of the teachers that teach classes in Early Years Schools and Primary School. Secondly, we sought to check if there is an association between these levels and the degree of work satisfaction and the factual data.

Method

Participants. The information was collected from 105 female state certified teachers, aged between 21 and 60 years of age, who, at the time of the survey, were teaching classes in
Early Years Schools and Primary School in a city, with 20 thousand inhabitants, located in the Vale do Paraíba, the state of São Paulo - Brazil.

With the intention of guaranteeing a certain degree of generality of the present study, our subjects presented similar characteristics to those of the teachers surveyed in a study coordinated by Unesco (2004) on the profile of Brazilian teachers, namely: a) the majority are females (81.3%); b) the average age is 37.8 years; c) just over half are married (55.1%); d) the parents’ educational level goes up to elementary school (not finished) (64.5%); e) the family income is between 2 and 10 minimum wages (65.5%); f) the work is carried out in only one school, with a workload of 21 to 40 hours in the classroom; g) more than half of them intend to remain in their current work function (50.2%).

**Instruments.** We used the *Beck Depression Inventory* (BDI) and *Beck Anxiety Inventory* (BAI) as a survey tool. These instruments were elaborated by Beck, Brown, Epstein and Steer (1988) and Beck, Erbaugh, Mendelson, Mocke and Ward (1961) respectively, and adapted to Brazilian reality by Cunha (2011) and are made up of the following aspects:

- **BDI.** A self-report questionnaire, containing 21 items related to the person’s view of themself, indicating the intensity of depressive symptoms.

- **BAI.** A self-report questionnaire, also containing 21 items, related to anxiety (for example, irritability, impatience and body pain).

Both classify the results of the answers into four levels:

a) **Minimum:** Even if some anxiety or depression symptoms occur, the subjects that fit into this level respond in a consistent way with the challenges of everyday life, and do not present a significant loss of quality of life.

b) **Mild:** They present pathological symptoms, with loss of quality of life, such as irritability; impatience; agitation; inattention; difficulty sleeping, learning; among others. They may be starting to present some psychological illness linked to depression or anxiety disorder.

c) **Moderate:** They present a degree of symptoms that characterize them as presenting depression or anxiety disorder, requiring medical and/or psychological treatment.
d) Severe: They present the pathology in a severe way, with great loss in quality of life, often making it impossible to perform activities considered routine.

We opted for these instruments because these scales were adapted to Brazilian conditions; were easy and quick to apply; apart from our being familiar with these instruments; as we often employ them in psychological assessments.

We also used two questionnaires. In one, we asked participants how satisfied they were with their work. In another, we checked factual data, such as: age, length of time teaching, marital status, religion, schooling and history of psychological disorders in the family.

The instrument related to the degree of satisfaction was set up based on studies that sought to point out the causes of teacher illness (Ferreira et al., 2015, Pereira, Teixeira, Andrade, Bleyer & Lopes, 2014 and Silveira et al., 2014) . Regarding the factual data, they were set up taking into account, among other things, the sociodemographic questionnaires of Carraro (2015), Ceballos and Santos (2015) and Souza et al. (2011).

Procedure for data collection. In order to obtain the information, we proceeded as follows: a) Initially, we requested authorization from the City's Secretariat of Education, to collect the data; b) After this consent, we contacted the schools, presented the proposal and invited the teachers to participate in the study; c) those who accepted, were explained the objectives of the research, signed the free informed consent form, and then answered the questionnaires, at which point we were available to clarify any doubts. Basically, teachers should answer the questionnaire and then, on their own application form, indicate the intensity of the symptoms mentioned in the instruments the week previous to their filling out the application form (absent, mild, moderate or severe); d) finally, we received back the questionnaires, thanked the participants for their collaboration and, again, we informed them about the confidentiality of research subject identification, in addition to scheduling a return interview with the participants.

