The Primary Care Frequent Attender Profile

Perfil do Hiperfrequentador nos Cuidados de Saúde Primários

ARTIGO ORIGINAL

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ABSTRACT

Introduction: Frequent attenders are believed to represent a problem in Primary Care, with human, economic and social impact. The present study aimed to describe these patients' sociodemographic and pathological characteristics.

Material and Methods: A cross-sectional study with analytical component was conducted in the population of frequent attenders in a Portuguese Primary Health Care Practice, between January 2007 and December 2009, allocated to six General Practitioners. Sociodemographic characteristics as well as data related to physical and mental illness were collected from clinical records. Associations between variables were tested with χ-*square* and *t-test*. The top quartile of frequent attenders was compared with the remaining population. The adopted significance level was 0.05.

Results: Of the 582 individuals evaluated, with a mean age of 55.4 years (men 58.6 and women 54.3; $p = 0.006$), 85% had chronic physical illness and 42% had chronic psychiatric illness. In the upper quartile of frequent attenders was observed a higher prevalence of chronic psychiatric illness ($p < 0.001$), as well as multiple pathology ($p = 0.01$), when compared to the remaining population. Individuals with physical illness were older (mean age: 58.0 years vs 40.1 years; $p < 0.001$) while those with chronic psychiatric illness were younger (mean age 53.7 years vs 56.6; $p = 0.035$).

Discussion: It was drawn a profile of the frequent attender consistent with international literature, at a time when there are no studies in Portuguese Primary Care settings. Information and selection bias were detected and minimized. In order to discriminate between frequent attenders, the upper quartile was compared with the remaining population. Some features seemed to be more associated with frequent attendance, such as advanced age, low educational level and the presence of chronic psychiatric illness.

Conclusion: The frequent attender of this Portuguese Primary Care Practice is a female, in the sixth decade of life, with low educational level, married or living as a couple, coming from a nuclear family, and often with chronic illness. Knowledge of these patients may allow the development of strategies that lead to more cost-effective health care services. This study shows some guidelines for studies on this important population.

Keywords: Health Services Misuse; Primary Health Care.

RESUMO

Introdução: A problemática dos hiperfrequentadores nos Cuidados de Saúde Primários tem impacto humano, económico e social não desprezível. O objetivo deste trabalho é descrever as características sociodemográficas e patológicas dos utentes hiperfrequentadores.

Material e Métodos: Foi efetuado um estudo transversal descritivo, com componente analítica, da população de utentes hiperfrequentadores inscrita nas listas de seis médicos de família do Centro de Saúde da Senhora da Hora, entre Janeiro de 2007 e Dezembro de 2009. Obtiveram-se dados sociodemográficos e antecedentes patológicos crónicos. Foram testadas associações entre variáveis com os testes χ-*quadrado* e *t student*. Comparou-se o quartil superior dos hiperfrequentadores com os restantes quartis. O nível de significância adotado foi 0,05.

Resultados: Dos 582 indivíduos avaliados, com média de idades 55,4 anos (mulheres 54,3 e homens 58,6; $p = 0,006$), 85% possuíam patologia física crónica e 42% tinham doença psiquiátrica crónica. No quartil superior observou-se uma prevalência superior de doença psiquiátrica crónica ($p < 0,001$), bem como de patologia múltipla ($p = 0,01$), comparativamente à restante população. Os indivíduos com doença física eram mais velhos (idade média: 58,0 anos vs 40,1 anos; $p < 0,001$) enquanto que aqueles com doença psiquiátrica crónica eram mais novos (idade média 53,7 anos vs 56.6; $p = 0,035$).

Discussão: Foi traçado um perfil do hiperfrequentador concordante com a literatura internacional, numa altura em que não há estudos nos cuidados de saúde primários portugueses. Com o intuito de discriminar os hiperfrequentadores entre si, foi feita a comparação do quartil superior dos hiperfrequentadores com os restantes. Algumas características parecem estar mais associadas ao hiperfrequentador, como a idade avançada, a baixa escolaridade e a presença de patologia psiquiátrica.

