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Quality of Life, Integrative Community Therapy, Family Support, and Satisfaction with Health Services Among Elderly Adults with and without Symptoms of Depression

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Abstract The aim of this cross-sectional study was to analyse quality of life, socio-demographic characteristics, family support, satisfaction with health services, and effect of integrative community therapy among non-institutionalised elderly adults with and without symptoms of depression in the state of Rio Grande do Norte, Brazil. Data from elderly adults with ($n = 59$) and without ($n = 61$) depressive symptoms were compared. The instruments used were the Mini-Mental State Examination, the short version of the Geriatric Depression Scale, a clinical socio-demographic questionnaire, the abbreviated

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version of the World Health Organisation Quality of Life questionnaire, the Family Assessment Device, and the Patient Satisfaction with Mental Health Services Rating Scale. Elderly adults with depressive symptoms had lower quality of life in the social relations domain than did those without depressive symptoms ($p = 0.003$). In addition, compared with those without depression, fewer elderly adults with depressive symptoms attended integrative community therapy ($p = 0.04$); they also reported a low degree of family involvement in problem solving ($p = 0.04$) and showed apathy regarding their satisfaction with health services ($p = 0.007$). These results have important implications in the decision-making process with regard to strategies for improving the health status of elderly adults with depressive symptoms.

Keywords Depression · Quality of life · Integrative community therapy · Elderly adult

Introduction

The decline in the fertility rate in Brazil in the last decade has had profound implications on the demographic trends, with data showing an increase in the number of elderly people [1]. Demographic changes have brought the need for new public policies for Brazil's elderly population, and a new perspective for the diagnosis and treatment of diseases in this population [2].

One of the higher-incidence diseases in the elderly population is depression. Almost 14 % of community-dwelling older adults worldwide are estimated to have clinically relevant symptoms of depression. The recognition of depression in elderly adults is not always easy [3]. Given the difficulty of tracking patients with depression, cases are under-reported, which may lead to significant losses for patient health and the development of health policies. The Geriatric Depression Scale (GDS) is one of the most frequently used tools worldwide to track depression in elderly adults in clinical and research settings [4–7].

Risk factors that can cause worsening of depression in elderly adults include socio-economic factors, patient satisfaction with health services, and family relationships, which, in turn, may compromise elderly adults' quality of life [8, 9]. Therapeutic innovations should also be considered for elderly patients. Among the therapeutic innovations offered to health service users in Brazil is integrative community therapy [10]. According to Carvalho et al. [11], integrative community therapy allows patients to understand situations clearly and to vent emotions and feelings; it creates opportunities for them to speak and improves their ability to face the challenges of dealing with psychological distress and its social consequences. The aim of this study was to investigate quality of life; social, economic, and clinical factors; familiary support; and satisfaction with health services in non-institutionalised older adults with and without depression.

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Material and Methods

Study Design

This cross-sectional study was conducted among elderly (age ≥60 years) outpatients of the Centro Especializado de Atenção a Saúde do Idoso (CEASI) and Centros de Atenção Psicosocial (CAPS), Natal, RN, Brazil, in 2013–2016.

Inclusion Criteria

Individuals eligible for study participation were aged ≥ 60 years and provided written informed consent after the data collection procedure had been explained to them.

Exclusion Criterion

Seniors with Mini-Mental State Examination scores below the following thresholds according to education level were excluded from the study: ≥11 points for illiterate individuals, ≥ 22 points for those with 1–11 years of education, and the same score or largest 27 points for those with >11 years of education.

Mini-Mental State Examination

The Mini-Mental State Examination is a widely used brief instrument for the evaluation of global cognitive dysfunction [13]. It can be used to detect and track cognitive decline [14]. The test assesses cognitive aspects such as spatial and temporal orientation, immediate memory and recall, calculation ability, language/naming ability, repetition ability, comprehension, writing ability, and constructive skill. Scores should be ≥ 11 points for illiterate individuals, ≥ 22 points for those with 1–11 years of education, and the same score or largest 27 points for those with > 11 years of education.

Geriatric Depression Scale

The GDS is among the instruments used most frequently to screen for depression in elderly adultsFirst described by Yesavage et al. [4], the original 30-item English-language scale was developed to screen for mood disorders (while avoiding responses related to somatic complaints) in elderly adults. Among its advantages are the readily understood questions, small range of variation in possible answers, and flexible administration method (self-administration or administration by a trained interviewer).

Sheikh and Yesavage [15] developed a short version of the GDS, which consists of the 15 items related most strongly to the diagnosis of depression. This scale has shown good diagnostic accuracy, with adequate sensitivity, specificity, and reliability [16]. The short version of the GDS is useful for the tracking of mood disorders in general outpatient clinical populations and other non-specialised settings because its administration requires less time. The case group consisted of elderly individuals with GDS scores ≥ 5 and the control group consisted of elderly individuals with GDS scores < 5.

