Original Article

Use of popular care by discharged patients of a neonatal intensive care unit

Utilização do cuidado popular por egressos de unidade de terapia intensiva neonatal

Utilización del cuidado popular en niños salidos de unidades de cuidados intensivos neonatales

Lia Cardoso de Aguiar https://orcid.org/0000-0002-8730-7245
Fernando Lamy Filho https://orcid.org/0000-0002-7858-4195
Erika Barbara Abreu Fonseca Thomaz https://orcid.org/0000-0003-4156-4067
Milady Cutrim Vieira Cavalcante https://orcid.org/0000-0001-6972-6246
Hortênsia Coutinho da Rocha https://orcid.org/0000-0001-8222-5411
Natany Sampaio Santos Dias https://orcid.org/0000-0002-2143-5287
Zeni Carvalho Lamy https://orcid.org/0000-0002-9332-0542

How to cite:
Aguiar LC, Lamy Filho F, Thomaz EB, Cavalcante MC, Rocha HC, Dias NS, Lamy ZC. Use of popular care by discharged patients of a neonatal intensive care unit. Acta Paul Enferm. 2022;35:eAPE02187.

DOI
http://dx.doi.org/10.37689/acta-ape/2022AO021877

Keywords
Culturally competent Care; Cultural competency; Social conditions; Faith healing; Child health; Intensive care units, neonatal

Descritores
Assistência à saúde culturalmente competente; Competência cultural; Condições sociais; Cura pela fé; Saúde da criança; Unidades de terapia intensiva neonatal

Descriptores
Asistencia sanitaria culturalmente competente; Condiciones sociales; Curación por la fe; Salud del niño; Unidades de cuidado intensivo neonatal

Submitted
August 3, 2021

Accepted
April 25, 2022

Corresponding author
Lia Cardoso de Aguiar
Email: lia_cardoso@hotmail.com

Associate Editor
Ariane Ferreira Machado Avelar
(https://orcid.org/0000-0001-7479-8121)
Escola Paulista de Enfermagem, Universidade Federal de Sao Paulo, SP, Brazil

Abstract

Objective: To evaluate the relationship between the search for popular care and socioeconomic and health conditions related to children discharged from a neonatal intensive care unit.

Methods: Retrospective cohort with a total of 165 children under 48 months old, discharged from the neonatal intensive care unit of two of the largest public maternity hospitals in a capital city in northeastern Brazil, in 2014 and 2015. Perinatal data were obtained from medical records and on health care through questionnaires. A theoretical model was created, establishing relationships between socioeconomic conditions, the presence of morbidity at discharge and the direct or indirect impact on the use of the popular sector. For analysis, Structural Equation Modeling was used (α=5%).

Results: The use of the popular sector was the least prevalent among the three care sectors. The presence of morbidity at discharge had a significant total effect (standardized coefficient of 0.302; p-value = 0.030), however, with no direct effect on the search for this sector. Among the practices of the popular sector, the search for a healer (55.3%) was the most prevalent.

Conclusion: Having morbidity at discharge from the neonatal intensive care unit, associated with other unidentified variables, is a factor that can influence the search for health care in the popular sector, without excluding the search for care with health professionals.

Resumo

Objetivo: Avaliar a relação entre a busca por cuidados populares e condições socioeconômicas e de saúde relacionadas às crianças egressas de unidade de terapia intensiva neonatal.

Métodos: Coorte retrospectiva com 165 crianças menores de 48 meses, egressas de unidade de terapia intensiva neonatal de duas das maiores maternidades públicas de uma capital do nordeste brasileiro, nos anos de 2014 e 2015. Dados perinatais foram obtidos de prontuários e sobre cuidados de saúde por meio de questionários. Criou-se um modelo teórico, estabelecendo relações entre condições socioeconômicas, presença de morbidade na alta e o impacto direto ou indireto no uso do setor popular. Para análise, utilizou-se Modelagem de Equações Estruturais (α=5%).

Resultados: A utilização do setor popular foi a menos prevalente entre os três setores de cuidado. A presença de morbidade na alta registrou efeito total significante (coeficiente padronizado de 0,302; valor de p=0,030), porém, sem efeito direto para a busca por esse setor. Dentre as práticas do setor popular, a procura por benzedeira/curandeiro (55,3%) foi a mais prevalente.

Conclusão: Apresentar morbidade na alta da unidade de terapia intensiva neonatal, associada a outras variáveis não identificadas, é fator que pode influenciar na busca por cuidados de saúde no setor popular, sem excluir a busca por cuidados com profissionais da saúde.

