Users' perception about primary care attributes in a Metropolitan Region of Minas Gerais

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ABSTRACT

Introduction: Family Health Strategy (FHS) is a tool for Primary Health Care (PHC) consolidation in Brazil, coexisting with the Traditional Health model (THS). Aim: To evaluate PHC attributes, from the user's perspective, according to PHC models in Vespasiano, Brazil. **Methods:** A population-based cross-sectional study carried out between 2015-2016 with home users registered in the HIPERDIA Program, using the Primary Care Assessment Tool (PCATOOL). Descriptive and comparative analyzes were performed according to PHC models. **Results:** 1,227 adults participated in the study. Almost all the attributes evaluated showed inadequate orientation to PHC, except the Coordination. The FHS model obtained a better evaluation when compared to the THS model (p-value <0.05). **Conclusions:** Users' perception of PHC was unsatisfactory in practically all dimensions/attributes, with a slightly more positive evaluation for the FHS model. Greater attention must be paid to the contact and recognition of community's needs by PHC health professionals.

Keywords: Consumers; Family Health Care; Health services; Models of Care; Performance and Evaluation; Primary Health Care.

RESUMO

Introdução: A Estratégia Saúde da Família (ESF) é um instrumento para consolidação da Atenção Primária à Saúde (APS) no Brasil, coexistindo com o modelo tradicional. **Objetivo**: Avaliar os atributos da APS, na perspectiva do usuário, segundo modelos de APS em Vespasiano, Brasil. **Métodos:** Estudo transversal de base populacional realizado entre 2015-2016 com usuários domiciliares e cadastrados no Programa HIPERDIA, utilizando o Primary Care Assessment Tool (PCATOOL). Análises descritivas e comparativas foram realizadas segundo os modelos de APS. **Resultados:** Participaram do estudo 1.227 adultos, cuja avaliação mostrou inadequada orientação dos serviços para a APS, exceto para o atributo Coordenação. O modelo ESF obteve melhor avaliação quando comparado ao modelo tradicional (p-valor<0,05). **Conclusões:** A percepção dos usuários foi insatisfatória para praticamente todos os atributos, sendo mais positiva para o modelo da ESF. Maior atenção deve ser dada ao contato e reconhecimento das necessidades da comunidade pelos profissionais de saúde da APS.

Palavras-chave: Consumidores; Atenção à Saúde da Família; Serviços de saúde; Modelos de Cuidado; Desempenho e avaliação; Atenção Primária à Saúde.

INTRODUCTION

Brazil adopts Primary Health Care (PHC) as the main gateway to the National Health System (SUS) (BRASIL, 2012). The PHC operational definition includes seven attributes divided into essential: 1- access of the individual's first contact with the health system (accessibility and use of the service); 2- Longitudinality (existence of a continuous source of attention, as well as its use over time); 3- comprehensiveness (services provided and provided by the primary care service) and 4- coordination of care (presupposes some form of continuity between the individual's health information) and derivatives: 5- family-centered health care (family orientation); 6- community orientation and 7- cultural competence (STARFIELD, 1992; SHI; STARFIELD; XU, 2001).

As far as these attributes are concerned, greater the capacity of health service to provide integral care to the individual and his family. Since 1994, Brazil has adopted as a tool for the expansion and consolidation of PHC the Family Health Strategy (FHS), which, briefly, focuses on the family as the unit of intervention, a defined territory, clientele assignment, multidisciplinary teamwork, co-responsibility, completeness, resolution and stimulus to social participation (BRASIL, 2012).

In 2016, about 63.7% of the Brazilian population was covered by the FHS and the remaining population was assisted by the Traditional Health System (THS). Each FHS team consists of at least general practitioners and nurses, auxiliary or nursing technicians and community health agents, working together. THS model includes health centers staffed with doctors of various specialties, nurses, nursing assistants, dentists and technical support staff, responding to a spontaneous demand and/or referred by other services (BRASIL, 2012).

PHC has advanced in Brazil, highlighting the need to assess the quality of care provided and to assess users about the care received. Studies show that units with FHS are more oriented to PHC than units with THS (PAULA et al, 2016).

