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Clinical and social characteristics of maternal health conditions of children treated in a primary health care program in a municipality in the interior of Brazil

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Abstract
Objective: This study aimed to understand the social and health conditions of mothers of children followed up at the childcare clinic in a basic health unit in a municipality in the interior of Brazil.
Method: This is a cross-sectional, observational and descriptive study carried out through interviews with mothers of children attended at childcare outpatient clinic of a basic health unit located in the city of Ribeirão Preto, state of São Paulo, during the period of one year. A specific questionnaire was used for the study containing questions about their social conditions (age, marital status, education, out- of-home work) and health (number of children, prenatal follow-up, disease during prenatal care, breastfeeding time, referred morbidity, continuous drug use, tabagism, occasional or regular physical activity and hours of sleep).
Results: 185 mothers were interviewed predominating the age group from 30 to 39 years old, married, with complete high school, with up to 3 children and do not perform professional activities away from home. Most (98.4%) preformed prenatal care, are non-smoker (90.3%), don't consume alcohol (80.5%), don't practice physical activity (78.4%) and sleep less than six hours at night (65.4%). The most frequent referred diseases were hypothyroidism (4.2%), anemia (2.2%), depression (2.2%), hypertension (2.2%) and insomnia (2.2%). Regular use of medicines was referred by 73 (38.6%) participants, and the most common were contraceptives (9.5%), antidepressants (8.4%), iron (7.4%), vitamins (4.2%), thyroid hormone (3.1%) and antihypertensive (2.6%).
Conclusion: The results of this study should be taken into account by health professionals when monitoring children in child welfare programs, as healthier mothers will certainly be able to provide more appropriate care for their children. Identifying physical and social problems in mothers and referring them for necessary care should be part of all child welfare program care.

Keywords: Child care, maternal health, primary health care, women's health

Introductions

Childcare progams encompasses a set of actions designed to promote the appropriate physical, emotional, and social development of children. This part of pediatrics focuses primarily on healthy children, with emphasis on health promotion and disease prevention, considering them as biopsychosocial beings who maintain relationships with the physical and psychosocial environment [1]. Over time, childcare has evolved into a more comprehensive practice and has been developed as a multidisciplinary and interdisciplinary process, in which the participation of parents and family is essential [2]. In this context, mothers often assume the primary role in developing this practice, becoming responsible for caring for their children, in addition to their social role as women [3]. Therefore, childcare serves the emancipation and empowerment of mothers in caring for their children, which requires them to be prepared, guided, and supported in all their needs [4].

The period from birth to two years of age is characterized by rapid growth and development, when changes and various factors such as nutrition, vacines and prevention of infectious diseases, unintentional injuries and chld safety ultimately require greater care and interventions from mothers [5]. During this phase, routine medical appointments in well-child care programs, complications, and emergency care place a strain on mothers' activities. In some cases, mothers are also not in adequate physical or emotional condition to care for their children because they also need to take care of their own health [6, 7].

Given this condition it is important to understand the difficulties and health conditions of mothers, who are the primary caregivers and highly demanded in the daily lives of their children. This study aimed to assess the social and health conditions of mothers of children receiving follow-up care at the well-child care clinic of a primary health care unit.

Material and Methods

This is a cross-sectional, observational, and descriptive study conducted through interviews with mothers of children attending at childcare outpatient clinic of a primary health care unit located in the municipality of Ribeirão Preto, São Paulo state, in the interior of Brazil. Data collection was conducted three times a week over a period of one year. For this purpose, a specific questionnaire was developed containing questions about their social conditions (age, marital status, education level, employment outside the home) and health conditions (number of children, frequency in prenatal appointments, disease during pregnancy, duration of breastfeeding, reported morbidity, continuous medication use, alcohol consumption, smoking status, occasional or regular physical activity, and hours of sleep). Furthermore, to calculate body mass index, mothers' height and weight were measured; mothers with a BMI < 18.5 kg/m2 were classified as underweight; Those with a BMI ≥ 18.5 and < 25 kg/m2 were classified as having a healthy weight; mothers with a BMI between ≥ 25.0 and < 30 kg/m2 and ≥ 30 kg/m2 were classified as overweight and obese, respectively [8].

