

# Family-centeredness and community orientation according to three child health care models

Orientação familiar e comunitária segundo três modelos de atenção à saúde da criança

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## Keywords

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## Descritores

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## Abstract

**Objective:** To assess the attributes family-centeredness and community orientation according to three Primary Health Care models for children.

**Methods:** Cross-sectional and quantitative assessment study, involving 1,484 family members and/or caregivers of children younger than ten years of age attended in different primary health care models. The attributes family-centeredness and community orientation were assessed using the Primary Care Assessment Tool - Brazil, child version. For comparative analysis, Kruskal-Wallis and Dunnett's test were used.

**Results:** Separately, all Primary Health Care models scored unsatisfactorily for the attributes assessed. When compared, a statistically significant difference was found for the attributes derived, favoring the Family Health Strategy models over the traditional model.

**Conclusion:** The Family Health Strategy models scored higher for family-centeredness and community orientation. Their principles can contribute to reorient primary health care in the mixed model.

## Resumo

**Objetivo:** Avaliar os atributos orientação familiar e orientação comunitária segundo três modelos de Atenção Primária à Saúde da criança.

**Métodos:** Estudo transversal, avaliativo e quantitativo, realizado com 1.484 familiares e/ou cuidadores de crianças menores de dez anos atendidas em diferentes modelos de atenção primária à saúde. Os atributos orientação familiar e comunitária foram avaliados utilizando-se o instrumento *Primary Care Assessment Tool - Brasil*, versão criança. Para análise comparativa, utilizaram-se os testes de *Kruskal-Wallis e Dunnett*.

**Resultados:** Isoladamente, todos os modelos de Atenção Primária à Saúde apresentaram escore insatisfatório para os atributos avaliados. Quanto comparados, houve diferença estatisticamente significativa para os atributos derivados em favor dos modelos que operam com a Estratégia Saúde da Família em relação ao modelo tradicional.

**Conclusão:** Os modelos com Estratégia Saúde da Família apresentaram maiores escores para orientação familiar e comunitária, cujos princípios podem contribuir para reorientação da atenção primária à saúde no modelo misto.

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## Introduction

Child health care has gained room in public policies, prioritizing care integrality to bring down child morbidity and mortality rates due to avoidable causes and achieve survival with quality of life, in view of the singularities and particularities involved in the growth and development process of these unique, dynamic and complex beings.<sup>(1)</sup>

Therefore, in child care, the team's interaction with the family and community is fundamental to permit shared activities in the systematic monitoring, involving prevention, cure, rehabilitation and health promotion actions,<sup>(2)</sup> aiming for effective and high-quality child health care in Primary Health Care (PHC).

In Brazilian PHC, distinct models coexist, whose work processes present particularities that can influence the outcomes of effective and high-quality PHC in child health care. These are: traditional Primary Health Care Units (UBS), with care centered on specialty areas; Family Health units (USF) with integral care centered on the family and community;<sup>(3)</sup> and mixed models,<sup>(4)</sup> which consider the traditional models while cooperating with the USF, called mixed Primary Health Care Units here.

Despite the implementation of guidelines to guarantee high-quality care in the Unified Health System (SUS), in PHC, child health care is usually centered on spontaneous demand and acute causes, making integral care difficult and driving family members to health services like the emergency care. That was evidenced in a study<sup>(5)</sup> intended to describe the problem-solving ability of child health care in PHC in two cities in the South of Brazil, in which the ability of PHC to solve children's problems is considered low, which limited access to the health units when compared to the emergency services, which grant access to tests and the first medication dose.

