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ORIGINAL ARTICLE

Psychiatric morbidity and quality of life of primary care attenders in two cities in Brazil

Sofrimento psíquico e qualidade de vida em pacientes da atenção primária de duas cidades do Brasil

Flávia Batista Portugal[1], Mônica Rodrigues Campos[2], Daniel Almeida Gonçalves[3], Jair de Jesus Mari[4], Linda Gask[5], Peter Bower[6], Christopher Dowrick[7], Sandra Fortes[8]

ABSTRACT

Objective: To identify the associations among quality of life (QoL), social determinants and psychological distress in primary care in two cities in Brazil. **Methods:** A cross-sectional study with 1,466 patients from 2009 to 2010. The statistical analysis used the t-test to compare the variables of interest to the study. **Results:** The prevalence of Common Mental Disorders (CMD3), severe forms of Common Mental Disorders (CMD5), anxiety and depression were 20.5%, 32%, 37% and 25.1% respectively. Thes presence of psychological distress is associated with worse QoL among the patients studied, especially those older than 40 years of age. In cases of CMD3, those with higher income and educational levels presented higher QoL in the psychical and psychological domains. For the cases of probable anxiety, those with higher educational levels presented lower scores on the physical and social relationship scores. **Conclusion:** Psychological distress can be associated with a worse QoL among those studied and can be influenced by socioeconomic conditions. Therefore, it is important to structure patient-centered help, which should also include patients' social contexts.

Keywords
Mental health, primary health care, quality of life, mental disorders, socioeconomic factors.

RESUMO

Objetivo: Identificar as associações entre qualidade de vida (QV), determinantes sociais e sofrimento psíquico na Atenção Primária (AP) em dois municípios do Brasil. **Métodos:** Estudo transversal com 1.466 pacientes atendidos na AP de São Paulo e Rio de Janeiro nos anos de 2009 e 2010. **Resultados:** As prevalências de Transtorno Mental Comum (TMC-3), Transtorno Mental Comum de intensidade grave (TMC-5), casos sugestivos de ansiedade e de depressão foram de 20,5%, 32%, 37% e 25,1%, respectivamente. Observou-se a associação entre as variáveis socioeconômicas e a presença de sofrimento psíquico, em especial para aqueles com idade superior a 40 anos. Nos casos de TMC-3, aqueles com maior renda e nível educacional apresentaram maiores escores nos domínios físico e psicológico. Para os casos sugestivos de ansiedade, maior nível educacional apresentou menores escores nos domínios físico e rela-

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1 Oswaldo Cruz Foundation, Sergio Arouca National School of Public Health (Fiocruz-ENSP).
2 Fiocruz-ENSP, Social Sciences Department.
3 Universidade Federal de São Paulo (Unifesp).
4 Unifesp, Department of Psychiatry. King's College, Institute of Psychiatry, Health Services and Population Research Department, Public Centre for Mental Health.
5 University of Manchester, Manchester Academic Health Science Centre, NIHR School for Primary Care Research.
6 University of Manchester, Manchester Academic Health Science Centre, NIHR School for Primary Care Research, Health Services Research.
7 Community and Behavioral Sciences, School of Population, Primary Medical Care.
8 Rio de Janeiro State University (UERJ).

Correspondence address to: Flávia Batista Portugal
Rua Manoel Barros da Costa, 61, ap. 501, Jardim Camburi
29090-730 – Vitória, ES, Brazil
Email: flaviabportugal@gmail.com

Palavras-chave
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ções sociais. **Conclusão:** Entre os pesquisados, o sofrimento psíquico associou-se a menores escores de qualidade de vida, podendo ser influenciado pelas condições socioeconômicas. Dessa forma, é importante estruturar uma assistência centrada no paciente, que também deve incluir o contexto social dos pacientes.

INTRODUCTION

Nowadays, according to the World Health Organization (WHO)[1], approximately 450 million people suffer from some sort of mental distress, that is, one in every four people will manifest some kind of distress during their lifetime. Thus, mental distress will affect people of all ages, men and women, rich and poor, impacting the individuals and their families, changing their everyday routines and restricting their professional and social activities[1].