[1]Universidade Federal do Maranhão, São Luiz, MA, Brazil.
Conflicts of interest: none to declare.

Resumen

Objetivo: Evaluar la relación entre la búsqueda de cuidados populares y las condiciones socioeconómicas y de salud relacionadas con niños salidos de unidades de cuidados intensivos neonatales.

Métodos: Cohorte retrospectiva con 165 niños menores de 48 meses, salidos de unidades de cuidados intensivos neonatales de dos de las mayores maternidades públicas de una capital del nordeste brasileño, durante los años 2014 y 2015. Los datos perinatales se obtuvieron de las historias clínicas y los datos sobre cuidados de salud por medio de cuestionarios. Se creó un modelo teórico, que estableció relaciones entre condiciones socioeconómicas, presencia de morbilidad en el alta e impacto directo o indirecto en el uso del sector popular. Para el análisis, se utilizó el Modelo de Ecuaciones Estructurales (α=5 %).

Resultados: La utilización del sector popular fue la menos prevalente entre los tres sectores de cuidado. La presencia de morbilidad en el alta registró un efecto total significante (coeficiente estandardizado de 0,302; valor de p=0,030), pero sin efecto directo en la búsqueda de ese sector. Entre las prácticas del sector popular, la búsqueda de acceder a un curandero (55,3 %) fue la más prevalente.

Conclusión: Presentar morbilidad en el alta de la unidad de cuidados intensivos neonatales, junto con otras variables no identificadas, es un factor que puede influenciar en la búsqueda de cuidados de salud en el sector popular, sin excluir la búsqueda de cuidados con profesionales de salud.

Introduction

Advances in neonatal care have increased the survival of preterm newborns with an increasingly lower gestational age at birth.[1] In this context, despite the hegemonic history of the biomedical model of health care over the years, traditional medicine has been insufficient given the complexity of the health problems of the Brazilian population, which has peculiar characteristics in each region of the country,[2] as is the case of children discharged from a neonatal intensive care unit.[3]

The health care system is socially, culturally constructed and provides people with ways to interpret their condition and possible actions in the search for treatment for their disease.[4] This system is internally constituted by the interaction of three different types of care that form sectors: the informal one, which involves informal care related to self-treatment and medicalization and obtaining advice from friends or relatives, the professional one, which includes the formal health care offered by the various health services, and the popular, which encompasses popular or traditional care expressed in the practices of religious healers.

In popular health care, practices are based on individuals who specialize in forms of healing that are sacred or secular, or even a mix of both, called healers, occupying an intermediate position between the informal and professional sectors.[4]

In Brazil, especially in the Northeast region, popular practices are commonly used in the search for solutions to health problems, with the objective of preventing or curing diseases.[5] Low maternal education[6,7] and low monthly family income[8] or complemented with benefits from government programs.

However, there are few current national studies on the subject.[10-12] These studies are limited to describing situations and characteristics of the use of alternative health care, especially in the popular sector, exempting themselves from testing explanatory hypotheses for the demand for this type of care.[3,13-15] Still, there are practically no statistics that explain the market, consumption and usage habits of popular care and other alternative practices in Brazil.[13]

Thus, the objective of this study was to evaluate the relationship between the search for popular care and socioeconomic and health conditions related to children discharged from a neonatal intensive care unit.

Methods

Retrospective cohort with children discharged from the neonatal intensive care unit of two of the largest public maternity hospitals in a capital city in northeastern Brazil, in 2014 and 2015.

The inclusion criteria were being a child under the age of 48 months old, coming out of these neonatal intensive care units and living in the city of study. Children who stayed in the city only for consultations, testing or other follow-ups were not included.

In the initial research using medical records, 293 eligible children were identified. Of these, 39

children lived in another city during the period of application of the questionnaires, 86 were not located and three refused to participate in this study. A total of 165 children were evaluated, and one died 5 months after discharge from the neonatal intensive care unit. For the 165 children, a sample power calculation was performed, considering the exposure variable "presence of morbidity at discharge", maintaining a confidence interval of 95%; significant relative risk of 2.0 and risk of positive outcome among exposed/unexposed of 40/19. Sampling power of 80% was obtained.

Data collection took place in 2016, when the participating children were approximately 2 years old. On that occasion, through medical records, data on the child's admission to the neonatal intensive care unit and perinatal care were collected: gestational age at birth (preterm, term); low birth weight (yes, no); Apgar in the first minute (<7, >7); Fifth-minute Apgar score (<7, >7) and morbidities at discharge from the neonatal intensive care unit. Information on the mother's prenatal consultations was also obtained, categorized as "none", "less than six consultations" and "six or more consultations".