To transform the organization and health practices from a comprehensive perspective, aiming to overcome the curative and disease-centered model,<sup>(6)</sup> the care models need to be structured in accordance with the attributes of PHC: access upon first contact, longitudinality, integrality, coordination,

family-centeredness, community orientation and cultural competency.<sup>(7)</sup>

The family-centeredness considers the family as the subject of care, with potential for care. In the community orientation, the families' needs are recognized in function of the geographical and socio-economic-cultural context they live in, besides its importance to assess the health services.<sup>(7)</sup> In each attribute, dimensions are assessed that are important for the integrality of care delivered to individuals, families and communities. In the family-centeredness, the items are related to the professionals' concern with what the child's family thinks about the treatment and the care provided, the concern with existing problems in the family, meeting with other members if the relative thinks that is necessary. What the community orientation is concerned, the dimensions include a team member making a home visit, the service's engagement in the community's health problems through household surveys and the invitation of family members to participate in the health council.

In view of the above and considering the family's importance for the integrality of child care, whose therapeutic project is put in practice by articulating the actions produced in health work, weaknesses at the encounter among professionals and between them, the child and his/her family represent challenges to produce new care forms,<sup>(8)</sup> as the family is not being considered as the priority focus in its context, that is, in its community.<sup>(9)</sup> That can reflect the continuation of care based on the individual and curative model.

Hence, the question is raised: What PHC model present higher levels of family-centeredness and community orientation in child health care? The objective was to assess the family-centeredness and community orientation according to three PHC models of child health care.

## Methods

Quantitative and cross-sectional assessment research based on the Manual of the Primary Care Assessment Tool or PCATool - Brazil in the

child version.<sup>(10)</sup> The study was developed between October 2012 and February 2013 at 22 traditional UBS in the city of Cascavel and at 40 mixed Primary Health Care services in Londrina, all located in Paraná, in the South of Brazil; and at 53 USF from Health District III in the city of João Pessoa, Paraíba, in the Northeast. Despite the existing socioeconomic inequalities between the Brazilian South and Northeast, the three care models target low-income populations with higher social vulnerability, considering indicators like the Municipal Human Development Index (MHDI) (Cascavel: 0.782, and Londrina: 0.778, in the State of Paraná, and João Pessoa: 0.763, in the State of Paraíba) and the Gini Index (Cascavel: 0.41, and Londrina: 0.42, in Paraná, and João Pessoa: 0.50, in Paraíba).<sup>(11)</sup> These characteristics are considered to be an indicator of sample homogeneity and bias control in the choice of the research scenarios.

The population consisted of family members (father, mother) and/or caregivers (grandparents, uncles /aunts, legal caregivers) of children younger than 10 years of age, with a history of care at those health services within six months before the data collection. That resulted in a total of 94,014 care cases. This age limit was chosen as the child growth and development monitoring recommended by the Ministry of Health involves an appointment calendar for children between zero and ten years of age. In addition, the dimensions assessed in the PCATool - Brazil consider the family member's opinion on the service or professional and their actions, independently of the child's age.

In view of the heterogeneity in the number of care cases registered in the three different cities, to calculate the sample, a 2.51% error margin and a 95% confidence level were adopted, using the application 'Diman 1.0', which resulted in a total sample of 1,501 participants. This sample was stratified proportionately per city, with 548 cases in Cascavel; 609 in Londrina and 344 in João Pessoa. As the traditional UBS was predominant in Cascavel, however, 17 family members and/or caregivers covered by the USF were ex-

cluded, leading to a final sample of 1,484 participants. To select the participant, (non-probabilistic) convenience sampling was used in the waiting line for the medical or nursing consultation at the health services.

Relatives and/or caregivers living in the urban area of the cities were selected to answer the questionnaire, with capacity to understand and express themselves on the documents presented, who knew the service they were to assess, having taken the children for care at least twice before the occasion when they were waiting.