Due to the magnitude of the problems involved, mental disorders are one of the biggest concerns of Health Services. Considering this, Family Health Strategy (FHS), Brazilian primary care units, becomes a fundamental aspect of Mental Health Care (MHC), having its operations based on the work of the multi-professional teams in the Basic Health Units. In order to improve health conditions, the Brazilian government has been promoting significant changes in the health system, investing and remodelling primary care and mental health services[2]. It is proposed that the substantial burden of mental disorders can be reduced by integrating mental health into primary care, particularly in places with high levels of inequality and socioeconomic deprivation[3]. The Family Health Strategy is the cornerstone of this integration, involving the introduction of 30,000 family health teams covering 95% of Brazil's municipalities and more than 50% of the population. Each team comprises one doctor and one nurse, two nurse assistants and six community health workers (in some teams there is also a dentist). Thus, FHS should be able to answer to 85% of the health problems found[4], including those of mental health. Mental disorders are frequent in primary care, especially common mental disorders, which, in general, manifest themselves as acute clinical situations, with somatic symptoms associated with psychiatric symptoms, such as depressive and anxious ones[5]. An important setback is that the professionals on these teams have not been adequately trained to deal with patients showing this type of problem[6].

Because of the consequences of psychological distress on the lives of the individuals, and that of their families, the concept of quality of life (QoL) emerges as a way of measuring its influence (and that of other health conditions) on the psychosocial development of these individuals. According to Zhan[7], QoL is influenced by social and cultural contexts, besides other factors, such as personal experiences, age, environment, and health conditions. Quality of life is a wide ranging expression that may have various definitions. Due to this complexity, WHO called for help from specialists from different countries, who defined it as: "the individuals' perception of their position in life in the context of culture and value systems in which they live and in relation to their goals, expectations, standards and concerns"[8].

As it is, the research efforts that value the QoL of those patients with psychological distress aim to study the influence of psychiatric illnesses and to demonstrate the necessity of improving the structure of mental health services, guided by the perception that individuals have of their own health conditions. In spite of the high prevalence and impact of mental disorders in primary care[6,9], there are only few studies in Brazil on mental disorders and QoL in the primary care[5,10-12]. Through a quick inquiry on PubMed about the subject ("quality of life" AND "primary care" AND "Brazil" AND "depression" OR "anxiety" OR "common mental disorders" OR "mental health") only sixteen studies were found, nine of which referred to the mentioned subject, and eight were done by the same research team.

Knowing the QoL measures of these individuals enables a wider view of how mental disorders affect their lives, as well as the identification of variables, such as social ones, that may help the development of preventive and therapeutic strategies[12].

This paper aims to identify possible associations between social determinants, mental health indicators and quality of life in primary care in the municipalities of Rio de Janeiro (RJ) and São Paulo (SP) in the years 2009 and 2010.

METHODS

The present paper is part of the research project – "Evaluation of a Model for Qualification in Mental Health in Primary Care: Integrative Care in the Matrix Support Practice". This project aimed the evaluation of the impact that qualification in mental health would have on those activities, within primary care, that seeked the integration of the teams working in mental health in family health and through the implementation of matrix activities and therapeutic interventions in mental health within the welfare practices in the FHS[13]. This paper presents the data of a cross-section from the above mentioned study in the municipalities of São Paulo (SP) and Rio de Janeiro (RJ), in the years of 2009 and 2010.

Study design and sample

In order to determinate our sample size, it was used the final outcome of treatment of patients, considering an improvement in the GHQ (presence of common mental disorder) – from 55% (reference value found in previous studies[14,15] to 35% (desired value), power of 80% and a statistical significance level of 5%. The teams that were qualified were those indicated by the municipal health secretary as being in need of training. Rio de Janeiro held the largest number of teams qualified. The number of patients of this study was made up by those that had been treated by a qualified team (doctor and nurse) and who had voluntarily accepted to participate in the research project. These patients were gathered from two transversal studies (pre and post qualification periods) with an average of 30 patients per team per period. Patients, from 18 to 65 years old, who had been treated by doctors and nurses, were invited to participate in the study, excepting pregnant women and individuals with a cognitive deficit.

Attention must be called to the fact the predominance of women in the studied population is characteristic of the population which attended in primary care in Brazil, a fact demonstrated in previous studies[5,6,16] reporting that more women look for medical attention than men.

Lastly, 1,466 patients in primary Care made up our sample, N = 909 from Rio de Janeiro and N = 557 from São Paulo. The same research team participated in both cities, following the same research protocol.

Instruments

The following instruments were used in this study:

Sociodemographic questionnaire

This questionnaire was used in previous studies[6,9]. The original instrument includes more data than those used in this study, which are: age, gender, educational level and *per capita* family income. Considering the homogeneity of the sample, it was necessary to work with dichotomized variables so that the existing associations could be detected.

The variable *per capita* monthly family income was dichotomized into "below or equal to 0.5 of the national minimum wage" and "above 0.5 the national minimum wage" so that the influence of extreme poverty over mental health could be studied. This hypothesis had been confirmed in previous studies[6,18], where belonging to the "extremely poor" group was associated with a larger presence of common mental disorders and unexplained somatic symptoms, when compared to those patients of the "not extremely poor" category.