Conclusão: O hiperfrequentador típico do Centro de Saúde da Senhora da Hora é um indivíduo do género feminino, na sexta década de vida, com baixa escolaridade, casado ou em união de facto, que pertence a uma família nuclear, geralmente com doença crónica. O conhecimento destes utentes permitirá delinear estratégias que conduzam a uma utilização de cuidados de saúde com melhor relação custo-efectividade. Este estudo lança linhas de orientação para futuros estudos sobre esta população tão importante.

Palavras-chave: Cuidados de Saúde Primários; Mau Uso de Serviços de Saúde.

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INTRODUCTION

At a Primary Care level, it has been observed that a small number of patients is responsible for a high percentage of the GP working time. Defined as "frequent attenders" or "frequent users", these patients use between 21 and 67% of the resources, are responsible for a great number of prescriptions and referrals to other levels of medical care. These patients therefore impact a significant economic, human and social burden on society.[1-3]

Studies on frequent attenders also present some heterogeneity.[4,5] However, the most recent definition regards frequent attenders as the top 10% users of medical appointments during a certain period of time. This concept allows a good differentiation between frequent attenders and non-frequent attenders independently of gender and age.[6]

The reasons that motivate an individual to frequently attend a Health Centre may be related to individual, morbid and socio-demographic factors and also with the Health Unit itself.[2] Although frequent attenders are presented as a heterogeneous group, some common characteristics such as old age, being female and belonging to the lowest social, educational or economical classes have been identified.[3] Evidence reveals that this group of individuals present a higher prevalence of chronic physical and psychiatric disorders, as well as social and emotional problems.[2,5,7] It is estimated that more than 50% of frequent attenders present a physical disorder and that about 33% present a combination of physical, mental and social problems.[7]

In Portugal, at the present time, scarcity of data on this issue results in failure to understand the characteristics of this particular population, especially at the primary care level (Almeida LM. Cuidados de saúde primários e utentes persistentes – caracterização dos hiperfrequentadores da sub-região de saúde de Coimbra. Espelho - publicação da Administração Regional de Saúde do Centro, Sub-região de Saúde de Coimbra. Janeiro 2004). "Frequent attender" characterization has become a major concern, as it will enable GPs to optimize healthcare and management of consulting time allocation.[8]

The aim of this study is to establish the "frequent attender" profile in our Health Unit through the description of the 10% more frequent attenders over a three-year period.

MATERIAL AND METHODS

A cross-sectional descriptive study was conducted through data collection between April and July 2010, at the *Senhora da Hora* Health Unit.

We considered "frequent attenders" those patients included in six GP medical lists, that were the top 10% attenders of medical appointments (in a programmed or non-programmed fashion), between January 2007 and December 2009.

The study excluded those attenders less than 18 years of age, those who died during the period of the study and those who were unable to answer the study questionnaire. Indirect contacts and programmed Maternal Health and Family Planning visits were not accounted for.

Data collection took place based on a form designed by the researchers that included information regarding age, gender, marital status (single, married/partnership, widow, divorced/separated), educational level (defined as the number of full years of schooling) and professional situation (active worker, unemployed, pensioner, other situation). Educational level and age information were subsequently categorized for statistical analysis. Information was also collected regarding family type (nuclear family, enlarged family, living alone, single-parent family, combined family or other).

Presence of a chronic disorder was defined considering the WHO definition: *'*disease that has one or more of the following characteristics: permanent, disabling, caused by irreversible pathological changes, demanding special training of the patient for rehabilitation or long supervising periods of time, observation or care'.[9] Attenders with a chronic disorder included those with a medical record matching the WHO definition in their clinical file and/or therapeutic prescription for a chronic disorder during the study time period including those with a chronic psychiatric disorder. A six-month prescription was considered to be a long-term therapeutic prescription for a chronic psychiatric disorder.