Primary Care Assessment Tool (PCATool) (SHI; STARFIELD; XU, 2001) is one instrument used to evaluate PHC. It has the ability to measure the presence and extent of the attributes that Starfield (1992) considers essential to PHC. It generates a score capable of establishing the degree of orientation of services to PHC, making it possible to compare services or set goals to be achieved (BRASIL, 2010). Another advantage of this instrument is that it allows, through home or health services interviews, to identify aspects of structure and process of services that require reaffirmation or reformulation in the quest for quality for both planning and execution of PHC actions.

User's evaluations of PHC attributes, using PCATool, showed important differences between FHS and THS organization models in Brazil (PAULA et al, 2016; PRATES et al., 2017). However, more knowledge is needed about which factors are associated with these differences. In this sense, this study aimed to evaluate PHC attributes from the user's perspective and to determine the factors associated with a PHC evaluation in FHS and THS models in a metropolitan area of Minas Gerais State, Brazil.

METHODS

This is a cross-sectional population-based study, carried out between 2015-2016 in the municipality of Vespasiano, Minas Gerais. Vespasiano has 104,138 inhabitants nested in 121 census tracts, with 20.2% of the population residing in areas called "favelas" (IBGE, 2010). Between 2007 and 2017, the estimate of the population served by the FHS increased from 27.78% to 49.84% (Fundação João Pinheiro, 2019). Vespasiano had 28 public health establishments, of which 20 performed primary care activities, with 16 FHS teams implanted (IBGE, 2010). Thus, the traditional PHC model (THS) and the model of family health teams (FHS) coexisted at the time of the study.

To estimate the sample size, we used the formula: n= [DEFF * Np (1-p)]/[(d2/Z21-α/2 * (N-1)+p * (1-p)], where: n=minimum sample size required; N=size of the Vespasiano population in

APS em Revista
Vol. 4, n. 1, p. 46-53 | Janeiro/Abril – 2022
ISSN 2596-3317 – DOI 10.14295/aps.v4i1.189
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2010 (104,138); Z=confidence level (5%); P=prevalence of the health-related event to be investigated (50%, unknown data); d=expected sampling error: 3.0%; deff=effect of the design, by clusters, estimated at 1.5.

We selected two types of participants: adult residents over 18 years old, by sampling stratified by clusters in three stages: 1- census tracts; 2- home, and; 3- inside the home; and users with Hypertension and/or *Diabetes Mellitus* registered in the Federal Government Program called HIPERDIA directly from the basic health units medical records, by systematic sampling. The inclusion of HIPERDIA patients was made to ensure the representativeness of users of the public health service, since in the household sample there was heterogeneity in the use of PHC services in the municipality. The final sample consisted of 1,206 adult households and 499 HIPERDIA users.

Home interviews were carried out, preceded by a period of broad awareness of the population by the Municipal Health Department, on local television and radio channels. All interviews were scheduled with the help of Vespasiano's community health agentes to access the users home and used a structured questionnaire containing sociodemographic information, use and access to health services, social determinants of health and users' perception of PHC, assessed through Primary Care Assessment Tool (PCATool), reduced version (OLIVEIRA et al., 2013). The interviews were conducted by a team previously trained and supervised by the researchers. No interobserver differences were identified

This version consists of 23 items with a 5-point Likert scale, considering the PHC essential and derivatives attributes. The scores for each item and attribute of PCATool were calculated by simple arithmetic means. Then, the values were transformed into a scale from 0-10 using the formula: $[(\text{Score obtained} - 1) \times 10/3]$ (BRASIL, 2010). The Essential score is measured by the sum of the degree of affiliation plus the average score of each component that belongs to the Essential attributes, divided by the number of components. The General score is measured by

the sum of the degree of affiliation, plus the average score of the components that belong to the essential and derived attributes divided by the total number of components. We consider high scores, values equal to or greater than 6.6, indicating that the evaluated services include the PHC attributes (OLIVEIRA et al., 2013). For the comparison between the PHC models, the scores were categorized into Strong PHC orientation (value ≥ 6.6) and Poor PHC orientation (<6.6).