World Health Organization Quality of Life Instrument, brief version (WHOQOL-Bref)

The WHOQOL-bref is an abbreviated version of the World Health Organization Quality of Life Instrument (WHOQOL-100), which is the instrument developed by WHO and validated in Brazil, aiming to assess quality of life (QoL) as a multidimensional construct. The WHOQOL-bref requires little time for implementation and has satisfactory psychometric properties. It contains 26 questions, related to the past two-week period, and is organized in four domains: physical, psychological, social and environmental. The domains's construction (score's calculation) was made according to the syntax proposed by the WHOQOL Group[17].

General Health Questionnaire (GHQ-12)

The General Health Questionnaire (GHQ-12) is an instrument used as a screening test for CMD, created by Goldberg and Blackwell[14] and validated in Brazil[15]. Common mental disorders are "those disorders that are commonly found in communities, whose presence signalizes a modification in relation to normal functioning"[18]. The instrument is comprised of 12 questions, each with four response options, always related to the past two-week period[14]. In this study, the score's calculation was a binary method whereby the two minimum symptomatic answers score 0 and the two most symptomatic answers score 1. The smallest GHQ-12 total score is 0 and the extreme GHQ-12 total score is 12[14,19].

As previously discussed in literature[9,14,15], the GHQ-12 may be used with different cut-off points for considering patients positive for CMD. In primary care, non-specified emotional distress is very common[9,16], requiring cut-off points that can detect all kinds of suffering. Because of that in this article will be considered those patients with three and four points as one group, with Common Mental Disorders (CMD3), and those with five or more points as another, denominated Severe Common Mental Disorders (CMD5).

Hospital Anxiety and Depression Scale (HAD)

The Hospital Anxiety and Depression Scale (HAD) was developed to detect probable cases of depression and/or anxiety within the hospital environment. However, it has been demonstrated that it had the same psychometric properties when used with general population, especially in primary care. The HAD scale, adapted and validated for the Brazilian reality[20], contains 14 questions and is subdivided into two subscales: one for anxiety symptoms and another for depression ones. Each subscale has seven questions, with answers that range from 0 to 3. The total score is the sum of the 14 questions, and for each subscale (anxiety and depression) the score is the sum of the respective seven items (range from 0-21). It is a short and easy-to-fill scale, which patients respond according to what they have felt in the past two weeks. The cut-off score of 8/9 was considered "probable case of anxiety" and "probable case of depression"[20], in each subscale.

Statistical analysis

Data was analyzed using the statistical software Statistical Package for the Social Science (SPSS) 17. Initially, a descriptive

analysis of the variables studied was carried out, measuring the proportions of CMD3, CMD5, "probable case of depression" and "probable case of anxiety". Later, social demographic and economic variables were considered. Furthermore, the mean scores of WHOQOL domains were calculated. Subsequently, a bivariate analysis was undertaken, establishing a 5% confidence level, using WHOQOL domains as outcome and the following variables as the independent ones: gender (male and female); age group (less than or equal to 40, and above 40 years of age); educational level (lower than or equal to 4th grade, and higher than 4th grade elementary school); income (less than or equal to 0.5 the national minimum wage, and above 0.5 the national minimum wage); prevalence of the different types of emotional distress, CMD3, CMD5, probable anxiety and probable depression.

To study the association between socioeconomic and demographic variables, and psychological distress, the chi-square was used, with odds ratios and their respective confidence intervals (CI) of 95%. The t-test was used for the association between categorical variables and the domains of WHOQOL, showing p-values. After that, an analysis with only those respondents positive to any type of mental distress was done, separated according to the mental disorder observed. Average results for quality of life in each of the WHOQOL domains were presented, based on independent analysis variables, and a t-test was carried out to compare means in each domain for each variable of interest.

Ethical aspects

The study was submitted to the Ethics Committee of the municipalities of São Paulo and Rio de Janeiro (nº 34/2009), and their completion was approved and deemed adequate to the population analyzed. All participants in the study signed a Consent Form, stating that their participation was voluntary. It was also clarified to them that the data would be released collectively, ensuring the anonymity of results, in compliance with Resolution 196/96, of the National Health Council.

RESULTS

We surveyed 1,466 patients treated in primary care in the cities of Rio de Janeiro (N = 909) and São Paulo (N = 557). Women were more prevalent (76.7%) and also people above 40 years of age (62.6%). The educational level observed more prevalent was "up to the 4th grade" (elementary school – 66.7%) and 55.9% at most having unconcluded elementary school. As for income, 93% of the respondents reported a monthly *per capita* family income of less than or equal to one and a half minimum wage (US$ 348 in São Paulo and Rio de Janeiro), where 2,6% of the total just received half or less than half the minimum wage (US$ 116 in São Paulo and Rio de Janeiro). The analysis of all patients in these two cities demonstrated that 20.5% had Common Mental Disorders (CMD3), 32% had some severe form of Common Mental Disorder (CMD5), 37% were likely to have Anxiety and 25.1% of them Depression. In the entire sample, females were associated with a larger prevalence of any type of psychological distress, except in the cases of CMD3. Educational and income levels were directly associated with CMD5 (Table 1).