Procedure for the analysis. We ranked the level of anxiety and depression according to the scale manuals, as well as listing the information regarding the factual data and the vision about teaching. Regarding the Beck Scales specifically (Cunha, 2011), as we have pointed out, they have four options for responses, and the subject should indicate the one that best relates to their case. Scores range from zero (absent) to three points (severe). Once the sum is made,
the subject is placed in the category corresponding to their score: not showing signs of the pathology (minimum); Light; moderate; or severe.

Once the categorization was completed, we analyzed the proportion of active teachers with anxious and/or depressive symptoms, as well as correlating these data with the factual data and the vision they had of teaching.

The entire process was submitted to statistical analysis using the Chi-Square test \((\chi^2)\). This instrument is used to compare the proportion of two samples, in order to verify if they have statistically significant differences. In the case of the present study, we divided the samples into "participants who did not present psychological illness" (those who obtained minimum levels in the BAI and BDI) and in "participants who had the cited illness" (mild, moderate or severe in one of the aforementioned scales).

The Chi-Square is a hypothesis test, that is, based on its calculation, the \((p)\) value allows the initial hypothesis to be confirmed - defined as a null hypothesis \((H_0)\) - or reject it and consider the alternative hypothesis \((H_1)\). The hypotheses were as follows:

- \(H_0\): There is no statistically significant difference between the proportions, when compared with the values obtained through BAI or BDI.

- \(H_1\): There is a statistically significant difference between the proportions of the sample variable, when compared with the values obtained through BAI or BDI.

For the aforementioned tests, we accepted \(\alpha = 0.05\) as a significance value; therefore, if the statistical calculation presents a less than 0.05 \((p)\) result, we reject \(H_0\) and accept \(H_1\).

**Ethical considerations.** The present study was approved by the Research Ethics Committee, CAAE No. 41008814.0.0000.5401, in compliance with the guidelines and norms of Resolution 196/96 of the National Health Council – the state of Mato Grosso do Sul - Brazil.
Results and Discussion

The main objective of the present study was to analyze the levels of anxiety and depression among teachers who teach classes in Early Years Schools and Primary schools in public schools in a small municipality.

Levels of anxiety and/or depression. In Table 1, we present the results on the levels of anxiety and depression:

Table 1 – Participants’ answers on the level of anxiety and depression

<table>
<thead>
<tr>
<th>Answers</th>
<th>Anxiety (n=105)</th>
<th>Depression (n=105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>58.1% (n=61)</td>
<td>69.5% (n=73)</td>
</tr>
<tr>
<td>Mild</td>
<td>24.8% (n=26)</td>
<td>22.9% (n=24)</td>
</tr>
<tr>
<td>Moderate</td>
<td>11.4% (n=12)</td>
<td>7.6% (n=8)</td>
</tr>
<tr>
<td>Severe</td>
<td>5.7% (n=6)</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Research Data

Concerning anxiety levels, 41.9% of subjects who answered the instruments presented "mild", "moderate" and "severe" levels. According to Silveira et al. (2014), such levels are detrimental to the educational act, besides compromising the quality of life of these people in other social spheres.

This does not mean, according to this classification, that the other subjects - classified as "minimum" - do not present anxious behavior. We make such a statement because anxiety is a psychological mechanism used by everyone, especially in situations that they judge to be challenging and/or dangerous. In a dynamic environment, such as the school, where personal demands and interactions are constant, the professional is expected to be anxious and, therefore, to experience situations of demotivation, sadness, anger and/or impatience. However, we do not refer to the vicissitudes related to this type of anxiety, which are experienced daily. We are pointing to anxiety disorders, that is, the symptomatic pictures that lead the subject to manifest, in an excessive way, certain behaviors, regardless of whether they are experiencing "real" stress situations.
In terms of depression, the percentage for mild and moderate was even lower (30.5%). as can be seen in Table 1.

In terms of who was considered ill (mild, moderate and severe), as in the other studies that use the same instruments, (Santos, Almeida, Martins, & Moreno, 2003; Silveira et al., 2014), we observed the prevalence of the “mild” level. Cunha (2001) points out the inconclusive nature of this level for the specific diagnosis of depression or anxiety disorder in non-psychological populations. However, the study states that the "mild" level is a strong indication of mental illness.