The inclusion criteria were mothers of children aged between birth and two years old, regularly attend in the childcare program and who agreed to sign the Informed Consent Form. Mothers whose information collected in the questionnaire was not fully obtained were excluded. The study was approved by the Research Ethics Committee of the Teaching Health Center of the Ribeirão Preto School of Medicine of the University of São Paulo, CAAE: 11170917.1.0000.5414, and received opinion number 3,386,401.

Results

During the study period, 197 mothers were invited, of whom 185 (93.9%) agreed to participate. The majority were between 30 and 39 years old (47,0%), married (44,3%), had completed high school (44,9%), had up to three children (90,3%), and did not work outside the home (51,9%), as presented in Table 1.

Table 2 presents some characteristics related to the health status of the participants. The majority (98.4%) received prenatal care, reported being non-smokers (90.3%), did not consume alcoholic beverages (80.5%), did not engage in physical activity (78.4%), and slept less than six hours per night (65.4%). Regarding nutritional status, assessed by body mass index, it was observed that 73 (39.5%) participants had a normal weight, 64 (34.5%) were obese, and 48 (25.9%) were considered overweight. The most frequent diseases reported by 33 (17.8%) of the participants were hypothyroidism (4.2%), anemia (2.2%), depression (2.2%), arterial hypertension (2.2%) and insomnia (2.2%), as shown in table 3. Regular use of medications was reported by 73 (38.6%) participants, with the most common being contraceptives (9.5%), antidepressants (8.4%), iron (7.4%), vitamins (4.2%), thyroid hormone (3.1%) and antihypertensives (2.6%).

Table 1: Social and demographic characteristics of mothers

	n	%
Age (years)		
< 20	3	1,6
20-29	73	39,4
30-39	87	47,0
≥ 40	22	11,9
Marital status		
Single	42	22,7
Married	82	44,3
Common-law relationship	54	29,2
Divorced	6	3,2
Widow	1	0,5
Education		
Incomplete elementary	12	6,5
Complete elementary	10	5,4
Incomplete high school	23	12,4
Complete high school	83	44,9
Incomplete higher	16	8,7
Complete higher	41	22,1
Number of children		
1	78	42,2
2	53	28,6
3	36	19,5
4	14	7,5
≥ 5	4	2,2
Works outside home?		
Yes	89	48,1
No	96	51,9

Table 2: Health characteristics of mothers

Variable	Category	n	%
Prenatal care	Yes	182	98.4
	No	3	1.6
Prenatal complications	Yes	80	43.2
	No	105	56.8
Breastfeeding (months)	>6	58	31.4
	<6	127	68.6
Smoker	Yes	18	9.7
	No	167	90.3
Alcoholic beverages	Yes	36	19.5
	No	149	80.5
Physical activity	Yes	40	21.6
	No	145	78.4
Hours of sleep	<6	121	65.4
	6-8	18	9.7
	>8	46	24.8

Table 3: Distribution of reported diseases among mothers

Disease	n	%
Anemia	4	2.2
Anxiety	2	1.1
Asthma	2	1.1
Depression	4	2.2
Endometriosis	1	0.5
Arterial hypertension	4	2.2
Hypothyroidism	8	4.3
Hyperthyroidism	1	0.5
Insomnia	4	2.2
Obesity	3	1.6

Discussion

During their first years of life, children require regular care to promote health and well-being, ensuring adequate physical, emotional, and social growth and development. To this end, childcare programs must be supported by families and work collaboratively with medical and nursing professionals committed to providing care to the mother-child pair [9]. In this context, the mother, as the child's primary caregiver, assumes a burden that must be shared with her usual duties, leading to a lack of time for self-care and resulting in greater physical and emotional strain that can compromise their health [10]. Generally, during well-child visits, healthcare professionals' attention is focused solely on the child, leading them to ignore or underestimate important aspects of mothers' daily lives, which certainly influence both maternal health and child care [11].

Changes resulting from urbanization, decreasing mortality and fertility rates, and technological advances have led women to adopt risk behaviors for chronic noncommunicable diseases, the prevalence of which has increased, particularly during the first few years after childbirth [10, 12]. The first years of a child's life are marked by maternal presence and dependence, without which their development will not occur satisfactorily [13]. Therefore, establishing an adequate mother-child relationship is essential during this period and can both influence and be influenced by the living conditions of both [14].