For gestational age, children born at <37 weeks were considered preterm and those born at ≥37 weeks were considered term.[16] Birth weight <2500g was considered low weight and those with ≥2500g were not underweight.[17] The mapping of the main morbidities presented among newborns, most of them heart disease, generated the variable "morbidities at discharge", which was considered one of the predictors in this study and categorized into presence or absence of morbidities.

Then, the application of the questionnaires was scheduled with each mother, through cellphone contact. After three unsuccessful phone contact attempts, an active search was carried out at the address listed in the medical record. During the home visit, a semi-structured questionnaire was applied, containing questions related to children, mothers and the use of the popular sector.

The maternal variables obtained were: age (15 to 19; 20 to 35 or 36 to 45); self-reported skin color (white or non-white); education (incomplete elementary school, complete elementary school, incomplete high school, complete high school, incomplete higher education and complete higher education); religion (yes or no); marital status (with or without a partner); monthly family income in minimum wages considering the amounts of R$880.00 in 2016, R$937.00 in 2017 and R$954.00 in 2018 (less than one, one to three, four to seven and eight to ten) and number of pregnancies (one, two, three, four to five and six or more).

The categorization of maternal age was based on the highest perinatal risk for pregnant women before the age of 20 and after the age of 35.[18,19] Government benefits constituted the variable "benefit from government programs", not being added to the declared values of income.

The child's variables were: sex (male or female); skin color reported by the mother (white or non-white); age in months (up to 11, 12 to 23, 24 to 35 or 36 to 47); post-discharge illness (none, disease with a good prognosis or disease with a poor prognosis) and readmissions (zero, one, two, three, four times or more).

The variable post-discharge illness was obtained from the question "What clinical diseases or health conditions has the child presented so far?" and categorized into none, good-prognosis disease, and poor-prognosis disease. In order to classify the type of prognosis, Clark's definition was considered,[20] "prediction of the course of a disease after its onset".

Use of the popular sector (yes or no) was the outcome variable. An explanatory theoretical model was developed with variables related to the characteristics of the mother (maternal education, family income, government program benefit and religion) and the child (birth order and morbidities at discharge from the neonatal intensive care unit, and related to follow-up post-discharge, such as referral, follow-up by the Family Health Team, post-discharge illness, readmissions and difficulty in getting care).

The variable "difficulty getting care" was obtained from the following question: "Do you find it difficult to get health care? (Yes or No). The difficulty in accessing health services permeates not only socioeconomic conditions, but also the understanding that popular practices are linked to traditions and cultures of local knowledge.[5,21]

Through factor analysis, two latent variables were also created for analysis of the theoretical model: socioeconomic condition, with a factor loading of 1.00, and obstetric history, with a factor loading of 0.79. For the latent variable socioeconomic status, the variables maternal education, family income and benefit from government programs were used. The choice of these variables for the composition of the socioeconomic condition variable was based on studies of alternative treatments in individuals with less education[6,7] and with monthly family income.[8] The inclusion of the variable benefit from government programs in the composition of this latent variable was due to the fact that adherence to these programs contributed to the supplementation of family income.

The latent variable obstetric history was created with the variables birth order and number of pregnancies. There seems to be a predilection for the use of popular care practices among the firstborn of primiparous mothers, justified by the greater influence of older people in the family, especially grandmothers, on a still inexperienced mother.[21] There are also indications that home care with the newborn, even among multiparous mothers, is influenced by sociocultural conditions and popular beliefs.[22]

The choice of these variables was based on studies in which socioeconomic and demographic characteristics[23-25] and the presence of morbidities at discharge[26,27] are often pointed out concomitantly with the use of the popular sector. The theoretical model established took into account the relationship between socioeconomic status, presence of morbidity at discharge and its direct or indirect impact on the search for the popular sector (outcome).

In the descriptive analysis, version 14.0 of the Stata software (StataCorp LP, College Station, United States) was used. To analyze the factors associated with the use of the popular sector, Structural Equation Modeling was used, using the MPlus® software, version 7.4 (Muthen & Muthen, North Carolina, United States).