As far as the relation between quality of life and socioeconomic and demographic factors are concerned, lower scores in QoL were found for women, for those aged above 40 years, with an educational level lower than 4th grade and those with a monthly *per capita* family income of half of the minimum wage or less (Table 2).

When relating psychological distress and QoL, there is a reduction in scores in all QoL domains, in the presence of any type of psychological distress, with statistical significance in the total sample and in both cities, except in the cases of CMD3 (Table 3). Moreover, in both city surveyed, the environment domain was the one which presented lower QoL scores.

In regards to the associations between socioeconomic variables, psychological distress and QoL (Table 4) in all cities, it is noteworthy that the physical domain is negatively influenced by all types of psychological distress in those over 40 years of age. In the psychological domain, being a female is associated with lower QoL scores for all types of mental distress, except for CMD5. In cases of CMD3, those with better educational levels had higher scores in the physical and psychological domains.

On the other hand, in specific cases of psychological distress, income and educational levels, behaved differently in relation to quality of life. In cases of probable anxiety, those with higher educational levels had lower QoL scores for the physical domain than those with lower educational levels.

Following the same trend, in the domain of social relation, those individuals with higher education had lower QoL scores for all kinds of distress, where only the cases of probable anxiety and probable depression presented statistical differences.

DISCUSSION

Summary of the results

This study found proportions of CMD3, CMD5, probable cases of depression and anxiety, of 20.5%, 32%, 37% and 25.1%, respectively. In the two cities studied, there was a positive association between psychological distress and the following social determinants: gender, education and income.

Table 1. Proportion of psychiatric morbidity according to socioeconomic characteristics in primary care attenders in Rio de Janeiro and São Paulo (2009/2010)