Attenders were contacted by telephone by the researchers (up to a maximum of three attempts) and were invited to participate after being informed of the study aim. After verbal consent was obtained, the attenders were asked to answer the questionnaire designed by the researchers. The information was complemented by the attender clinical file (on paper and/or electronic record). For each participant, information was recorded in a data collection form. The questionnaire was pilot tested.

Statistical analysis

After collection, codification and data recording were performed in a database created on Microsoft Office Excel 2007® software.

Descriptive and inferential statistic results were determined, using c^2 and *t student* tests as appropriate. Comparison by gender was obtained regarding the presence of morbidity in frequent attenders by quartiles, comparing the upper quartile of frequent attenders with the other three. Data analysis has been obtained using the STATA 11.0 program (Stata Corporation, College Station, Texas).

Ethical issues:

The protocol was approved by the *Matosinhos* Local Health Unit Ethic's Commission.

RESULTS

From the initial population of 5.820 individuals who attended the Health Unit at least once, during the study period of three years, the top 10% of patients with more medical appointments were selected, corresponding to a population of 582 frequent attenders. The selected individuals attended a minimum of 15 medical appointments during the study period. The most frequent attender attended up to 76

Table 1 - Socio-demographic and disease characteristics of frequent attenders

Socio-demographic and Disease Characteristics of Frequent Attenders (n = 582)	
Age (mean ± sd)	55.4 ± 15.92
Gender [n (%)]	
Male	138 (23.7)
Female	444 (76.3)
Educational level [n (%)]*	
≤ 4 years	312 (53.6)
5 - 6 years	34 (5.8)
7 - 9 years	71 (12.2)
10 -12 years	96 (16.5)
≥ 12 years	47 (8.1)
Marital status [n (%)]	
Single	44 (7.6)
Married/partnership	435 (74.7)
Widow	68 (11.7)
Divorced/separated	35 (6.0)
Working status [n (%)]†	
Active	269 (46.2)
Unemployed	57 (9.8)
Pensioner	204 (35.1)
Other	51 (8.8)
Family type [n (%)]	
Nuclear	402 (69.1)
Enlarged	63 (10.8)
Living alone	57 (9.8)
Single-parent	33 (5.7)
Combined	15 (2.6)
Other	12 (2.1)
Chronic physical disorder [n (%)]	496 (85.2)
Diabetes	106 (18.2)
Arterial Hypertension	280 (48.1)
Dyslipidemia	232 (39.9)
Asthma/COPD	71 (12.2)
Osteoarticular pathology	224 (38.5)
Other	334 (57.4)
Multiple pathologies (≥ 2)	366 (62.9)
Chronic psychiatric disorder [n (%)]	245 (42.1)

* missing n=22 ; † missing n=1

medical appointments (23 with their own GPs and 53 with other GPs). The average number of medical appointments by frequent attenders was 17.4 ± 7.11 and 22.2 ± 7.69 when considering appointments with the patients´ own or other GPs, respectively. These 10% of attenders were responsible for 19% of the medical appointments of the six GPs whose patient lists were included in the study.

The average age of frequent attenders was 55.4 (female 54.3; male 58.6; $p = 0.006$) with a minimal age of 20 and maximal of 95. Females amounted to 444 individuals (76.3%) and had on average 6.6 ± 4.02 years of schooling. Approximately 75% were married or lived as a couple, 269 (46.2%) were professionally active and 204 (35%) were pensioners. About 70% of the individuals lived in a nuclear family (Table 1). Chronic conditions, namely physical and psychiatric, were identified in 85 and 40% of the patients, respectively. The individuals with a physical disorder were older (age average: 58.0 ± 15.10 *vs* 40.1 ± 11.35; $p < 0.001$) than those with a psychiatric disorder (age average of 53.7 ± 15.28 *vs* 56.5 ± 16.9; $p = 0.035$).