Structural Equation Modeling empirically tests a set of dependency relationships through a model that operationalizes the theory. In this modeling, constructs or latent variables can be incorporated into the analysis. A latent construct or variable is a theorized and unobserved concept that cannot be measured directly, but can be represented or measured by two or more observable or measurable variables and has practical and theoretical justification for improving statistical estimation.[28]

The causal relationships (between variables) of interest in Structural Equation Modeling can be direct causal (one variable causes an effect on another directly), indirect causal (one variable causes an effect on another through a third variable), spurious relationships (two variables have a common variable that has an effect on both) and association without correlation (it is not possible to determine whether the common variable contributes to the covariation between two previous variables through spurious or indirect relationships).[28]

Estimation was performed using the weighted least squares method, adjusted by mean and variance, used for categorical variables, being robust in the absence of normality. Theta parameterization controlled for residual variance differences. In the analysis of standardized estimates for the construction of latent variables, factor loading greater than 0.4 and $p<0.05$ was considered as an indication that the correlation between the observed variable and the construct is moderately high in magnitude.[28]

The model fit was determined by: p value greater than 0.05 for the chi-square test, $p<0.05$ and upper limit of the 90% confidence interval (90%CI) lower than 0.08 for the root mean square of approximation errors, values greater than 0.95 for the comparative fit index (CFI) and the Tucker Lewis Index (TLI) and a residual weighted root mean square value less than 1.

First, seven indirect paths (C) were tested to analyze the relationship between socioeconomic conditions and the use of the popular sector: C1 declared religion; C2 specialized post-discharge follow-up; C3 follow-up by the Family Health Team, morbidities at discharge from the neonatal intensive care unit and post-discharge illness; C4 morbidities in the neonatal intensive care unit discharge; C5 post-discharge illness; C6 difficulties in getting care and C7 obstetric history. To assess the relationship between morbidity at discharge from the neona-

tal intensive care unit and the use of the popular sector, three indirect paths were tested: C1 specialized post-discharge follow-up; C2 religion and C3 post-discharge illness. Factor loadings were less than 0.40 for all items and did not show statistical significance.

The initial model did not show a good fit. Thus, paths were included starting from the variables referral to follow-up and obstetric history, both towards the use of the popular sector. However, the most plausible modification was to include a path from the obstetric history and Family Health Team variables towards morbidities at discharge, which originated the model used (final model).

The final model did not present well-adjusted indices, but it was chosen considering the theoretical point of view. When comparing the ideal hypothetical model with the proposed model, the chi-square test did not show significant differences, indicating adequacy of the model. The value of the root mean square of the approximation errors was less than the maximum acceptable, showing similarity between the examined models and the hypothetical model. The CFI and TLI indices were below the reference values (Table 1).

This research was approved by the Research Ethics Committee of the University Hospital of the Federal University of Maranhao, under opinion 1 588 178 (Certificate of Presentation of Ethical Appreciation: 54415016.0.0000.5086), issued on June 13, 2016. In the case of mothers under the age of 18, the Informed Consent Form was signed by their legal guardian.

Table 1. Use of the popular sector according to the characteristics of children discharged from the NICU

Variables	Popular sector			
	Yes n(%)	No n(%)	p-value	95CI
Sex			0.643#	0.50-0.65
Male	30(63.8)	65(55.1)		
Female	17(36.2)	53(44.9)		
Skin color			0.445#	0.72-0.85
White	13(27.7)	22(18.6)		
Non-white	34(72.3)	96(81.4)		
Age (months)			0.150##	0.90-0.98
Up to 11 months	2(4.3)	2(1.7)		
12 to 23 months	2(4.3)	4(3.4)		
24 to 35 months	24(51.0)	69(58.5)		
36 to 47 months	19(40.4)	43(36.4)		
Mother's age*			0.662##	1.88-196
15-19 years old	3(6.4)	10(8.5)		
20-35 years old	32(68.1)	28(71.8)		
36-45 years old	12(25.5)	10(19.7)		
Mother's education*			0.346##	3.55-3.97
Incomplete elementary school	8(17.4)	8(6.8)		
Complete elementary school	2(4.4)	10(8.5)		
Incomplete high school	8(17.4)	15(12.7)		
Complete high school	18(39.1)	59(50.0)		
Incomplete higher education	3(6.5)	13(11.0)		
Complete higher education	7(15.2)	13(11.0)		
Religion**			0.562##	0.80-0.93
Yes	36(7.7)	62(84.9)		
No	3(92.3)	11(15.1)		
Mother's marital status*			0.918##	0.26-0.41
With a partner	31(66.0)	79(67.5)		
No partner	16(34.0)	38(32.5)		
Family income			0.688##	1.56-1.77
Less than 1 minimum wage	5(10.6)	16(13.6)		
1 to 3 minimum wage	35(74.5)	92(78.0)		
4 to 7 minimum wage	6(12.8)	7(5.9)		
8 to 10 minimum wage	1(2.1)	3(2.5)		