Characteristics	Rio de Janeiro											
	CMD3 = 20.9%			CMD5 = 31%			Anxiety = 35.4%			Depression = 25%		
	N (%)	OR (IC95%)	p-value	N (%)	OR (IC95%)	p-value	N (%)	OR (IC95%)	p-value	N (%)	OR (IC95%)	p-value
Gender												
Female	158 (83.2%)	0.7 (0.4-1.0)	0.054	245 (86.9%)	**2.3 (1.6-3.4)**	**< 0.001**	268 (83.2%)	**1.6 (1.2-2.3)**	**0.005**	197 (86.8%)	**2.2 (1.4-3.3)**	**< 0.001**
Male	32 (16.8%)	1.0		37 (13.1%)	**1.0**		54 (16.8%)	**1.0**		30 (13.2%)	**1.0**	
Age group												
≤ 40 y.o.	79 (41.6%)	0.9 (0.7-1.3)	0.78	125 (44.3%)	1.2 (0.9-1.7)	0.14	137 (42.5%)	1.25 (0.9-1.5)	0.40	92 (40.5%)	1.0 (0.7-1.3)	0.95
> 40 y.o.	111 (58.4%)	1.0		157 (55.7%)	1.0		185 (57.5%)	1.0		135 (59.5%)	1.0	
Education level												
≤ 4th grade	72 (37.9%)	0.9 (0.6-1.2)	0.38	110 (39%)	1.3 (1.0-1.7)	0.11	121 (37.6%)	1.2 (0.9-1.6)	0.27	86 (37.9%)	1.2 (0.9-1.6)	0.33
> 4th grade	118 (62.1%)	1.0		172 (61%)	1.0		201 (62.4%)	1.0		141 (62.1%)	1.0	
Per capita family income												
≤ 0.5 min. wage	4 (2.3%)	1.4 (0.5-4.1)	0.54	10 (3.9%)	1.5 (0.7-3.3)	0.35	13 (4.5%)	2.0 (0.9-4.5)	0.08	6 (3.0%)	1.0 (0.4-2.4)	0.91
> 0.5 min. wage	167 (97.7%)	1.0		247 (96.1%)	1.0		277 (95.5%)	1.0		197 (97.0%)	1.0	
São Paulo												
Characteristics	**CMD3 = 19.7%**			**CMD5 = 33.6%**			**Anxiety = 39.5%**			**Depression = 25.3%**		
	N (%)	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**
Gender												
Female	80 (72.7%)	1.1 (0.8-1.7)	0.07	161 (86.1%)	**2.9 (1.8-4.7)**	**< 0.001**	181 (82.3%)	**2.1 (1.4-3.2)**	**< 0.001**	119 (84.4%)	**2.3 (1.4-3.7)**	**0.001**
Male	30 (27.3%)	1.0		26 (13.9%)	**1.0**		39 (17.7%)	**1.0**		22 (15.6%)	**1.0**	
Age group												
≤ 40 y.o.	30 (27.3%)	1.3 (0.8-2.1)	0.22	54 (28.9%)	0.8 (0.5-1.2)	0.24	70 (31.8%)	1.0 (0.7-1.4)	0. 90	39 (27.7%)	0.8 (0.5-1.1)	0.19
> 40 y.o.	80 (72.7%)	1.0		133 (71.1%)	1.0		150 (68.2%)	1.0		102 (72.3%)	1.0	
Education level												
≤ 4th grade	34 (30.9%)	1.0 (0.6-1.5)	0.85	64 (34.2%)	1.3 (0.9-2.0)	0.14	74 (33.6%)	1.3 (0.9-1.9)	0.15	50 (35.5%)	1.4 (0.9-2.1)	0.11
> 4th grade	34 (30.9%)	1.0		123 (65.8%)	1.0		146 (66.4)	1.0		91 (64.5%)	1.0	
Per capita family income												
≤ 0.5 min. wage	2 (2.0%)	0.9 (0.2-4.3)	0.87	3 (1.9%)	1.1 (0.3-4.4)	0.91	4 (2.1%)	1.3 (0.4-5.0)	0.68	4 (3.4%)	2.6 (0.7-9.8)	1.0
> 0.5 min. wage	98 (98.0%)	1.0		154 (98.1%)	1.0		184 (97.9%)	1.0		115 (96.6%)	1.0	
Total												
Characteristics	**CMD3 = 20.5%**			**CMD5 = 32%**			**Anxiety = 37%**			**Depression = 25.1%**		
	N (%)	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**	**N (%)**	**OR (IC95%)**	**p-value**
Gender												
Female	238 (79.3%)	0.8 (0.6-1.1)	0.19	406 (86.6%)	**2.5 (1.9-3.4)**	**< 0.001**	449 (82.8%)	**1.8 (1.4-2.4)**	**< 0.001**	316 (85.9%)	**2.1 (1.6-3.1)**	**0.001**
Male	62 (20.7%)	1.0		63 (13.4%)	**1.0**		93 (17.2%)	**1.0**		52 (14.1%)	**1.0**	
Age group												
≤ 40 y.o.	109 (36.3%)	1.1 (0.8-1.4)	0.64	179 (38.2%)	1.2 (1.0-1.4)	0.70	207 (38.2%)	1.1 (0.8-1.3)	0.65	131 (35.6%)	0.8 (0.7-1.1)	0.40
> 40 y.o.	191 (63.7%)	1.0		290 (61.8%)	1.0		335 (61.8%)	1.0		237 (64.4%)	1.0	
Education level												
≤ 4th grade	106 (35.3%)	0.9 (0.7-1.2)	0.40	174 (37.1%)	**1.3 (1.0-1.6)**	**0.034**	196 (36.2%)	1.2 (1.0-1.5)	0.12	137 (37.2%)	1.2 (1.0-1.6)	0.09
> 4th grade	194 (64.7%)	1.0		295 (62.9%)	**1.0**		346 (63.8%)	1.0		231 (62.8%)	1.0	
Per capita family income												
≤ 0.5 min. wage	6 (2.2%)	1.2 (0.5-2.9)	0.66	13 (3.1%)	1.3 (0.7-2.7)	0.39	17 (3.6%)	1.8 (0.9-3.5)	0.09	10 (3.1%)	1.3 (0.6-2.7)	0.50
> 0.5 min. wage	265 (97.8%)	1.0		401 (96.9%)	1.0		461 (96.4%)	1.0		312 (96.9%)	1.0	

Note 1: min. wage = national minimum wage of the reference year (2009 in Rio de Janeiro and São Paulo).
Note 2: in bold are the results in which p-value < 5% in the chi-square test.