In addition to PCATOOL, sociodemographic variables (gender, age, marital status, income and education), number of comorbidities, obtained by simply counting the number of self-reported comorbidities (Diabetes, Hypertension, Depression, Cancer, Arthritis/rheumatism, Heart diseases, Stroke), has a private health plan, self-assessment of health (obtained by the question "Comparing your health to last year (2014), how do you evaluate your health?") and type of user (HIPERDIA or home).

Descriptive and comparative analyzes (Student's t-test and Pearson's chi-square test) were performed for each PHC model. Data were tabulated and analyzed using Statistical Package for Social Sciences (SPSS) 20.0.

The study was approved by the Research Ethics Committee of the Faculty of Health and Human Ecology of Vespasiano (CAAE: 01942212.00000.5101). All participants who agreed to participate in the study signed a Free and Informed Consent Form (ICF).

RESULTS

A total of 1,227 individuals participated in the study, 728 from the household sample and 499 from the HIPERDIA registry. We excluded 39.6% (n = 478) of household adults, not SUS users.

About 58.0% of respondents were women, aged between 30-59 years (52.3%), with an income between 1-2 minimum wages (approximately U$ 205) (42.2%) and less than eight years of study (70.3%). In relation to health, 20.0% have a private health plan, 68.0% reported at least one chronic disease (diabetes, hypertension,

depression, lung diseases, rheumatism) and 66.0% had a worse perception of health in relation to the last year. About 66.0% (n=830) used a FHS model as a reference to answer the questionnaire.

Most of the attributes obtained scores below 6.6, indicating inadequate guidance for PHC, except for the attributes Coordination and Access of First Contact and for the Essential score. For the FHS model, the attributes Affiliation and Coordination and the essential score obtained values above 6.6 and, compared to the Traditional model, had higher scores for almost all attributes (Table 1).

The analysis of the variables associated with the perception of PHC quality showed that for the FHS model, only sex and income were not associated with any of the PHC attributes. Marital status and having a private health plan were relevant only for Family Orientation and Coordination, respectively. Self-rated health in relation to the previous year and origin of the user (household or HIPERDIA) were important for at least four attributes in addition to the Essential and General Scores. For the THS model, only marital status was not associated with any of the PHC attributes. Age and having a private health plan proved to be important for all attributes, Essential and General scores in THS model (Table 2).

DISCUSSION

Users' perception of PHC was unsatisfactory in practically all dimensions/attributes. The General score can be considered bad, indicating that, together, the six attributes analyzed are not yet properly consolidated in the health services of Vespasiano. Cultural Competence (SHI; STARFIELD; XU, 2001) attribute was not evaluated because of its absence in Brazilian version of PCATool (OLIVEIRA et al., 2013).

The unsatisfactory result in the General score was observed for the two PHC models analysed (<6.6). However, services with FHS were better evaluated than Traditional services, as observed in other Brazilian studies (PAULA et al., 2016; ARAÚJO et al., 2014; FACCHINI; TOMASI; DILÉLIO, 2018), indicating that the expansion of the FHS is still underway in the country and needs more investments.

The Essential score that considers the first four attributes of PHC (Access, Longitudinality, Coordination and Integrality) obtained a satisfactory evaluation, which is probably due to the better evaluation in the Coordination attribute (mean=8.38), thus raising the final average. Similar to what was observed in the General score, FHS services were better evaluated than Traditional services. This result indicates that the implementation of the FHS contributed to the access and continuity of care for users. The assignment of clientele and home visits by Community Health Agents may have been relevant factors for this evaluation.

The Coordination attribute and the items that compose it (Integration of Care and Information System) were satisfactory with values above 7.07, being better evaluated in the FHS model, with a better assessment of the item Information System (score=9.11). This was the best evaluated dimension, indicating that PHC and specialized care are able to maintain a close relationship, with adequate communication, referral, planning, reference and counter-reference strengthened in Vespasiano. This result differs from other studies (PAULA et al., 2016; PRATES et al., 2017; PERILLO et al., 2020) that showed a negative evaluation for this dimension.

The item Use (from the Access to First Contact dimension) also obtained a positive evaluation in the two PHC models, suggesting that users seek PHC as a gateway to the health system, similar to that found in other national studies (PAULA et al., 2016; PRATES et al., 2017; PERILLO et al., 2020).