#Chi-Square Test; ##Fisher's Exact Test; *n=164; **n=112. The n of the variables differ due to the number of losses by category

Results

Among the children discharged from the neonatal intensive care unit who used practices from the popular sector (28.5%), most of them were men, non-white and aged between 24 and 35 months old. Their mothers were prevalently aged between 20 and 35 years old, had completed high school (39.1%) and had a family income of one to three minimum wages (74.5%) (Table 1). Popular care referred to was: healer (55.3%), anointing with oil/water (14.9%), healing prayers (23.4%) and payment of promises (17.0%). Four mothers did not inform the practices used (8.5%). The initial analysis model did not show a good fit. Paths were included based on the variables referral to follow-up and obstetric history, both towards the use of the popular sector. The most plausible modification from a theoretical point of view was to include a path from the variables obstetric history and the Family Health Strategy towards morbidities at discharge, which originated the final model used. The final model presented a significant chi-square test (p>0.05) with a value of the root of the mean of the squares of the acceptable approximation errors (below 0.05), indicating adequacy of the model,

although the CFI and TLI indices have below the reference values (Table 2). The presence of morbidity at discharge registered a significant total effect with a standardized coefficient (0.302; p=0.030). However, there was no significant direct effect of this variable on the search for care in the popular sector (standardized coefficient of 0.278; p=0.075). This demonstrates that, somehow, having a diagnosis of morbidity at discharge is associated with the search for the popular sector, but possibly associated with some other factor, not investigated in this study, demonstrated by this indirect effect.

Table 2. Final model fit indicators

Index	Final model	Reference value
No. of free parameters	49	
Degrees of freedom	34	
X^{2a}	47.209	Valor mais baixo
X^2 p-value	0.065	p > 0,05
RMSEA[b]	0.049	Abaixo de 0,05
90%CI of RMSEA	0.000 – 0.0079	Abaixo de 0,08
CFI[d]	0.902	Acima de 0,95
TLI[e]	0.809	Acima de 0,95
WRMR[f]	0.648	Menor que 1,0

[a]Chi-square test; [b]Root Mean Square Error of Approximation; [c]Confidence Interval 90%; [d]Comparative Fit Index; [e]Tucker Lewis Index; [f]Weighted Root Mean Square Residual

Neither of the two latent variables (socioeconomic status and obstetric history) was associated with the search for the popular care sector, although socioeconomic conditions showed a p-value close to significance (0.055) for the total indirect effect (Table 3).

Table 3. Standardized coefficient, standard error and p-value of direct and indirect effects for indicator variables

Variables	Standardized coefficient	Standard error	p-value
CSE			
Total effect	0.067	0.123	0.588
Indirect total effect	-0.219	0.114	0.055
Direct total effect	0.286	0.181	0.115
HO			
Total effect	0.163	0.126	0.194
Indirect total effect	0.018	0.047	0.700
Direct total effect	0.145	0.125	0.244
Morbidity at hospital discharge			
Total effect	0.302	0.140	0.030
Indirect total effect	0.024	0.056	0.669
Direct total effect	0.278	0.156	0.075
Specialized Follow-up			
Total effect	0.068	0.142	0.634
Indirect total effect	0.009	0.043	0.836
Direct total effect	0.059	0.157	0.708
Follow-up by FHS			
Total effect	0.125	0.139	0.369
Indirect total effect	0.031	0.063	0.627
Direct total effect	0.094	0.139	0.498
Difficulty getting care			
Total effect	-.0.034	0.152	0.820
Indirect total effect	-0.045	0.038	0.242
Direct total effect	0.010	0.047	0.700

Discussion

In this study, 47 children discharged from a neonatal intensive care unit were submitted to care in the popular sector in different situations of illness, while in a study carried out in Bahia[3] no participant evidenced the use of the popular sector. However, it was not possible to identify, through the structural equations, direct effects of the variables of this study in determining the use of this care sector. The variable presence of morbidity at discharge was associated as an indirect effect, denoting the participation of factors not investigated in this study, influencing the search for health care in the popular sector.-

The main hypothesis of this study was the fact that the use of the popular health care sector was directly associated with more disadvantaged socioeconomic conditions. This hypothesis was not confirmed, although the results show that the total indirect effect of the latent socioeconomic condition variable has a borderline association with this outcome. Rolim[11] points out the worst socioeconomic conditions as one of the possible determinants of the use of the popular sector. A study carried out in the city of Parintins (AM)[11] showed that practices such as blessing are pointed out by poor families in conditions of social vulnerability as an alternative for healing in situations of lack of medical care.