One of the fundamental actions for child's health is breastfeeding, the practice of which depends on several factors, such as the desire to breastfeed, the mother's physical and emotional condition, stimulation, and a favorable environment. Children breastfed for longer periods have better health and maintain more supportive family relationships. Therefore, every effort should be directed toward initiating and maintaining this practice, encouraging exclusive breastfeeding to be maintained during the first six months of life [15]. In the present study, 58 (31.3%) of the participants reported having achieved this goal, which certainly places greater demands on the daily lives of breastfeeding mothers. However, this figure is lower than that found in Brazil in the latest National Study of Child Feeding and Nutrition, which observed a 43.6% prevalence of breastfeeding among children aged 12 to 23 months; in the Southeast region, the same study found a 38.0% prevalence of breastfeeding in this age group [16]. Although, is in line with the average observed in other countries in different regions of the world [17-21]. Problems with lack of sleep (65.4% of mothers reported sleeping ≤ six hours/day) and a high proportion of mothers working outside the home may help explain this finding in the study population.

Furthermore, only a quarter of the mothers surveyed engaged in any type of physical activity, which may also contribute to the low prevalence of breastfeeding. It is known that physical exercise, among other benefits, reduces stress, which can decrease milk production, thus reducing the likelihood of prolonged breastfeeding [22]. Beyond that, 60.5% of the mothers studied were overweight, which may have contributed to the low prevalence of breastfeeding [23].

A worrying aspect that can compromise the mother-child relationship concerns mothers' mental health. It is known that approximately 20% of women may develop some type of mental disorder during pregnancy or after childbirth, periods during which women are more vulnerable to emotional issues related primarily to anxiety and depression [24].

The role of maternal depression in interactions with children is recognized as an important risk factor for the

development of emotional, behavioral, and cognitive disorders in children [25-28]. In the present study, 33 (17.8%) mothers reported some type of illness, of which 6 (18.2%) reported depression and/or anxiety. Furthermore, among the 73 (38.6%) that reported taking some type of medication, 16 (21.9%) regularly use antidepressants, highlighting the existence of mental health problems among the participants. Specifically in relation to depression, this condition tends to be exacerbated as the workload increases for each new child added to the family [22]. In this study, 107 (57.8%) of the mothers had more than one child, which represents a higher rate than the current fertility rate in Brazil, which is less than two children per couple [29]. Additionally, the low proportion of physically active mothers may contribute to a lower reduction in stress, increasing the chance of developing mental health disorders [30].

Regarding healthy lifestyle habits, the study showed that 18 (9.7%) of the participants were smokers, 36 (19.4%) reported consuming some type of alcoholic beverage, and 145 (78.3%) did not engage in regular physical activity, which may have contributed to the high prevalence of excess weight observed (60.5%). Interestingly, despite the high prevalence of excess weight observed, only 1.6% of mothers reported having the condition; failure to recognize excess weight may reflect a lack of accessibility to accurate information about the condition, which consequently hinders its prevention and management, increasing the risk of complications secondary to the condition.

As for physical activity, it can be observed that 145 (78.4%) mothers reported not practicing, which contributes to excess weight and may contribute to the emergence of other diseases, since combating a sedentary lifestyle is a universal recommendation due to the multiple health benefits it provides [31,32]. Although alcohol consumption (19.5%) and smoking (9.7%) were found to have low prevalence, the results demonstrate that targeted actions aimed at reducing these habits should always be present in all health care [33-35].

Another relevant aspect concerns the number of hours of sleep. Approximately two- thirds (65.4%) of the participants reported sleeping less than six hours per night, a time considered insufficient for physical and mental recovery. The American Academy of Sleep Medicine recommends that adults should sleep seven or more hours per night to maintain adequate physiological functions. Sleep deprivation can cause physical, cognitive, and social changes that compromise quality of life and is associated with an increase in cardiovascular, neurological, and cerebrovascular diseases, as well as early mortality [36, 37]. The high proportion of women working outside the home and being overweight, combined with the responsibilities inherent in caring for an infant, may help explain this finding regarding sleep among the mothers in this study [38].

Conclusions

The results of this study should be taken into account by health professionals when monitoring children in child welfare programs, as healthier mothers certainly will be able to provide more appropriate care for their children. Identifying physical and social problems in mothers and referring them for necessary care should be part of all child welfare program care.

Limitations of this study may be related to the relatively small number of participants, the fact that it was conducted in a single health facility using a convenience sample, and the fact that mothers responded to a questionnaire administered by the researchers, which may lead to recall bias.

Conflict of interest: None

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