The item Accessibility obtained the worst user evaluation (score=4.63) indicating geographical and organizational barriers to access PHC services in Vespasiano. Among these difficulties, we highlight the short opening hours of the services, the scheduling of consultations and the long waiting time for assistance (PAULA et al, 2016; ARAÚJO et al., 2015; PRATES et al., 2017). Despite the structural difficulties in accessing

the evaluated services, users recognize them as their first source of health care.

All other items and dimensions obtained a negative evaluation. The attributes Community Orientation and Family Orientation obtained scores below expectations (4.64 and 5.11, respectively). Again, the FHS model performed better. The performance of these attributes may indicate failures in comprehensive care aimed at the family and community, being still distant from the Social Health Production model (PRATES et al., 2017), and an incomplete implantation of the FHS in Vespasiano's PHC. The main objective of the FHS is to provide care with a focus on the family and their health needs however, it is possible to observe that in Vespasiano, and in the rest of the country, services with FHS find it difficult to achieve this goal (PAULA et al., 2016; PRATES et al., 2017; FACCHINI; TOMASI; DILÉLIO, 2018). In this context, it is important to highlight some PHC challenges, such as the turnover of doctors in services, which makes it difficult to form bonds, greater involvement with the community and knowledge of their living conditions.

In addition to the difficulties raised above, Brazil still faces a major problem related to the fall in Federal Government investments in health. From 2017 until 2021, there was a 64.09% decrease in the amount of resources earmarked for health (Portal da Transparência, 2021). States and municipalities are experiencing a financing crisis in the health sector that can impact the quality of services, guarantee access and the advancement and consolidation of PHC. In the municipalities, where SUS is the main alternative of health care for the population, such as Vespasiano, the repercussions of the constitutional amendment that froze health sector spending (MELO; MENDONÇA; TEIXEIRA, 2019), with a direct impact on PHC, may further exacerbate users' negative perception of quality services.

Individual factors associated with users' PHC assessment showed that each variable had different importance according to the model analyzed. The most relevant to the FHS model may reflect the profile of users of FHS services,

most sought after by users aged 40 or over, with chronic health conditions that require monitoring and without a private health plan (PERILO et al., 2020).

Despite the already known limitations of cross-sectional studies, this study has the advantage of using a representative sample of a municipality, which contributes to external and internal validity, and the use of an instrument validated in different languages, which allows for greater comparison of data. In addition, the fact that the interviews were conducted in the users' homes and by an external team to the PHC services stands out, which probably guaranteed greater freedom for the participants to express their opinion without fear of being repressed or having worse health care due to its evaluation.

Our results also indicate the need for greater investments, especially regarding access to health services and the effectiveness of FHS guidance for the family and community. It is recommended that more attention be given to aspects related to the derived attributes that contemplate the teams' knowledge about important family factors, mainly in the FHC model, and the recognition of the needs and reality of the community, which were the points with the worst evaluation by users.

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APPENDIX

Table 1 – Means and standard deviations (SD) of Primary Health Care (PHC) items and attributes score for the entire sample and comparison of means according to the PHC model (Family Health Strategy-FHS and Traditional). Vespasiano MG, 2015-2016.