It is possible that a wide range of factors could influence the choice of the popular health care sector. Among them, in addition to social vulnerabilities that could determine problems in accessing professional health services, there are issues related to local culture, such as specific religions and beliefs, which are not always associated with the individual's degree of poverty.[29]

Another possible explanation for the absence of a relationship between socioeconomic status and

the search for popular health care is found in the relative homogeneity of the sample studied, with regard to socioeconomic conditions. It is known that most of the mothers (91.6%) studied lived with a monthly family income of up to three minimum wages at the time. Therefore, it is possible that this fact has reduced the chances of demonstrating differences between groups with better and worse socioeconomic conditions.

In this study, the presence of morbidities at discharge indirectly influenced the search for popular care practices for newborns, revealing that people can take different paths to reach a cure, combining the biomedical model with spiritual treatment or opting for a them after experiencing and not getting results with the other. In the process of a child's illness, mothers recognize and associate the signs in different ways, which influences the search for different care and treatments, both in the disease already installed and in its prevention.[3]

The individual ends up making use of natural resources and existing practices in their social environment for the relief and cure of their ailments, in the search for health recovery and the restoration of biopsychic balance.[14] People seek biomedical resources while undergoing spiritual treatment with flushing baths, prayers, penances and promises, resorting to Umbanda, spiritism or Christian churches.[30] The exclusive adoption of popular practices, unlike others, is seen with concern,[31] but their use, in a complementary way, can be seen as a positive aspect in the behavior of the mothers of these children.

Among popular care, the search for a healer was the most mentioned, and is reported in different areas of Brazil.[10-12] In 2009, the blessing and its variations were identified as a frequent practice of care for newborns of risk in Rio Grande do Sul,[10] and the use of this practice was also reported in Ceara, with the incorporation of mourners in the routine of many Family Health Teams in the state.[32]

In this study, in addition to the low use of popular care practices (28.5%), the use of care with health professionals was always present (100%). This result was similar to that of a study on the therapeutic itinerary of mothers of children enrolled in the Kangaroo Method in Bahia,[3] which found that mothers sought alternatives in the various systems, with the informal sector being the first to be sought. However, no mother reported the search for the popular sector. As they were children with preterm birth, it is likely that this explained the predominance of the search for formal care practices.[3] In this study, even in the case of discharged patients from the neonatal intensive care unit, the search for the popular sector was of almost a third of the sample, being present although in a relatively low percentage.

Rocha et al.[15] also identified practices from the popular sector that are less prevalent among children discharged from a neonatal intensive care unit, with the search being motivated only for the treatment of diseases of the soul, such as the evil eye and upset wind. The search for health care sectors was influenced by the families' prior knowledge and their perception of the health-disease process. In another study, carried out with mothers of infants with respiratory infections, a similar behavior was observed, with the demand for the formal health service concomitant with the use of popular practices for child care.[33]

The biomedical system is not abandoned by the subject, but it can be positioned as a system that does not respond to its demand.[34] This concomitant search for popular and professional practices can also be linked to the belief that there are supernatural evils which traditional medicine cannot cure.[35]

This study faced some limitations. The first one was the sample loss, despite the fact that the sample power calculation of 80.0% proved to be sufficient to ensure a high probability of observing the effect. The fact that the questionnaire was administered by health professionals could also be considered a weakness, as this may have influenced the participants' responses. It is recognized that adjustments in the research form could minimize possible biases. In addition, the fit of the models may have been compromised by the way the data were collected/categorized, preventing a better treatment of these data.

However, it is believed that a strong point of this study was the use of structural equation mod-

eling, establishing direct and indirect linear relationships between the variables and the outcome. Furthermore, it is the only search to address the factors related to the use of popular practices in a quantitative way, constituting a differential in the face of qualitative analyzes on the subject.

Conclusion

The search for the formal care sector is an option for families with children discharged from the neonatal intensive care unit. The presence of morbidity at discharge from the neonatal intensive care unit, associated with other unidentified variables, is a factor that can influence the search for health care in the popular sector, without excluding the search for care with health professionals. The work draws attention to the importance of health professionals understanding that beliefs can generate valid care practices and contribute as an important emotional and therapeutic support for families. Furthermore, this study constitutes an important starting point for future analyzes on determining factors in the search for popular health practices. It is necessary to investigate the influence of other factors influencing the choice of popular practices for health care.