As pointed out in the literature review, a significant part of the studies related to teachers’ mental health aimed at investigating the psychological suffering of this working class, without dwelling on the analysis of a specific psychopathology. The main purpose was to identify physical and psychological exhaustion symptoms that are harmful to health, even if they do not fit into a nosology category, such as common psychological disorders. Thus, when considering anxiety and depression together, as shown in Table 2, around 50.0% of the teachers participating in the study revealed symptoms that indicate psychological illness.

### Table 2 - Subjects with psychological illness (anxiety and/or depression)

<table>
<thead>
<tr>
<th>Answers</th>
<th>Results (n=105)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting no illness</td>
<td>50.5% (n=53)</td>
</tr>
<tr>
<td>Presenting Illness (mild, moderate and severe levels)</td>
<td>49.5% (n=52)</td>
</tr>
</tbody>
</table>

Source: Research Data

It should be highlighted that the percentage of psychologically ill teachers is probably higher than the results obtained. One of the explanations for this finding is that we have only surveyed levels of anxiety and depression. Thus, other psychological disorders, such as psychoses, personality and somatoform disorders were not contemplated in our study. Another reason, specially in relation to depression, refers to the content of some alternatives of the instrument. For example, in question 7 of the BDI, the subject is asked to tick one of the following:
"0 - I do not feel disappointed with myself;"; "1 - I'm disappointed with myself;"; "2 - I am angry with myself;"; "3 - I hate myself."

As this test was designed for clinical application, we assumed that the subjects might be "scared" and resistant to the content of some of the alternatives contained in the instrument. Thus, certain phrases may have mobilized psychological defense contents, to the point that they have caused them to not effectively signal how they were feeling.

Finally, another factor that may have had influence, is the fear the teachers may have felt about being punished by their superiors if they were informed about their psychological illness. We supported this hypothesis based on the testimony given by some participants when returning the questionnaire, they expressed this concern, even though they were informed that the data would remain confidential.

Considering these results, we presented the findings regarding the possibility of an association between these levels and job satisfaction level.

**Satisfaction level.** We believe that the school, as it is organized today, places the teacher in a constant stressful situation. Thus, by applying the professional teachers’ satisfaction measurement instrument, we sought to identify aspects that may have contributed to the production of this situation of suffering and illness.

Among the items evaluated, the participants of the study had a higher degree of dissatisfaction or little satisfaction in relation to the following aspects: salary (85.7%); parent interest (76.7%), materials offered by the school for the work activity development (59.2%); student interest (55.8%) and structural aspects of the rooms, such as acoustics, lighting and air conditioning (51.9%). They also showed dissatisfaction with the type of interaction students and parents had with them (48.1% and 44.6% respectively); the dialogue with administrators (21.4%); and the relationship with colleagues (21.2%).

In this perspective, we noticed that the aspects that have most distressed teachers refer to the structural work factors (salary, rooms and materials), as well as the relation factors (student and their parents’ behavior). These results are consistent with those found by Lyra et al. (2006), Pereira, Teixeira, Andrade, Bleyer and Lopes (2014), Silveira et al., (2014), Silveira et al. (2011) and Souza e Costa (2011).
Although the relationship difficulties in the school were less mentioned, when we carried out the individual return interview for the participants, most of the teachers who indicated that they were satisfied with the established relationships expressed an opinion contrary to the one indicated. They complained about the vertical relationship with management, which does not provide the means for them to be heard and be part of the decisions taken by the school, and of the lack of companionship among teachers. The teachers went on to report the occurrence of several cases of gossip, public discussions among teachers, insubordination by some colleagues who - not carrying out the activities designated by the administrators - ended up causing problems for everyone.

These discourses are in line with the reflections made by Dejours (1980) and Sennett (1998) on the influence of interpersonal relationships. These authors believe that relationships established in the work environment (organizational and/or affective) have greater weight for psychological exhaustion than other aspects, such as monetary.