Undergraduate nursing and medical students, *lato sensu* post-graduation students in public health and *stricto sensu* post-graduation students (Master's and Doctoral level) from the respective institutions that participated in the research collected the data by means of an interview at the waiting rooms of the health services. The professors who coordinated the research properly trained the students who collected the data. Therefore, they used the Primary Care Assessment Tool or PCATool - child version,<sup>(10)</sup> validated in Brazil.<sup>(12)</sup> In the tool, the answers are formulated using a Likert scale.<sup>(10)</sup>

To verify the attributes deriving from the child PHC models, the item scores for the attributes family-centeredness and community orientations of the PCATool-Brazil child version were used as variables. Based on the average item scores, the mean scores for the family-centeredness and community orientation attributes were calculated according to the Manual of the PCATool-Brazil. The scores for each component were transformed into an adjusted score on a scale from 0 to 10, defining scores  $\geq 6.6$  as high and scores  $< 6.6$  as low or unsatisfactory, indicating the degree of these attributes or their supply but the investigated PHC models as adequate or not.<sup>(10)</sup>

To store, process and analyze the data, the software Microsoft® Excel, version 7.0 and SPSS (Statistical Package for Social Sciences), version 13.0 were used. To identify the existence of statistically significant differences in the attribute scores among the models, the Kruskal-Wallis test (non-parametric one-way ANOVA) was used. To define among what study groups the differences existed, Dunnett's

(post hoc) multiple comparison test was applied, associated to the above with a 5% significance level ( $p < 0.05$ ).

The study was registered in the Ethics Committee (CEP) 044/2012-CEP/Brazil.

## Results

The results evidenced that the supply of the attributes deriving from family-centeredness and community orientation in child health care was considered unsatisfactory in the three models, as the mean score was  $< 6.6$ .

Table 1 presents the demographic and socioeconomic characteristics of the sample, which consisted of 1,484 family members and/or caregivers of children attended in the PHC models in three Brazilian cities. The mother was the most mentioned as the main caregiver in the three models (82.5%), whose prevalent age range varied between 24 and 34 years (41%). Independently of the care model, the majority has only one child (42.3%). Living with a fixed partner (48.5%) was predominant among the participants in the USF model when compared to married participants (31.4%), which scored higher in the other models. Family income was concentrated between two and three minimum wages (53.0%), except in the group attended in the USF, where it was up to one minimum wage (46.2%). The family providers were the fathers (45.5%) and, in total, four or more people depended on the income (59.4%).

As regards the application of the chi-square association test for the demographic and socioeconomic variables according to the Primary Health Care models (Family Health Unit, traditional Primary Health Care Unit and mixed Primary Health Care Unit), except for the variable number of dependents on the family income, all variables presented statistically significant results at  $p < 0.01$ .

Concerning the family-centeredness and community orientation attributes, in table 2, it is observed that, independently of the PHC model, the mean score was  $< 6.6$ , considered unsatisfactory for child health care. In comparison, no statistically sig-