Table 2. Mean scores of quality of life based on socioeconomic characteristics in primary care attenders in Rio de Janeiro and São Paulo (2009/2010)

Socioeconomic characteristics	Quality of life			
	Physical	Psychological	Social relations	Environment
Rio de Janeiro				
Gender				
Female	**64.7***	**63.2***	69.3	**48.1***
Male	**68.2***	**69.6***	71.4	**52.0***
Age group				
≤ 40 y.o.	**67.5***	64.0	70.6	**47.8***
> 40 y.o.	**64.0***	65.0	69.1	**49.7***
Education level				
≤ 4th grade	**63.0***	**62.3***	69.4	48.3
> 4th grade	**66.8***	**65.9***	69.9	49.3
Per capita family income				
≤ 0.5 min. wage	65.7	62.5	63.1	47.5
> 0.5 min. wage	65.3	64.5	70.1	49.0
São Paulo				
Gender				
Female	**62.1***	**62.4***	65.6	**48.4***
Male	**67.5***	**67.6***	68.9	**52.4***
Age group				
≤ 40 y.o.	**69.3***	**66.8***	**69.4***	**51.0***
> 40 y.o.	**60.8***	**62.3***	**65.1***	**48.7***
Education level				
≤ 4th grade	**58.9***	**59.9***	66.3	47.8
> 4th grade	**65.6***	**65.4***	66.6	50.1
Per capita family income				
≤ 0.5 min. wage	54.2	67.6	63.9	49.7
> 0.5 min. wage	64.4	64.2	67.0	49.6
Total				
Gender				
Female	**63.7***	**62.8***	**67.9***	**48.2***
Male	**67.9***	**68.7***	**70.3***	**52.2***
Age group				
≤ 40 y.o.	**68.1***	64.9	**70.2***	48.8
> 40 y.o.	**62.7***	63.9	**67.4***	49.3
Education level				
≤ 4th grade	**61.9***	**61.4***	68.3	**48.1***
> 4th grade	**66.3***	**65.7***	68.6	**49.6***
Per capita family income				
≤ 0.5 min. wage	62.7	63.8	63.3	48.1
> 0.5 min. wage	65.0	64.4	68.9	49.2

Note 1: min. wage = national minimum wage of the reference year (2009 in Rio de Janeiro and São Paulo).
Note 2: boldface type and asterisks show the comparison of means where p-value < 5% in the t-test.

Table 3. Mean scores of quality of life based on psychiatric morbidity in primary care attenders in Rio de Janeiro and São Paulo (2009/2010)

Quality of life's domains	Psychic distress							
Rio de Janeiro (N = 909)	CMD3 (*)		CMD5		Anxiety		Depression	
	Yes	No	Yes	No	Yes	No	Yes	No
Physical	63.9	65.8	54.1	70.5	56.1	70.6	55.1	68.9
Psychological	64.2	64.7	52.3	70.2	54.1	70.4	51.0	69.2
Social relations	68.7	70.0	62.1	73.2	63.9	72.9	63.1	71.9
Environment	48.6	49.0	42.0	52.0	43.4	52.0	41.4	51.4
São Paulo (N = 557)	CMD3 (*)		CMD5		Anxiety		Depression	
	Yes	No	Yes	No	Yes	No	Yes	No
Physical	63.1	63.6	50.3	70.2	53.9	69.8	49.1	68.4
Psychological	65.4	63.3	51.9	69.7	54.4	69.9	48.0	69.1
Social relations	70.0	66.4	56.9	71.3	58.5	71.7	55.8	70.1
Environment	48.0	50.0	43.0	52.7	43.5	53.3	40.4	52.5
Total	CMD3 (*)		CMD5		Anxiety		Depression	
	Yes	No	Yes	No	Yes	No	Yes	No
Physical	63.6	65.5	52.6	70.4	55.2	70.3	52.8	68.7
Psychological	64.7	64.2	52.1	70.0	54.2	70.2	49.8	69.1
Social relations	68.1	68.6	60.0	72.5	61.7	72.5	60.3	71.2
Environment	48.4	49.3	42.4	52.3	43.4	52.5	41.0	51.8

Note 1: asterisks (only to CMD3 – yes/no) shows the comparison of means where p-value > 5% in the t-test.

Table 4. Mean scores of quality of life based on psychiatric morbidity and socioeconomic characteristics in primary care attenders in Rio de Janeiro and São Paulo (2009/2010)