How can this contradiction between the data presented in the questionnaire and the complaints presented in the interview be explained? One of the possible explanations is perhaps related to the fact that we requested that the subjects identify themselves in the instrument of factual data collection. It is important to remember that we only proceed in this way because we decided together with the participants to do the return interview with them on the result obtained in the anxiety and depression inventories (BAI and BDI scales). This has probably become an inconvenient variable, since such a situation may have awakened the participants' concern about the negative consequences for themselves from a professional point of view, even though we have guaranteed confidentiality.

As to the relationship between satisfaction with work and anxiety and/or depression level, it was not possible to perform the association between these variables, according to the chi-square test($\chi^2$), with the alpha decision level = 0.05.
Table 3 - Participants' answers about the satisfaction level with regard to aspects of professional work developed in the teaching profession

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Positive Vision (Very Satisfied/Satisfied)</th>
<th>Negative View (Not very satisfied /Dissatisfied)</th>
<th>( \chi^2 ) (p=value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presenting no illness</td>
<td>Presenting illness</td>
<td>Presenting no illness</td>
</tr>
<tr>
<td>Structure of the room</td>
<td>50.0% (n=26)</td>
<td>43.8% (n=24)</td>
<td>50.0% (n=27)</td>
</tr>
<tr>
<td>Materials</td>
<td>42.3% (n=23)</td>
<td>37.5% (n=19)</td>
<td>55.8% (n=29)</td>
</tr>
<tr>
<td>Dialogue with administrators</td>
<td>82.7% (n=44)</td>
<td>72.9% (n=37)</td>
<td>15.4% (n=8)</td>
</tr>
<tr>
<td>Relationship between teachers</td>
<td>84.6% (n=45)</td>
<td>75.0% (n=37)</td>
<td>15.4% (n=8)</td>
</tr>
<tr>
<td>Student interest</td>
<td>50.0% (n=27)</td>
<td>40.4% (n=19)</td>
<td>50.0% (n=26)</td>
</tr>
<tr>
<td>Respect from Student</td>
<td>57.7% (n=31)</td>
<td>45.8% (n=23)</td>
<td>42.3% (n=22)</td>
</tr>
<tr>
<td>Parent interest</td>
<td>28.8% (n=15)</td>
<td>18.8% (n=9)</td>
<td>69.2% (n=37)</td>
</tr>
<tr>
<td>Respect from Parents</td>
<td>57.7% (n=31)</td>
<td>50.0% (n=25)</td>
<td>40.4% (n=21)</td>
</tr>
<tr>
<td>Salary</td>
<td>19.2% (n=11)</td>
<td>8.3% (n=4)</td>
<td>80.8% (n=42)</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>90.4% (n=48)</td>
<td>72.9% (n=37)</td>
<td>9.6% (n=5)</td>
</tr>
</tbody>
</table>

Source: Research Data

However, when asked in general terms about their professional satisfaction, without focusing on specific aspects such as "dialogue with administrators", there was a higher and statistically significant proportion (p = 0.0224) of dissatisfied participants in the group formed by psychologically ill teachers.

**Age of subjects.** Regarding the anxiety and/or depression levels, based on the 104 subjects who presented them, we identified an association only with those whose age ranged from 41 to 45 years (p = 0.0407). In this case, as shown in Table 4, more than 70% of
participants presented anxiety and/or depression levels which were judged to be likely to compromise the teaching-learning process. According to Bauman (1997), Bruckner (1997) and La Taille (2009), such an age group - for many women - is usually understood as the end of youth – and is precisely one of the most valued aspects nowadays. It is as if it were an age limit, because the person, when they cease to perceive themselves as young, think themselves incapable of performing certain actions and nourishing certain dreams, leading to an increase in anxiety and/or depression, which ends up being reflected in the field of professional performance.