Study Groups

Study groups were defined by tracking elderly people who met the inclusion criteria and agreed to participate in the study. The case group consisted of elderly individuals with GDS scores ≥ 5 (indicating the presence of depression symptoms), and the control group consisted of elderly individuals with GDS scores < 5 (indicating the absence of depression symptoms).

Sample Size Calculation and Sampling

To calculate the appropriate sample size, we used a 95 % confidence interval and a 15 % tolerable sampling error. Considering the infinite population and the 42.9 % prevalence of depression among elderly adults [17], the following formula was used:

$$n = z_{\alpha/2}^2 P(1-P)/\varepsilon^2$$

where n is the sample size, $z_{\alpha/2}$ is the confidence interval, P is the prevalence, and ε is the tolerable sampling error. According to this calculation, the required sample size was 41.2 patients, which we increased by approximately 20 % -DEFF (DEFF is the design effect, which is an adjustment that should be used to determine survey sample size). We thus aimed to include 50 participants with depression and 50 participants without depression. Non-probability convenience sampling was used to select individuals from among those waiting for care at the participating centres.

Data Collection Instruments

Trained and calibrated researchers administered the following questionnaires during interviews.

Clinical Socio-Economic Survey

A clinical socio-economic survey [8] was used to collect information about participants' age, sex, place of residence, type of housing, education, marital status, income, and medical condition (depression diagnosis, comorbidities such as hypertension, diabetes, and high cholesterol level).

World Health Organisation Quality of Life–BREF Questionnaire

The abbreviated version of the World Health Organisation Quality of Life questionnaire (WHOQOL-BREF) is used to assess quality of life. Fleck et al. [18] translated the instrument into Brazilian Portuguese and validate it in a Brazilian population. This instrument has 26 items: two general questions about quality of life and satisfaction with health and 24 questions in the physical, psychological, environmental, and social relations domains. Average domain scores are calculated, with higher scores indicating better quality of life.

Family Assessment Device

The Family Assessment Device (FAD) was developed to assess six dimensions of family functioning according to the McMaster model [19]. The 60-item FAD is divided into seven

scales used to assess problem solving, communication, family function, affective responses, affective involvement, behavioural control, and overall family functioning [20]. The FAD has been used widely in research and clinical practice to identify families with problems and specific problematic areas. Average scale scores are calculated, with higher scores indicating worse family functioning.

Patient Satisfaction with Mental Health Services Rating Scale

The abridged version of the Patient Satisfaction with Mental Health Services Rating Scale (SATIS-BR) was developed by the Mental Health Division of the World Health Organisation and has been validated in a Brazilian population [21]. This multidimensional scale consists of two subscales: satisfaction with healthcare professionals and satisfaction with the health service. The abbreviated version of the SATIS-BR consists of 12 quantitative items that are used to calculate the degree of health service users' satisfaction by assessing perceived competence and understanding of the health professional team, team's attendance to the user's problem, welcoming nature and help provided by the staff, condition of the physical facilities, and comfort of the health service setting. Responses are structured by a 5-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied) [21].

Data Analysis

Socio-demographic and clinical variables of the case and control groups were compared using the chi-squared test and analysis of variance (ANOVA). WHOQOL-BREF, FAD, and SATIS-BR scores were compared using ANOVA. P values < 0.05 were considered to be significant.

Results

The study sample consisted of elderly adults who attended the health services offered by CEASI and CAPS of the city of Natal, RN, Brazil. Of 300 elderly adults approached, three were excluded because their Mini-Mental State Examination scores fell below the thresholds for their education levels and 182 refused participation. 54 elderly patients with symptoms of depression and 61 elderly patients without symptoms of depression were recruited.

The mean ages of participants in the case ($n = 54$) and control ($n = 61$) groups were 71.4 (standard deviation [SD] 7.73) years and 72.98 (SD 6.96) years, respectively ($p = 0.418$).

The case group was composed of 85.18 % women and the control group consisted of 81.97 % women ($p = 0.418$). The majority of participants in both groups had elementary-school education levels (case group, 64.8 %; control group, 62.3 %; $p = 0.932$). Most participants were retired (case group, 88.9 %; control group, 75.4 %; $p = 0.173$). Homes were the predominant type of residence (case group, 81.5 %; control group, 89.8 %; $p = 0.158$), and most individual ($p = 0.862$) and family ($p = 0.123$) incomes fell between one and two times the minimum wage (Table 1).