Socioeconomic characteristics	Quality of life			
	Physical	Psychological	Social relations	Environment
CMD3				
Gender				
Female	63.2	**63.6***	68.2	47.7
Male	65.2	**68.9***	67.8	51.0
Age group				
≤ 40 y.o.	**66.4***	65.8	68	47.8
> 40 y.o.	**62.0***	64	68.1	48.7
Education level				
≤ 4th grade	**61.1***	**62.1***	69.8	48.1
> 4th grade	**65.0***	**66.1***	67.1	48.5
Per capita family income				
≤ 0.5 min. wage	52.4	68.1	68.1	43.2
> 0.5 min. wage	64.1	64.5	67.8	48.2
CMD5				
Gender				
Female	53.0	52.0	60.5	42.3
Male	50.0	52.5	56.9	43.0
Age group				
≤ 40 y.o.	**57.9***	53.5	**62.2***	43.1
> 40 y.o.	**49.4***	51.2	**58.6***	42.0
Education level				
≤ 4th grade	51.2	52.0	61.9	43.1
> 4th grade	53.5	52.2	58.9	42.0
Per capita family income				
≤ 0.5 min. wage	56.3	52.2	**50.4***	41.2
> 0.5 min. wage	52.6	52.0	**60.6***	42.5
ANXIETY				
Gender				
Female	**54.5***	**53.2***	61.9	43.1
Male	**58.4***	**59.1***	60.4	45.0
Age group				
≤ 40 y.o.	**59.5***	**56.1***	63.0	43.8
> 40 y.o.	**52.5***	**53.0***	60.9	43.2
Education level				
≤ 4th grade	**59.5***	56.1	**63.0***	43.8
> 4th grade	**52.5***	53.0	**60.9***	43.2
Per capita family income				
≤ 0.5 min. wage	59.0	59.6	59.1	45.0
> 0.5 min. wage	55.3	53.9	61.8	43.2
DEPRESSION				
Gender				
Female	52.6	**49.1***	60.6	40.8
Male	53.7	**54.0***	58.7	42.5
Age group				
≤ 40 y.o.	**58.0***	**52.5***	62.1	41.1
> 40 y.o.	**49.9***	**48.3***	59.3	41.0
Education level				
≤ 4th grade	51.3	48.0	**64.4***	42.5
> 4th grade	53.7	50.9	**57.9***	40.2
Per capita family income				
≤ 0.5 min. wage	58.2	53.3	55.8	46.6
> 0.5 min. wage	52.8	49.7	60.8	41.0

Note: boldface type and asterisks show the comparison of means where p-value < 5% in the t-test.

The presence of any type of psychological distress is associated with worse QoL in the two municipalities. No statistical differences were found in CMD3 cases. However, when stratified according to the socioeconomic variables, there is a change in QoL, with variations depending on the type of distress.

In all kinds of distress, the physical domain was negatively influenced by the individual's age being over 40 years. In probable cases of anxiety, educational levels higher than 4th grade (elementary school) were associated with a reduction in physical domain scores. Finally, higher educational levels were associated with lower scores in the domain of social relationships for all kinds of distress, where only probable anxiety and depression cases presented statistical differences.

Results in the context of the wider literature

The prevalence of psychological distress found is similar to that found in national and international studies of specific populations, such as health students and patients in health care units[21-24]. It is important to highlight that the prevalence of psychological distress found concerns a population treated by the health service. Considering QoL, it was found that individuals in psychological distress have statistically significant lower mean scores, except for CMD3 cases. This fact shows the influence, on the individuals' lives, of well determined cases of mental disorders such as depression. A study done in the south of Brazil showed that depression found in patients of a university hospital was the most important factor for predicting a reduction in scores in all domains considered. The severity of the symptoms and their treatment were also circumstances that could directly affect quality of life[25]. Thus, it becomes important to assess the influence of socioeconomic factors on the QoL of people in psychological distress. Galvão *et al.* also demonstrated that, in the presence of mental disorders, QoL scores can be lowered by certain socioeconomic factors such as female gender, low educational and income levels[26]. On the other hand, the environment domain has an element about socioeconomic factors, for example financial resources, that may influence the lower scores of QoL found in this study when we investigate the association between low education, low income and quality of life.

Accordingly, this study found worse scores in the psychological domain for women in the presence of all types of psychological distress. Generally, women's self-assessment of their health status is the worst, this being attributed to women's greater awareness of illnesses and symptoms[27], consequently generating lower QoL for them, in any domain[28].

Another point is the association found between older age and lower QoL scores in the physical domain, which is probably attributable to the onset of chronic diseases in this age group[29]. Moreover, the aging process itself generates physical impairment and dissatisfaction with one's health, leading to worse QoL assessment.

It was also found that those with an educational level higher than 4th grade (elementary school) had worse QoL in terms of social relationships in the presence of any type of psychological distress. In WHOQOL-Bref, the social relationship domain is composed of three facets, one being social support[30]. "Social support" is understood as any assistance among people who know one another, resulting in positive emotional effects. Thus, it acts as an important psychosocial factor, generating greater life satisfaction[31]. Carneiro *et al.*[32] report that social isolation is frequently associated with patients in psychological distress since, as far as society is concerned, they would not be capable of carrying out their daily activities and maintaining interpersonal relations. Understanding that social support generates better QoL scores[32], our results may suggest that, among those in psychological distress with higher educational levels, the negative influence of psychological distress, together with social isolation, might be more accentuated.