Acknowledgements

To the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (CAPES) and the *Fundação de Amparo à Pesquisa e ao Desenvolvimento Cientifico e Tecnológico do Maranhão* (FAPEMA).

Colaborations

Aguiar LC, Filho FL, Lamy ZC, Thomaz EBA, Cavalcante MCV, Rocha HC and Dias NSS declare that they contributed to the study design, data analysis and interpretation, article writing, critical review of the manuscript and approval of the final version to be published.

References

1. Barría-Pailaquilén RM, Mendoza-Maldonado Y, Urrutia-Toro Y, Castro-Mora C, Santander-Manríquez G. Trends in Infant mortality rate and mortality for neonates born at less than 32 weeks and with very low birth weight. Rev Lat Am Enfermagem. 2011;19(4):977-84.
2. Mello ML. Práticas terapêuticas populares e religiosidade afro-brasileira em terreiros no Rio de Janeiro: um diálogo possível entre saúde e antropologia [tese]. Rio de Janeiro: Escola Nacional e Saúde Pública Sergio Arouca; 2013.
3. Morais AC, Silva AC, Almeida CR, Lima KD. Therapeutic itinerary of children's mothers after the Kangaroo Method. Cien Cuid Saúde. 2017;16(2).
4. Kleinman A. Patients and healers in the context of culture: an exploration of bordel and between antropology, medicine and psychiatry. California: University of California Press; 1980. 448 p.
5. Oliveira AT, Moreira CT, Machado CA, Vasconcelos Neto JA, Machado MA. Crendices e práticas populares: influência na assistência de enfermagem prestada à criança no programa saúde da família. Rev Bras Prom Saúde. 2012;19(1):11-8.
6. Azevedo AM, Alonso NB, Caboclo L, Westphal AC, Silva TI, Muszkat RS. O uso da medicina alternativa e complementar por pacientes com epilepsia: risco ou benefício. J Epilepsy Clin Neurophysiol. 2004;10(4):201-4.
7. Madsen H, Andersen S, Nielsen RG, Dolmer BS, Høst A, Damkier A. Use of complementary/alternative medicine among paediatric patients. Eur J Pediatr. 2003;162(5):334-41.
8. Rodrigues Neto JF, Faria AA, Figueiredo MF. Medicina complementar e alternativa: utilização pela comunidade de Montes Claros, Minas Gerais. Rev Assoc Med Bras. 2009;55(3):296-301.
9. Instituto de Pesquisa Econômica Aplicada (IPEA). Focalização e cobertura do Programa Bolsa-Família: qual o significado dos 11 milhões de famílias? Texto para discussão, nº 1396. Brasília (DF): IPEA; 2009 [citado 2022 Jan 10]. Disponível em: http://repositorio.ipea.gov.br/handle/11058/1398
10. Iserhard AR, Budó ML, Neves ET, Badke MR. Práticas culturais de cuidados de mulheres mães de recém-nascidos de risco do sul do Brasil. Esc Anna Nery. 2009;13(1):116-22.
11. Rolim DC. Vulnerabilidades e potencialidades de famílias da área urbana e rural do município de Parintins-AM. In: VIII Jornada Internacional Políticas Públicas; 22 a 25 de agosto de 2017; São Luís, Maranhão. São Luís: Programa de Pós-Graduação em Políticas Públicas, Centro de Ciências Humanas, Universidade Federal do Maranhão; 2017 [citado 2022 Jan 10]. Disponível em: http://www.joinpp.ufma.br/jornadas/joinpp2017/pdfs/eixo4/vulnerabilidadesepotencialidadesdefamiliasdaareaurbanaeruraldomunicipiodeparintinsam.pdf
12. Góes FG, Silva MA, Santos AS, Pontes BF, Lucchese I, Silva MT. Postnatal care of newborns in the family context: an integrative review. Rev Bras Enferm. 2020;73(Suppl 4):e20190454. Review.
13. Almeida IJ, Buarque BS, Guedes TG, Sette GC, Cavalcanti AM. Evidências científicas sobre a influência cultural nos cuidados às crianças. Rev Rede Enferm Nordeste. 2017;18(6):840-6.
14. Oliveira AP. Práticas populares no cuidado infantil: revisão integrativa [trabalho de Conclusão de Curso]. Rondonópolis (MT): Universidade Federal de Mato Grosso; 2020 [citado 2022 Jan 10]. Disponível em: https://bdm.ufmt.br/handle/1/1767
15. Rocha HC, Lamy ZC, Aguiar LC, Moreira JG, Pereira MU, Albuquerque YL, et al. Busca por cuidados de saúde: itinerário terapêutico de crianças egressas de unidades neonatais. Rev Bras Prom Saúde. 2021;34.