The proportion of participants with physician-confirmed diagnoses of depression differed significantly between groups (case group, 51.85 %; control group, 27.87 %;

Table 1 Socio-demographic characteristics of elderly adults who attended health services offered by CEASI and CAPS Natal, RN, Brazil	Characteristic	Cases		Controls		p
		n	%	n	%	
	Sex					
	Female	46	85.18	50	81.97	0.418
	Male	8	14.82	11	18.03	
	Education					
	Illiterate	9	16.7	10	16.4	0.932
	Elementary school	35	64.8	38	62.3	
	High school	10	18.5	13	21.3	
	Occupation					
	Working	1	1.85	3	4.9	0.173
	Retired	48	88.9	46	75.4	
	Other	5	9.25	12	19.7	
	Marital status					
	Married	25	46.3	28	45.9	0.996
	Single	12	22.2	14	22.9	
	Widowed	17	31.5	19	31.2	
	Type of housing					
	Own	44	81.5	53	89.8	0.158
	Lease	10	18.5	6	10.2	
	Individual income					
	0–1 minimum wage	3	5.55	4	6.9	0.862
	1–2 minimum wages	49	90.75	53	91.4	
	3–4 minimum wages	2	3.7	1	1.7	
	Family income					
	1–2 minimum wages	38	70.4	51	85	0.123
	3–4 minimum wages	16	29.6	7	11.7	
	5 minimum wages			2	3.3	

$p = 0.007$; Table 2). Of 24 patients in the case group with such diagnoses, only 9 were taking antidepressants drugs. The presence of comorbidities did not differ significantly between groups. All participants claimed to have access to health consultation services; 42.6 % of patients in the case group and 60.65 % of those in the control group participated in integrative community therapy at the health centres ($p = 0.040$; Table 2).

Average scores on the two general questions of the WHOQOL-BREF about quality of life and satisfaction with health in the control and case groups were 3.64 (SD 0.66) and 3.59 (SD 0.87), and 3.48 (SD 0.69) and 3.29 (SD 0.96), respectively ($p = 0.494$; Table 3). In the case group, the domain with the lowest average score was social relations, which differed significantly from the score in the control group ($p < 0.003$).

FAD administration was introduced into the study protocol in January 2015, when the need to assess relationships between elderly participants and their families was realised. Although the FAD could be administered to some elderly people who had completed questionnaires previously, it could not be applied to the entire sample, due to lack of contact, lack of return to the health centres, or refusal. FAD data were collected from 34 subjects in the case group and 61 subjects in the control group.

Table 2 Clinical characteristics of elderly adults who attended health services offered by CEASI and CAPS of Natal, RN, Brazil

Variables	Cases		Controls		p
	n	%	n	%	
Diagnosis of depression					
Yes	28	51.85	17	27.87	0.007*
No	26	48.15	44	72.13	
Antidepressant drugs					
Yes	9	39.15	7	18.9	0.079
No	14	60.85	30	81.1	
Comorbidities					
Hypertension	24	52.17	23	46	0.933
Diabetes	1	2.18	1	2	
High cholesterol	2	4.35	2	4	
Hypertension, diabetes and/or cholesterol	19	41.3	24	48	
Access to consultation					
Yes	61	100	54	100	
No	0	0	0	0	
Attends integrative community therapy					
Yes	23	42.6	37	60.65	0.040*
No	31	57.4	24	39.35	

*$p < 0.05$

Table 3 Mean WHOQOL-BREF scores of elderly adults who attended health services offered by CEASI and CAPS east and west of Natal, RN, Brazil

Facet/domain	Cases n = 54	Controls n = 59	p
Quality of life	3.48 ± 0.69	3.64 ± 0.66	0.494
Satisfaction with health	3.29 ± 0.96	3.59 ± 0.87	0.179
Domain 1: physical	3.16 ± 0.71	3.51 ± 0.69	0.936
Domain 2: psychological	3.85 ± 2.22	3.85 ± 0.51	0.197
Domain 3: environment	3.26 ± 0.58	3.49 ± 0.54	0.760
Domain 4: social relations	3.53 ± 0.82	3.85 ± 0.53	0.003*

Data are presented as means ± standard deviations. *$p < 0.05$

Scores for the troubleshooting facet were significantly lower in the control group than in the case group ($p = 0.040$; Table 4).

The mean SATIS-BR score reflecting satisfaction with local health services was significantly lower in the control group (2.92 ± 0.8;) than in the case group (3.03 ± 1.04; $p = 0.007$; Table 5).