Strengths and limitations of the research

Even though quality of life is a much studied topic, it is still little explored when it comes to the association between emotional distress and primary care, as addressed in this paper. This study examined QoL in two different municipalities, making the results even stronger, and demonstrating that, in addition to psychological distress, social determinants also influence QoL.

Among its limitations, it is important to mention its cross-sectional nature, admitting that the phenomenon of reverse causality may have occurred here, as it has not been possible to say that the chosen outcome (QoL) has been caused by the independent variables.

Besides, GHQ-12 and HAD were instruments used to track down mental disorders, that is, they only measured psychiatric symptoms that pointed out probable cases of different types of psychological suffering but did not provide a diagnosis based on a reference definition, such as DSM-IV or ICD-10. This fact may cause the appearance of false-positive results and, consequently, an increase of the prevalence of emotional distress. On the other hand, patients suffering from emotional distress are frequently treated in PC units, thus it being important to identify probable cases of mental disorders as early as possible[33]. Besides that, this study is not of a community, but that of a service. It consists of patients attending consultations in FHS units, who represent our population of interest.

Implications for service delivery

The prevalence of psychological distress found, shows the importance of developing strategies to deal with this public health problem. Primary care takes a leading role in facing

this situation since its objective is to offer integral approach[34]. Based on that, qualification of primary care professionals is an important aspect in the development of strategies for the care of these patients, including not only the treatment itself but also disease prevention and health promotion interventions. This way, professionals need apply this integrative practice, bringing about early diagnosis and treatment specifically adapted to each individual, will help minimize the influence of mental disorders on these individuals' life conditions as well as help to improve QoL[16].

In this study, we found that the presence of psychological distress and worse QoL occur simultaneously. However, when considering the influence of socioeconomic factors, it is possible to notice significant differences in mean scores for QoL domains, depending on the type of distress. This negative interaction between emotional distress and socioeconomic factors in the perception of quality of life may suggest that the reduction of social inequality may positively influence mental health and quality of life. It is important to highlight that QoL domains, especially the environmental one, are influenced by macro-social issues such as safety, financial resources, leisure, transportation and others[35], making the perception of QoL possible dependent on socioeconomic factors.

In addition, QoL instruments are currently used to assess the effectiveness of therapeutic interventions[36], especially in primary care. QoL assessment helps identify difficult and problematic issues for the patients. In the case of chronic illnesses, such as psychiatric ones, it helps both the patient and the professional to create strategies to overcome these problems. The multidimensional nature of both QoL and mental health, influenced by socioeconomic aspects, creates the need for multifaceted approaches to address this issue, demanding that health services use multisectoral and multidisciplinary strategies.

CONCLUSION

Perception of health is built individually, influenced by the patients' subjective and socio cultural context that affect their illnesses and, consequently, their quality of life. Data from this study indicate that psychological distress is associated with lower quality of life, which is also influenced by socioeconomic factors.

Besides mental disorders, this study showed how social determinants (SD) are associated with quality of life and determinant factors, such as socioeconomic, cultural, psychological ones, that interfere in health conditions. These SD become a great political challenge. So, the need for public investments in order to minimize social inequities becomes notorious. But it is also known that changes in a micro level can themselves contribute to bring about modifications in this reality. Professionals that know well and understand the profile of the population they deal with are able to build strategies that can develop better QoL, such as structuring patient-centered care, which involves a patient's life context. In this way, it is possible to structure better ways to prevent, promote and care for patients in emotional distress, including those with mental disorders, based on the social reality of each individual.

INDIVIDUAL CONTRIBUTIONS

Flávia Batista Portugal – Contributed in study design, analysis of results, drafting of the article and approved its final version.

Mônica Rodrigues Campos – Contributed in study design, analysis of results and preparation of the article and approved its final version.

Daniel Almeida Gonçalves – Contributed in study design, in data collection, the preparation of the article and approved its final version.

Jair de Jesus Mari – Contributed in designing the study, revising it and approved its final version.

Linda Gask – Contributed in designing the study, revising it and approved its final version.

Peter Bower – Contributed in designing the study, revising it and approved its final version.

Christopher Dowrick – Contributed in designing the study, revising it and approved its final version.

Sandra Fortes – Contributed in study design, in data collection, analysis of results, drafting of the article and approved its final version.

CONFLICT OF INTERESTS

The authors declare no conflicts of interest.

RESEARCH BUDGET

Sandra Fortes – Projeto Avaliação de um modelo de capacitação em saúde mental na atenção básica: cuidados integrais na prática do matriciamento – 575194/2008-1 – Edital MCT/CNPq/CT-Saúde/MS/SCTIE-DCIT – no33/2008 Flávia Batista Portugal – Bolsista de doutorado do CNPq.

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