**Table 1.** Demographic and socioeconomic data of family members and/or caregivers in child primary health care models

Variables	Primary Health Care Model				Chi-square test p-value <sup>(+)</sup>
	Total n(%)	USF n(%)	Traditional UBS n(%)	Mixed UBS n(%)	
Main caregiver					
Mother	1220(82.5)	313(91.0)	429(80.8)	478(79.1)	$p=0.000^*$
Father	28(1.9)	3(0.9)	13(2.4)	12(2.0)	
Grandparents	149(10.1)	14(4.1)	52(9.8)	83(13.7)	
Others	82(5.5)	14(5.0)	37(7.0)	31(5.2)	
Total validated	1479(100)	344(100)	531(100)	604(100)	
Age range (years)					$p=0.006^*$
< 24 years	358(24.4)	85(24.7)	133(25.9)	140(23.1)	
24   34	599(40.9)	164(47.7)	207(40.4)	228(37.6)	
34   54	435(29.7)	87(25.3)	146(28.5)	202(33.4)	
54 years or +	72(4.9)	8(2.3)	27(5.3)	37(6.1)	
Total valid	1464(100)	344(100)	513(100)	607(100)	
Marital situation of parents					$p=0.000^*$
Married	740(49.9)	108(31.4)	265(49.9)	367(60.4)	
Fixed partner	417(28.1)	167(48.5)	145(27.3)	105(17.3)	
Single	196(13.2)	49(14.3)	67(12.6)	80(13.2)	
Others	49(3.4)	5(1.5)	23(4.3)	21(3.5)	
Not informed	81(5.5)	15(4.4)	31(5.8)	35(5.8)	
Total valid	1483(100)	344(100)	531(100)	608(100)	
Family income (FI)					$p=0.000^*$
< 1 MW	60(4)	42(12.2)	13(2.4)	5(0.8)	
1 MW	390(26.3)	159(46.2)	117(22.0)	114(18.7)	
Between 2 and 3 MW	800(53.9)	122(35.5)	317(59.7)	361(59.3)	
4 or + SM	221(14.9)	19(5.5)	81(15.2)	121(19.9)	
Not informed	13(0.9)	2(0.6)	3(0.6)	8(1.3)	
Total valid	1484(100)	344(100)	531(100)	609(100)	
People contributing to income					$p=0.000^*$
Father	664(45.5)	184(53.5)	223(42.0)	257(44.2)	
Mother	170(11.7)	41(11.9)	51(9.6)	78(13.4)	
Father and Mother	508(34.9)	88(25.6)	200(37.7)	220(37.8)	
Others	115(7.9)	31(9)	57(10.7)	27(4.6)	
Total valid	1457(100)	344(100)	531(100)	582(100)	
No. of people contributing to FI					$p=0.000^*$
1 person	817(55.1)	243(70.6)	272(51.2)	302(49.7)	
2 persons	578(39.0)	96(27.9)	220(41.4)	262(43.1)	
3 or + persons	88(5.9)	5(1.5)	39(7.3)	44(7.2)	
Total valid	1483(100)	344(100)	531(100)	608(100)	
No. persons dependent on FI					$p=0.492$
Up to 3 dependents	597(40.2)	140(40.7)	223(42.0)	234(38.4)	
4 or + dependents	881(59.4)	204(59.3)	305(57.4)	372(61.1)	
Not informed	6(0.4)	-(-)	3(0.6)	3(0.5)	
Total valid	1484(100)	344(100)	531(100)	609(100)	

(+) Chi-square association test: Significant results (\*) p-value  $< 0.01$ . USF - Family Health Unit; UBS - traditional Primary Health Care Unit; UBS Mixed - mixed primary Health Care Unit; FI - Family Income; MW - Minimum Wage(s)

nificant difference was found between the USF and mixed UBS, but a statistically significant difference was identified between these and the UBS model

( $p < 0.001$ ), which was higher for the USF in terms of family-centeredness (score 5.3) and for the mixed UBS in terms of community orientation (score 5.9).

**Table 2.** Scores of family-centeredness and community orientation attributes of primary health care models

Attributes	Primary health care model	Valid n	Average score	Median score	SE	p-value <sup>#</sup>
Family-centeredness <sup>#</sup>	USF	341	5.3 <sup>*</sup>	5.6	0.16	< 0.001
	UBS	536	4.4 <sup>***</sup>	4.4	0.14	
	Mixed UBS	603	5.0 <sup>*</sup>	3.3	0.13	
Community orientation <sup>#</sup>	USF	241	5.8 <sup>*</sup>	5.8	0.19	< 0.001
	UBS	398	4.9 <sup>***</sup>	5.0	0.15	
	Mixed UBS	496	5.9 <sup>*</sup>	6.7	0.13	

SE - Standard Error; USF - Family Health Unit; UBS - traditional Primary Health Care Unit; Mixed UBS - Mixed Primary Health Care Unit; \*Kruskal-Wallis test (non-parametric one-way ANOVA),  $p < 0.05$ ; \*\*Dunnett's multiple comparison (post hoc) test ( $\neq$ )

In table 3, it was observed that, in the family-centeredness items, a statistically significant difference was found in child health care among the PHC models. For the professional's concern with the family's opinions on the treatment and care provided to the child, the significant difference was favorable to the Primary Health Care model, with an average score of 4.0, higher than the other models; for the professional's concern with knowing about the existing illnesses in the child's family and with meeting with other relatives if necessary, statistically significant differences were found in favor of the Family Health model, with 7.0 and 5.8 as the mean scores, respectively, despite the score superior to 6.6 in the mixed UBS model for knowing about existing problems in the family.