16. WHO: recommended definitions, terminology and format for statistical tables related to the perinatal period and use of a new certificate for cause of perinatal deaths. Modifications recommended by FIGO as amended October 14, 1976. Acta Obs Gynecol Scand. 1977;56(3):247-53.

17. Prado IF, Cardoso BL, Sabatés AL, Silva SC, França NM. Desenvolvimento neuropsicomotor em crianças nascidas prematuras e com baixo peso. Rev Lusófona Cien Reli. 2019;21(1):327-48.

18. Gomes TG, Queiroz MN, Costa AB, Moreira AC. Desfechos perinatais relacionados a idade materna e comorbidades gestacionais nos nascimentos prematuros. Comun Cien Saúde. 2021;32(1):43-8.

19. Santos NL, Costa MC, Amaral MT, Vieira GO, Bacelar EB, Almeida AH. Gravidez na adolescência: análise de fatores de risco para baixo peso, prematuridade e cesariana. Cien Saude Colet. 2014;19(3):719-26.

20. Clarck G. Prognostic and predictive factors. In: Harris JR, Lippman ME, Morrow MH, editor. Disease of breast. 5th ed. Philadelphia: Lippincott-Raven; 1996. p. 461-70.

21. Gomes LM, Melo MC. Práticas populares de cuidado: percepção de gestantes em uma unidade de saúde de Petrolina-Pe. Espaço Saúde. 2015;16(3):53-63.

22. Costa LD, Dalorsoletta K, Warmling KM, Trevisan MG, Teixeira GT, Cavalheiri JC, et al. Dificuldades maternas no cuidado domiciliar a recém-nascidos. Rev Rene. 2020;21:e44194.

23. Behera MR. Relationship between maternal education and under-five mortality rate in low and middle income countries-a literature review. Int J Heal Sci Res. 2015;5(6):646-51.

24. Bousso RS, Poles K, Serafim TS, Miranda MG. Crenças religiosas, doença e morte: perspectiva da família na experiência de doença. Rev Esc Enferm USP. 2011;45:397-403.

25. Desai S, Alva S. Maternal education and child health: Is there a strong causal relationship? Demography. 1998;35(1):71-81.

26. Aguiar Júnior NR, Costa IM. Uso da medicina alternativa em crianças com dermatite atópica no ambulatório de dermatologia pediátrica do Hospital Universitário de Brasília [dissertação]. Brasília (DF): Universidade de Brasília; 2009 [citado 2020 Jan 10]. Disponível em: https://repositorio.unb.br/handle/10482/3928

27. Tsao JC, Meldrum M, Kim SC, Jacob MC, Zeltzer LK. Treatment Preferences for CAM in children with chronic pain. Evid Based Complement Alternat Med. 2007;4(3):367-74.

28. Silva JS. Modelagem de equações estruturais: apresentação de uma metodologia [dissertação]. Porto Alegre: Universidade Federal do Rio Grande do Sul; 2006 [citado 2020 Jan 10]. Disponível em: https://lume.ufrgs.br/handle/10183/8628

29. Hoffmann-Horochovski MT. Benzeduras, garrafadas e costuras: considerações sobre a prática da benzeção. Guaju. 2015;1(2):110-26.

30. Minayo MC. Saúde-doença: uma concepção popular da etiologia. Cad Saude Publica. 1988;4(4):363-81.

31. Faria JB, Seidl EM. Religiosidade e enfrentamento em contextos de saúde e doença: revisão da literatura. Psicol Reflexão Crítica. 2005;18(3):381-9. Review.

32. Andrade L, Barreto I, Fonseca C. A Estratégia saúde da família. In: Duncan BB, Schmidt MI, Giugliani ER. Medicina ambulatorial: condutas de Atenção Primária baseadas em evidências. Porto Alegre: Artmed; 2014. p. 88-99.

33. Oliveira DR, Dantas GB. Práticas culturais de cuidados entre mães de lactentes com infecção respiratória. Rev Bras Prom Saúde. 2012;25(2 Suppl):13-9.

34. Henriques HI, Oliveira Filho P, Figueiredo AA. Cura e adoecimento em relatos de evangélicos usuários de CAPS. Rev Est Contemp Subjetividade. 2017;7(2):349-62.

35. Cunha CG, Gonçalves CR. A tradição oral das práticas de benzeção. Rev Assoc Bras Pesqui Negros. 2018;10:30-42.