Table 4 Mean FAD scores of elderly adults who attended health services offered by CEASI and CAPS east and west of Natal, RN, Brazil

Facet	Cases n = 34	Controls n = 61	p
Problem solving	2.09 ± 0.70	2.04 ± 0.54	0.040*
Communication	2.16 ± 0.44	2.09 ± 0.46	0.897
Function	2.40 ± 0.61	2.44 ± 0.46	0.068
Affective responses	2.35 ± 0.43	2.39 ± 0.42	0.960
Emotional involvement	2.89 ± 0.59	2.72 ± 0.49	0.142
Behavioural control	2.26 ± 0.37	2.31 ± 0.30	0.390
General functioning	2.04 ± 0.37	2.14 ± 0.29	0.230

Data are presented as means ± standard deviations. *p < 0.05

Table 5 Mean SATIS-BR scores of elderly participants who attended health services offered by CEASI and CAPS east and west of Natal, RN, Brazil

Facets	Cases n = 53	Controls n = 59	p
Satisfaction with staff	4.22 ± 0.51	4.25 ± 0.49	0.732
Satisfaction with welcome	4.22 ± 0.54	4.29 ± 0.58	0.564
Satisfaction with local service	3.03 ± 1.04	2.92 ± 0.80	0.007*

Data are presented as means ± standard deviations. *p < 0.05

Discussion

The ageing of the Brazilian population has implications for public policy. The National Policy for the Elderly Act 8842 was enacted in 1994 in Brazil and regulated by Decree no. 194 [2]. Its aim was to ensure the social rights of elderly adults by creating conditions to promote their autonomy and their integration and effective participation in society. It gave the family, the society, and the state the duty to ensure that elderly adults retained all rights of citizenship by ensuring their participation in the community and defending their dignity, well-being, and right to life. Among the responsibilities of public bodies and entities are to ensure that elderly adults have access to health care at different levels within the Unified Health System; to conduct studies to detect epidemics of certain diseases in the elderly population with the aims of prevention, treatment, and rehabilitation; and to create alternative health services for the elderly population.

Although it is the responsibility of the state, screening for depression in the elderly population is not a common practice in health services in Brazil. In this study, 54 of 115 (46.95 %) of elderly adults were diagnosed with depression according to GDS scores. Only 51.85 % of these 54 patients had physician-confirmed diagnoses. The data show that depression is currently overlooked in the elderly population of Brazil.

Almeida et al. [22] emphasised that the use of the GDS enables prompt identification of cases suspicious for depression and prevention of the worsening of the disorder. Treatment of mild to moderate depression can be initiated in the core network, and severe cases can be referred to a speciality centre for mental health care.

Alternative therapies can contribute to the alleviation of depression. In the present study, integrative community therapy appeared to play a significant role, as most patients who participated in this therapy were in the control group, without symptoms of

depression. The Integrative Community Therapy appeared in 1986 in the community of Pirambú, one of the largest slums of Fortaleza City, Brazil, in response to a growing demand for individuals with psychological distress seeking legal support by the Project in Support of Human Rights shanty town. It is a methodological construction psychiatrist, anthropologist and university professor Dr. Adalberto Paula Barreto, to meet the health needs of the population of that community. Integrative community therapy was introduced as a social inclusion strategy to support the mental health of the population. It is a form of care technology that has given satisfactory answers to those who benefit from being more an instrument of work, which can be used by health professionals in coping with the emergence of everyday situations involving suffering. Through this therapy, these professionals and involved community members can better understand the sources of problems and develop strategies that allow for direct action to promote health [23].

In a study conducted among institutionalised elderly patients, those with symptoms of depression, according to WHOQOL-BREF scores, had less control than did patients without such symptoms over physical, psychological, social, and environmental variables [8]. In the present study, non-institutionalised elderly adults with symptoms of depression according to WHOQOL-BREF scores had less control than those without such symptoms over social variables. These discrepant findings point to the devastating effects of the institutionalisation process, which may compromise all aspects of quality of life in all aspects. In addition, the evidence of impaired social relationships among non-institutionalised elderly adults with symptoms of depression signals the need for policies to integrate individuals within their social environments.

Family support is essential, not only for the ageing process, but also for coping with depression in this stage of life. The lack of family support appears to be a risk factor for the worsening of depression in elderly adults [8]. A significant number of elderly adults with symptoms of depression in the present study reported their families' no participation in problem solving, which may exacerbate depression.

SATIS-BR scores showed that individuals without symptoms of depression expressed significantly less satisfaction with local health services. Elderly people with depression symptoms appear to be apathetic and indifferent to public health service. Apathy is a common feature of late-life depression, and the results of this study suggest that more focused study is warranted to improve apathy and depression outcomes [24]. Apathy is a main feature of moderate to severe depressive illness in elderly patients, and is related to the negative symptoms of the disorder [25].

Conclusion

The results of this study point to the need for screening of elderly adults to identify symptoms of depression and initiate treatment in primary care or referral centres. Elderly adults with symptoms of depression showed impaired quality of life in the arenas of social relations and family support.

Research Involving Human Participants Participants and their family members provided written informed consent. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards [12], (The study protocol no. 300.766-was approved by Research Ethics Committees/UFRN).

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