What the community orientation attribute is concerned, all items presented a statistically significant difference between the PHC models. The USF model revealed a higher mean score for the home visit by a service professional (8.0) and the mixed UBS model for the service knowing important health problems in its neighborhood (score 6.1) and surveying the community's health problems (score 5.1), according to table 3.

## Discussion

Based on the data, the perception of family members and/or caregivers of children younger than 10 years can be verified with regard to the quality of care offered in the distinct PHC models. The study contributes by raising awareness on the need for holistic care provision to children and families in PHC, in nursing actions as well, including qualified listening, bonding and health education, aiming for the subject's autonomy. In that sense, in view of the nature of health care and the capacity to contribute to the families, this professional seeks to help them to find strategies and gain strength in view of the health needs identified in all phases of their lives. Therefore, it is urgent for the scientific knowledge on nursing activities in the family to be included in undergraduate and post-graduation education, with a view to its incorporation in clinical practice at the health services.<sup>(13)</sup>

**Table 3.** Mean scores 0-10 for the items of the attributes deriving from the primary health care models

Items of attributes deriving from primary health care	USF n=344 Mean score (SE)	UBS n=531 Mean score (SE)	Mixed UBS n=609 Mean score (SE)	p-value <sup>#</sup>
"Family-centeredness" <sup>2</sup>				
I1. Does your "physician/nurse" ask about your ideas and opinions about your child's treatment and care?	3.1(0.24) <sup>*</sup>	4.0 <sup>***</sup> (0.20)	3.4(0.18)	0.006
I2. Has your "physician/nurse" already asked you about diseases or problems in your child's family?	7.0 <sup>***</sup> (0.24)	4.8 <sup>***</sup> (0.21)	6.8 <sup>***</sup> (0.18)	0.000
I3. Would your "physician/nurse" meet with other family members if you thought that was necessary?	5.8 <sup>***</sup> (0.19)	4.4 <sup>***</sup> (0.16)	4.9 <sup>***</sup> (0.15)	0.000
"Community orientation" <sup>##</sup>				
J1. Does anyone from the health service visit you at home?	8.0 <sup>***</sup> (0.20)	6.3 <sup>***</sup> (0.19)	7.0 <sup>***</sup> (0.18)	0.000
J2. Does the health service know the important health problems in your neighborhood?	5.4 <sup>***</sup> (0.19)	4.9 <sup>***</sup> (0.16)	6.1 <sup>***</sup> (0.14)	0.000
J3. Does the health service survey community health problems in the homes?	4.7 <sup>***</sup> (0.19)	4.6 <sup>***</sup> (0.16)	5.1 <sup>***</sup> (0.15)	0.003
J4. Does the health service invite family members to participate in the health council?	3.9 <sup>***</sup> (0.21)	2.8 <sup>***</sup> (0.17)	3.0 <sup>***</sup> (0.16)	0.000

USF - Family Health Unit; UBS - Traditional Primary Health Care Unit; Mixed UBS - Mixed Primary Health Care Unit; SE - Standard Error; \*Kruskal-Wallis test (non-parametric one-way ANOVA),  $p < 0.05$ ; \*\*Dunnett's multiple comparison (post hoc) test ( $\neq$ )

In the analysis of the attribute scores deriving from the three PHC models, unsatisfactory results were found regarding effective and high-quality childcare. These findings are a source of concern, as the attributes under analysis represent fundamental characteristics for the services' planning and execution of health actions, for the strengthening of the bond among professionals-family-community and advances in the health indicators, such as the reduction of the childhood morbidity and mortality due to causes sensitive to PHC.<sup>(14)</sup>

In a study involving traditional UBS users, it was appointed that the importance attributed to the family and community is still incipient in the health team's work process.<sup>(15)</sup> International studies developed in China<sup>(16)</sup> and in Santander<sup>(17)</sup> and Bogotá<sup>(18)</sup>, Colombia, unsatisfactory scores were revealed for family-centeredness and community orientation in primary care.