There were no significant gender differences regarding the presence of chronic physical or psychiatric disorders. Nevertheless, we observed a greater proportion of men with diabetes ($p = 0.006$), high blood pressure ($p = 0.008$), dyslipidemia ($p < 0.001$) and multiple pathology ($p = 0.014$) in those with physical disorders. Psychiatric disorders were more frequent in women, although gender differences were not statistically significant (43.9% *vs* 36.2; $p = 0.11$) (Table 2). In what concerns educational level, marital status or family type, there were no statistically significant differences in the individuals with a psychiatric disorder.

Quartile analysis (25 – 50 - 75) revealed that individuals in the upper quartile were older (mean age 56.2 *vs* 51.8; $p = 0.001$), had more multiple physical disorders ($p = 0.009$) and more frequent chronic psychiatric pathology ($p < 0.001$). We did not find any other statistically significant differences for the evaluated variables. We also found differences in educational level, with the upper quartile having a higher proportion of individuals with lower educational level and who were unemployed (Table 3).

DISCUSSION

The typical frequent attender in the studied population is a female, approximately 60 years- old, with a low educational level, married or living as a couple, from a nuclear family and in general with a chronic disease. Almost half of the frequent attenders present with chronic psychiatric pathology.

Primary health care centres constitute the front door to the national health system and the GP is the most accessible physician. As such, the efficient use of these services is crucial for the adequate function of the entire health system.[8,10] The results of this study allow for a systematic characterization of the individual features of those patients who use most resources in the Health Unit where this study took place. This information may contribute to a better understanding of frequent attenders in healthcare in Portugal, allowing for more rational management of medical resources.

Despite its relevance, the present study is not exempt of limitations. Frequent attender definition is controversial[2,11] and the authors may have incurred in a selection bias. However, the adopted definition is the one that has been more consensual and that has been used in several studies.[2,11,12] We also acknowledge a possible information bias in our definition of chronic physical or psychiatric disorder. In this study, the authors used a combination of disease auto-declaration and medical records in paper and electronic form in an effort to extract maximal information. In what concerns

Table 2 - Chronic disorders distribution by gender.

	Gender		*p*
	Male (*n* = 138)	Female (*n* = 444)	
Chronic physical disorder [n (%)]	124 (89.9)	372 (83.8)	0.079
Diabetes	36 (26.1)	70 (16.8)	**0.006**
Arterial Hypertension	80 (58.0)	200 (45.1)	**0.008**
Dyslipidemia	73 (52.9)	159 (35.8)	**< 0.001**
Asthma/COPD	19 (13.8)	52 (11.7)	0.519
Osteoarticular pathology	47 (34.1)	177 (39.9)	0.221
Other	84 (60.9)	250 (56.3)	0.344
Multiple pathologies (≥ 2)	99 (71.7)	267 (60.1)	**0.014**
Chronic psychiatric disorder [n (%)]	50 (36.2)	195 (43.9)	0.110

Table 3 - Frequent attenders upper quartile comparison with the other three quartiles.

	Upper quartile (*n* = 145)	Lower quartiles (*n* = 437)	*P*
Age (mean ± sd)	56.2 ± 15.28	51.8 ± 14.73	**0.001**
Gender [n (%)]			
Male	38 (26.2)	100 (22.8)	0.415
Female	107 (73.8)	337 (77.1)	
Educational level [n (%)]*			
≤ 4 years	66 (47.1)	246 (58.6)	**0.018**
5 - 6 years	12 (8.6)	22 (5.2)	
7 - 9 years	27 (19.3)	44 (10.5)	
10 - 12 years	21 (15.0)	75 (17.9)	
≥ 12 years	14 (10.0)	33 (7.9)	
Marital status [n (%)]			
Single	12 (8.3)	32 (7.3)	0.081
Married/partnership	102 (70.4)	333 (76.2)	
Widow	16 (11.0)	52 (11.9)	
Divorced/separated	15 (11.3)	20 (4.6)	
Working status [n (%)]†			
Active	66 (45.5)	203 (46.6)	**0.002**
Unemployed	23 (15.9)	34 (7.8)	
Pensioner	38 (26.2)	166 (38.1)	
Other	18 (12.4)	33 (7.6)	
Family type [n (%)]			
Nuclear	93 (64.2)	309 (70.7)	0.219
Enlarged	18 (12.4)	45 (10.3)	
Living alone	15 (10.3)	42 (9.6)	
Single-parent	7 (4.8)	26 (6.0)	
Combined	7 (4.8)	8 (1.8)	
Other	5 (3.5)	7 (1.6)	
Chronic physical disorder [n (%)]	123 (84.9)	374 (85.4)	0.877
Diabetes	22 (15.2)	84 (19.2)	0.274
Arterial Hypertension	63 (43.4)	217 (49.7)	0.195
Dyslipidemia	59 (40.7)	173 (39.6)	0.814
Asthma/COPD	13 (9.0)	58 (13.3)	0.170
Osteoarticular pathology	56 (38.6)	168 (38.4)	0.970
Other	78 (53.8)	256 (58.6)	0.312
Multiple pathologies (≥ 2)	78 (53.8)	288 (65.9)	**0.009**
Chronic psychiatric disorder [n (%)]	82 (56.6)	163 (37.3)	**< 0.001**