Attributes /Itens	Primary Health Care Models			p value[a]
	Total (n=1,227)	**Family Health Strategy (n=830)**	**Traditional Health System (n=397)**	
	Mean (SD)	**Mean (SD)**	**Mean (SD)**	
Afiliation[b]	6.18 (2.52)	6.79 (2.34)	4.91 (2.42)	<0.001
First Contact Access	6.46 (2.80)	6.46 (2.87)	6.46 (2.65)	0.998
Utilization	7.86 (3.49)	7.85 (3.52)	7.87 (3.42)	0.911
Accessibility	4.63 (3.24)	4.58 (3.31)	4.72 (3.11)	0.519
Longitudinality	6.04 (2.89)	6.43 (2.83)	5.22 (2.85)	<0.001
Coordination	8.38 (2.57)	8.59 (2.31)	7.93 (2.99)	<0.001
Integrated Care	7.07 (2.88)	7.09 (2.89)	7.03 (2.88)	0.834
Information System	8.87 (2.66)	9.11 (2.34)	8.34 (3.19)	<0.001
Comprehensiveness	5.92 (2.93)	6.18 (2.86)	5.35 (3.00)	<0.001
Services available	5.66 (3.18)	5.87 (3.11)	5.21 (3.30)	0.006
Services received	6.21 (3.26)	6.48 (3.18)	5.64 (3.35)	<0.001
Family Orientation	5.11 (3.58)	5.37 (3.63)	4.59 (3.44)	0.001
Community Orientation	4.64 (4.41)	5.11 (4.47)	3.67 (4.11)	<0.001
Essential score[c]	6.60 (1.73)	6.84 (1.68)	6.08 (1.72)	<0.001
General score[d]	6.25 (1.89)	6.52 (1.86)	5.69 (1.83)	<0.001

a – Obtained through the t-Student Test.

b - Structure component of the Longitudinality attribute

c – Formed by the average of the scores of First contact access, Longitudinality, Coordination and Comprehensiveness

d – Formed by the average of the scores of all PHC atributes

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Table 2 - Variables associated with users' perception of the quality of health care, according to Primary Health Care (PHC) attributes[a], for each PHC model, Vespasiano MG, 2015-2016.

Individual Variables	Primary Health Care attributes						Escale	
	First Contact Access	Longitudinality	Coordination	Comprehensiveness	Family Orientation	Community Orientation	Essential Score	General Score
Family Health Strategy								
p-value[a]								
Sex	0.448	0.121	0.315	0.168	0.058	0.121	0.217	0.301
Age	0.497	**<0.001**	0.086	0.066	**0.007**	**0.017**	**<0.001**	**<0.001**
Marital status	0.279	0.477	0.210	0.300	**0.039**	0.303	0.320	0.205
Income	0.948	0.240	0.823	0.741	0.828	0.300	0.837	0.487
Education	0.525	**0.002**	0.163	0.225	0.114	**<0.001**	0.105	**0.039**
User Source[b]	0.221	**<0.001**	**0.048**	**0.001**	0.066	**0.001**	**<0.001**	**<0.001**
Nº of comorbidities[c]	0.200	**<0.001**	0.169	**0.015**	**0.023**	0.058	**<0.001**	**0.004**
Private Health Insurance	0.112	0.291	**0.008**	0.355	0.148	0.251	0.140	0.524
Self Health Evaluation[d]	**<0.001**	**0.030**	0.091	**0.008**	0.065	**0.019**	**<0.001**	**0.001**
Traditional Health System								
p-value[a]								
Sex	**0.032**	**0.001**	**0.001**	**0.002**	0.251	0.458	**0.018**	**<0.001**
Age	**0.001**	**<0.001**	**0.001**	**0.039**	**0.038**	**0.025**	**<0.001**	**<0.001**
Marital status	0.453	0.113	0.127	0.224	0.256	0.097	0.120	0.479
Income	**0.025**	**0.049**	0.272	0.423	0.757	0.187	0.484	0.172
Education	0.459	**0.020**	**0.007**	0.474	0.438	0.438	0.059	0.194
User Source[b]	**0.002**	**<0.001**	**0.030**	0.071	**0.033**	0.130	**<0.001**	**<0.001**
Nº of comorbidities[c]	0.108	**<0.001**	0.119	**0.037**	0.392	0.908	**<0.001**	**0.001**
Private Health Insurance	**0.003**	**<0.001**	**0.016**	**<0.001**	**0.017**	**0.005**	**<0.001**	**<0.001**
Self Health Evaluation[d]	0.165	0.122	0.357	0.528	0.262	0.311	0.242	**0.026**

a. Obtained using Pearson's Chi-square test, in univariate analysis

b. If recruited from households or from the HYPERDIA program, directly from the records of basic health units

c. Self-reported comorbidities (Diabetes, Hypertension, Depression, Cancer, Arthritis/rheumatism, Heart diseases, Stroke)

d. Related to the question: "Comparing your health to last year (2014), how do you evaluate your health?"