Table 4 - Subjects presenting psychological illness (anxiety and/or depression) according to age

<table>
<thead>
<tr>
<th></th>
<th>Up to 35 (n=20)</th>
<th>36-40 (n=23)</th>
<th>41-45 (n=21)</th>
<th>46+ (n=40)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting no illness</td>
<td>55.0% (n=11)</td>
<td>56.5% (n=13)</td>
<td>28.6% (n=6)</td>
<td>55% (n=22)</td>
</tr>
<tr>
<td>Presenting illness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(mild, moderate and</td>
<td>45.0% (n=9)</td>
<td>43.5% (n=10)</td>
<td>71.4% (n=15)</td>
<td>45% (n=18)</td>
</tr>
<tr>
<td>severe levels)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\chi^2) (p = value)</td>
<td>0.7511</td>
<td>0.679</td>
<td>0.0405</td>
<td>0.5244</td>
</tr>
</tbody>
</table>

Source: Research Data

Religion. Almost all the subjects (more than 90%) indicated that they were members of the Catholic religion (Table 5). Despite this, it is not possible to establish an association between being Catholic and psychological illness. However, the difference is significant in relation to those who are Evangelical Christians and those who do not have a religion. Concerning Protestants, about 70% said they did not present answers that indicated a level of anxiety and/or depression considered to be pathological. In addition, our practice in mental health treatment reports that devotees of this faith are ashamed to admit that they are suffering psychologically, since they relate this to a lack of faith. Despite this reflection, because of the small number of subjects who professed to follow this religion (six participants), the difference found may be related to chance.

As for those who considered themselves "without a religion", all of them presented levels of anxiety and/or depression that were compromising the educational act. There are studies (Moreira-Almeida, Lotufo-Neto & Koening, 2006) that show that faith assists in the
maintenance of mental health. In addition, participation in a religious temple offers a greater possibility of creating and maintaining an affective network, which acts as a preventative factor and helps to overcome psychological illness. However, as with other items, this result may have been due to chance, since only three subjects expressed this condition.

Table 5 - Subjects presenting psychological illness (anxiety and/or depression) according to religion

<table>
<thead>
<tr>
<th></th>
<th>Catholic (n=92)</th>
<th>Evangelical Christian (n=6)</th>
<th>Spiritist (n=4)</th>
<th>No religion (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenting no illness</td>
<td>51.1% (n=47)</td>
<td>66.7% (n=4)</td>
<td>50% (n=2)</td>
<td>0% (n=0)</td>
</tr>
<tr>
<td>Presenting illness (mild, moderate and severe levels)</td>
<td>48.9% (n=45)</td>
<td>33.3% (n=2)</td>
<td>50% (n=2)</td>
<td>100% (n=3)</td>
</tr>
<tr>
<td>$\chi^2$ (p = value)</td>
<td>1</td>
<td>0.4525</td>
<td>0.9502</td>
<td>0.0764</td>
</tr>
</tbody>
</table>

Source: Research Data

Schooling. Based on Table 6, we verified an association between illness and those graduated in the Normal Superior School\(^5\) (p = 0.0296). This course was offered in 2005 for the teachers who had, at the time, only the teaching course. One hypothesis raised is that such professionals - even though they attended university courses - were not sufficiently trained to deal with the demands of the environment, and thus became more prone to this illness.

Table 6 - Subjects with psychological illness (anxiety and/or depression) due to schooling

<table>
<thead>
<tr>
<th></th>
<th>Pedagogy (n=64)</th>
<th>Normal Superior School (n=21)</th>
<th>Teacher Licensing (n=17)</th>
<th>Others (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present no illness</td>
<td>57.8% (n=37)</td>
<td>28.6% (n=6)</td>
<td>47.1% (n=8)</td>
<td>66.7% (n=2)</td>
</tr>
<tr>
<td>Present illness (mild, moderate and severe levels)</td>
<td>42.2% (n=27)</td>
<td>71.4% (n=15)</td>
<td>52.9% (n=9)</td>
<td>33.3% (n=1)</td>
</tr>
<tr>
<td>$\chi^2$ (p = value)</td>
<td>0.4086</td>
<td>0.0296</td>
<td>0.7654</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Research Data

\(^5\) Normal School also called teachers college or teacher-training college, an institution for the training of teachers for Early Years Education. Known in Brazil as Normal Superior Course (Curso Superior Normal). TN
Other factual information. When we verified the levels of anxiety and/or depression, associated to the number of classrooms in which the subjects taught; the time in the teaching profession; the history of psychological disorders in the family; and the marital situation; again we did not find an association between these variables. Although 80% of the widows were ill, the difference may have by chance been due to the reduced number of teachers in this condition.