* missing n=22 ; † missing n=1

psychiatric pathology, the authors also used as an auxiliary method the long-term prescription of anxiolytic, antidepressant and antipsychotic medication, which may have resulted in overdiagnosis. One other source of information bias arises from heterogeneity of medical records by different physicians. In addition, this study only included frequent attenders data from six GPs, a fact which prevents the extrapolation of results to the entire primary care population.

In what concerns socio-demographic characteristics, the obtained results regarding attenders gender and age are in accordance with previous evidence.[1,2] In the present study there is a high prevalence of chronic disease justifying regular follow-up. Nevertheless, the high number of medical appointments cannot be only justified by chronic disorders. The higher prevalence of diabetes *mellitus*, hypertension and dyslipidemia is explained by their higher frequency in patients that require healthcare, when compared to the general population.[13] The higher prevalence of chronic psychiatric disorder, also higher than expected for general population, may partly justify the frequent use of health resources, where previous evidence shows strong psychological, emotional and social components associated to excessive healthcare demand. The reduced educational level of frequent attenders is also in line with this evidence.[2,3]

Low socio-economic level and unemployment have been associated with excessive healthcare use.[3,14] Some studies have further identified that factors such as living alone, being divorced or single are associated with this behaviour.[14, 15] Nevertheless, data are not consensual and differ according to gender.[3] The results obtained show that the majority of frequent attenders are married or living as a couple, are professionally active or pensioners and belong to a nuclear family type. These may suggest that other factors are involved in this behaviour.

We drew the comparison between the upper quartile of frequent attenders with the other three quartiles. The results emphasize that some characteristics such as old age, low educational level and the presence of psychiatric disease seem to be more associated to a "frequent attender status".

Up to the present time, few studies have demonstrated that particular interventions may have an effect on quality of life or morbidity improvement in frequent attenders in Primary Care. There is some evidence that two types of approaches allow for a reduction in the number of medical appointments, improve patient and GP satisfaction and reduce health system costs: an intervention type in specialized clinics approaching the attender in a holistic fashion integrating his complaints in the context of his experiences [16] and a type of GP driven intervention through the application of a different approach model for the individual's reasons to attend healthcare. [17] It is important to emphasize that the solution to this problem seems to be focused on GP based intervention and attitude change. In this sense, we propose that a future study on this issue should take into account both physician and patient characteristics.

CONCLUSION

This study demonstrated that a small number of attenders use a high percentage of GPs working time. This phenomenon reflects an inefficient health system use which involves high costs.[1,18-20] The identification of frequent attender features provides a starting point for designing strategies that lead to a best cost-effectiveness healthcare use.

In the future, it will be important to compare frequent attenders with a group of non-frequent attenders and include other factors such as exemption of user charges that may allow for a more extensive characterization of those patients with intense usage of healthcare resources.

CONFLICT OF INTERESTS

The authors declare no conflict of interests regarding the present manuscript.

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