The low qualification of these attributes has been demonstrated in an international study involving users, professionals, coordinators and managers of public health services, demanding an enhanced perspective with a view to the implementation of strategies that focus on the individual, together with the family and the community, in the care process.<sup>(19)</sup>

Based on this context, it is verified that the PHC professionals may not know the family's health situation. This is thought-provoking as, although the Family Health Strategy represents the Brazilian model for the reorientation of PHC, in practice, these principles have not been fully incorporated yet, privileging models that prioritize the individual and the disease in their actions.<sup>(19)</sup>

Therefore, there is an urgent need to transform the work process of the teams in the health care models, including the expanded clinic approach in their practices, based on a dialogical relation among professionals-child-family, establishing a legitimate encounter<sup>(8)</sup> to build a singular therapeutic project for the user.<sup>(20)</sup>

Therefore, reflections are needed on the work process the health teams implement, with a view to redirecting and strengthening the professional training, based on continuing health education that can awaken the professionals to thoughts and

actions coherent with integral and interdisciplinary care for the subjects in PHC.<sup>(21)</sup>

In this study, the fact is highlighted that the USF and mixed UBS models present the highest scores for the family-centeredness and community orientation models when compared to the traditional model, in line with other studies<sup>(4,22,23)</sup> that demonstrate the superiority of USF concerning these attributes. These two models differ from the traditional UBS because their work process takes into account the principles of the Family Health Strategy.

The individual analysis of the attribute components among the investigated PHC models reveals that the USF model performed better in terms of the concern of the professionals who monitor the child with identifying the existing diseases or problems in the family. This attitude is coherent with the proposal to understand the health and disease processes based on the articulation of different knowledge,<sup>(20)</sup> from the perspective of activities based on welcoming and bonding, but also the professional's accountability and commitment to integrate the actions, with a view to defragmenting the care and supplying comprehensive care.<sup>(8)</sup>

When comparing the scores of the community orientation attribute's component, a statistically significant difference was identified with regard to the better results of the models that work with the Family Health Strategy. This can reflect the steps taken, although discrete, towards the principles of the Family Health Strategy in health care practices for the population, in which individuals, families and communities serve as subjects in the care process.

A powerful tool for integral care in PHC is the home visit, which is fundamental for the effectiveness of the horizontal relation between the professionals and the families in the care process. At home, the professionals can acknowledge the mothers' efforts in terms of autonomy and daily responsibility in childcare. In the same context, the professionals get to know the families' reality, employment, housing and sanitation conditions, as well as the mothers' dedication to the prevention and promotion of their children's health.<sup>(8)</sup>

The contact with the family in the home environment allows the professionals to envisage possi-

bilities for new care, guiding their practice by the population's social determinants of health. Through qualified listening, they can plan interventions to respond to the family's singular needs, going beyond strictly technical knowledge.<sup>(24)</sup>

## Conclusion

It was evidenced that the models presented a statistically significant difference in favor of the USF and mixed UBS. This demonstrates that, despite the limitations, the models that operate with the Family Health Strategy (FHS) present higher scores for family-centeredness and community orientation in PHC. In that sense, the better score for the mixed UBS indicates that the presence of the FHS principles in the care practices may be contributing to improve the score of this model towards the reorientation of child PHC. It should be highlighted that the Ministry of Health adopts the concept of family-centered health care as a synonym of family-centeredness in the assessment of PHC. Nevertheless, to truly change the child and family health care process in the context of PHC, the professionals need to be sensitized to expand and found their actions in a theoretical framework with a family focus, going beyond the governmental guidelines. The fact that the study did not assess the PHC professionals' opinion can also be considered a limitation in this study.

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## Collaborations

Santos NCCB, Toso BRGO and Reichert APS participated in the conception of the project, analysis and interpretation of the results. Santos NCCB, Tosam BRGO, Collet N and Reichert APS contributed to the writing of the article, relevant critical review of the intellectual content and approval of the version for publication.

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