Table 7 - Subjects with psychological illness (anxiety and/or depression) according to marital situation

<table>
<thead>
<tr>
<th></th>
<th>Single (n=22)</th>
<th>Married (n=61)</th>
<th>Divorced (n=17)</th>
<th>Widow (n=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present no illnesses</td>
<td>50% (n=11f)</td>
<td>54.1% (n=33)</td>
<td>47.1% (n=8)</td>
<td>20% (n=1f)</td>
</tr>
<tr>
<td>Present illnesses (light, moderate and severe levels)</td>
<td>50% (n=11f)</td>
<td>45.9% (n=28)</td>
<td>52.9% (n=9)</td>
<td>80% (n=4)</td>
</tr>
<tr>
<td>( \chi^2 ) (p = value)</td>
<td>0.9270</td>
<td>0.6846</td>
<td>0.6972</td>
<td>0.1634</td>
</tr>
</tbody>
</table>

Source: Research Data

To conclude, the present study pointed to the following aspects: a) using the BAI and BDI scales as parameters (Cunha, 2011), about 50% of the teachers questioned presented harmful levels of anxiety and/or depression to the educational act, confirming the results obtained by Baldaçara et al. (2015) and Oliveira and Leite (2012). Regarding however, the association of these levels to a) the degree of satisfaction with work aspects developed in the teaching profession, the differences were not statistically significant; b) the age of the participants, the difference was only statistically significant for the 16 subjects who were in the age group between 41 and 45 years; c) the devotees of the catholic religion (almost all the subjects), there were no statistically significant differences either, as for protestant Christians and those "without religion" the differences may have occurred by chance, considering the small number of participants; d) teachers who taught classes in more than one room, likewise, we did not verify an association; e) the time of the professional exercise in the teaching profession, a similar result was verified, that is, we did not find any statistically significant differences; f) marital status, again there were no significant differences, except for the widows (although the greatest degree of illness among them may have been by chance); g) schooling where the majority of teachers who attended Normal Superior School showed high levels of anxiety and depression, allowing the association between illness and this variable; and h) the history of
psychological disorders in the family and psychological illness, where it was also not possible to establish an association.

**Conclusion and final considerations**

Psychological illnesses, especially anxiety and depression, have been one of the main factors that are responsible for teachers having sick leave because of health problems. And it is in the midst of this reality that formal teaching is being practiced today. The consequence is that the illness does not affect the teacher exclusively. When they are sick, the school as a whole has contributed to this and/or it also becomes ill and its role in the forming of citizens is not being effective.

Considering this context, we analyzed the levels of anxiety and depression of the teachers who taught classes in Elementary and Early Childhood Education in a small city in São Paulo. Using psychological tests and self-administered questionnaires, we verified that half of the subjects had levels of anxiety and/or depression considered harmful to the teaching-learning process.

The analysis of the data allowed us to conclude that it is urgent to implement an educational policy that takes into account the mental health of the educators and promotes actions that can prevent the occurrence of such maladjustments, as well as to remedy them, by offering psychological assistance to these professionals. It is unacceptable that society should continue to see the teacher as one who does not present problems of a psychological nature; a human being who is able to teach and learn in these times of rapid and constant changes, without the proposition of adequate conditions for the development of their professional practice. It is also evident that the process of hiring these professionals must contemplate the psychological and "vocational" conditions for the exercise of a profession that demands a high degree of "tolerance" and resilience.

In addition, we believe it is imperative to carry out new studies, with a numerically larger population, in larger cities and with the use of other screening instruments, such as the Hospital Anxiety and Depression Scale (HAD), because, as we pointed out in the literature review, scientific studies are scarce.
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