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DOI: 10.15343/0104-7809.202347e11052021I

Factors Associated with Mothers' Knowledge about Sudden Infant Death Syndrome

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Abstract

Sudden Infant Death Syndrome is defined as the death of any infant under one year of age, with a sleeping position, in the prone position, being the most important risk factor. Thus, the massive dissemination of risk factors for this syndrome is fundamental so that mothers, specifically, would know these factors and be able to avoid this accident. Therefore, the objective of this study was to verify the knowledge of mothers about the risk and protective factors for sudden infant death syndrome and its association with socioeconomic and demographic conditions. 502 mothers of children who went for a polio vaccination participated. Socioeconomic and demographic information and mothers' knowledge of factors associated with the syndrome were collected. A chi-square test was performed to associate the dependent variable (number of mothers' correct answers) with the independent variables (socioeconomic and demographic data). Analysis of variance (ANOVA) was used for age, income, and level of education and a generalized linear model for social exclusion. Most mothers (72.34%) reported having heard about the syndrome; however, only 51.9% knew how to describe it. There was an association between lower accuracy in the questions (p=0.0001) and never having heard about the syndrome. Mothers who had not heard about it and got fewer questions right lived in neighborhoods with a worse social exclusion index than those who had already heard about it. It is concluded that mothers who had never heard about the syndrome and consequently answered fewer questions correctly, lived in neighborhoods with a worse social exclusion index than those who had already heard about the syndrome. However, among all the factors related to the syndrome, the sleeping position was the one with the highest number of correct answers by the mothers.

Keywords: Sudden Death. Infant. Sudden Infant Death.

INTRODUCTION

Sudden Infant Death Syndrome (SIDS) is defined as the sudden death of a child under one year of age without explanation, even after a thorough investigation, including a complete postmortem examination, review of the clinical history, and place where the death occurred[1,2].

Although SIDS is not a new condition, with reports in ancient scriptures and the bible, its etiology is still unknown[3,4,5]. Several pathophysiological mechanisms, such as the existence of disturbances in the breathing pattern, failure to control breathing, airway obstruction, immaturity of the mechanisms of autonomic control of body temperature, and problems in the part of the brain responsible for controlling awakening, have been suggested as causes for its appearance[6,7]. Furthermore, factors linked to the infant and the care provided, such as co-sleeping with

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parents, overheating of the child during sleep due to excessive clothing, presence of toys or stuffed animals in the crib; and factors related to pregnancy, such as the use of tobacco, alcohol and drugs, are also consolidated in the literature as factors associated with a greater chance of occurrence of SIDS[5]. A retrospective cohort study in the city of Sao Paulo verified the occurrence of risk factors for SIDS during the nursing consultation in Primary Care, noting that, among the main risk factors for SIDS were keeping soft objects in the crib (93.6%) and sharing a bed with their parents (58.7%)[8]. Therefore, there is no specific cause for this death as reported in the literature. However, the position of sleeping in the prone position has been shown to be the most important risk factor for the occurrence of SIDS[9].

SIDS is one of the main causes of death in children under one year of age, even with all known risk factors, with a higher prevalence between the second and fourth month of life in developed countries[7,9]. North American estimates have shown that SIDS corresponds to 90% of mortality in children up to the sixth month of life. These data corroborated several other studies on the risk of SIDS and the need to intensify the population's awareness about this form of death[9]. Thus, preventive and educational campaigns were created with the aim of disseminating information about the correct positioning of infants, seeking adherence to the supine position (belly up) during the children's sleep[7]. In developing countries, research on SIDS is still insufficient, as well as estimates of prevalence and incidence. In Brazil, the first national campaign "Sleep on your back", to encourage the positioning of the child to sleep in the supine position, took place in 2009, through the Pastoral da Criança, which informed people of the risks of letting the child sleep on their side or in the prone position, which was considered the most important risk factor for SIDS[9].

Faced with the vulnerability of a portion of the Brazilian population that has less education and more difficulty in accessing information, and because it is a syndrome in which several factors can contribute to its occurrence, it is necessary to know the information that mothers of infants have about these risk factors, as well as the protective actions that can be taken in order to avoid such deaths. Therefore, the present study verified the knowledge of mothers concerning the risk factors and protective measures of sudden infant death syndrome and its association with socioeconomic and demographic conditions.

MATERIALS AND METHODS

Study Delineation

This is a cross-sectional, analytical study with a quantitative approach, carried out in the city of Piracicaba, SP, on the "D-Day" of the Vaccination Campaign against Poliomyelitis on August 15, 2015.

"D-Day", as it is called, is a national campaign for the application of vaccines, a strategy adopted since the 1980s by health authorities whose main objective was to ensure that a greater number of people have access to all vaccines in the national calendar. In this campaign, children between 6 months and 5 years of age were able to receive the polio vaccine, which protects against three types of polio virus, free of charge. Despite the campaign extending until the last day of August (31), data were collected on a single day (Saturday)[10].

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Sampling plan and data collection

Five Family Health Strategy (FHS) centers that have a vaccine room were selected, from which they were chosen for convenience, each one of them in a different macro-region of the municipality of Piracicaba (North, South, East, West, and Center).

For the sample calculation, a target audience of residents of the municipality of Piracicaba was taken into account, of which 100% should be vaccinated by the Primary Care Centers of the municipality between the hours of 8 am and 5 pm.

The studied population consisted of mothers of children assisted on "D-Day". Sampling was intentional, where individuals were selected based on certain characteristics considered relevant by the researcher. Therefore, mothers of newborns, infants, or preschoolers, up to 36 months old, who attended the health units to participate in the vaccination campaign or update the child's vaccine booklet were included. Participating mothers were 18 years old or older and agree to participate in the study by signing the Informed Consent Form (ICF). Children with genetic syndromes and/or malformations and those older than 36 months were excluded. Furthermore, this criterion of child age was justified by the ease with which a greater number of mothers are approached during the campaign and/or the possible updating of vaccination booklets, in addition to resorting to a period of greater memories about the birth and the way their child slept. Therefore, the sample consisted of 502 women who met the selection criteria for mothers.

Data collection took place in a single session lasting 15 to 25 minutes by a post-graduate nurse in Collective Health and two previously trained dental students. Before data collection, those responsible for the children were informed about the research objectives and were asked to sign the Informed Consent Form. The researchers used a semi-structured questionnaire containing information about the mothers' socioeconomic and demographic conditions and their knowledge about sudden infant death syndrome (SIDS).

Study Variables

The dependent variable of the present research was the number of correct answers given by the mothers regarding the protection and risk factors for SIDS, which were later dichotomized by the median number of correct answers (≤11 and >11). Most mothers answered 11 questions correctly, which is why it was classified as a median number of correct answers (≤11 and >11).

To verify the mothers' knowledge, a list containing risk and protective factors was presented, in addition to others that are not associated with SIDS. The factors were organized in a table, at random, and in which the mother should indicate whether each factor presented could cause, prevent, or be unrelated to the sudden death of an infant.

Protective factors included: 1) baby sleeping in the crib alone[9,10]; 2) keeping the room well ventilated[9,10]; 3) using a pacifier[9,10]; 4) breastfeeding[9,10]; 5) baby sleeping with feet touching the bottom (the foot) of the crib[9,10]; 6) tucking the blanket into the crib[4,9,10]; 7) using a firm mattress for the baby to sleep[9,10]; 8) baby sleeping on their back[3,4,7,9,11,12,13].

The risk factors considered were: 1) baby sleeping in bed with the mother and/or father and/or siblings (co-sleeping)[9,11,13]; 2) baby sleeping with lots of clothes, well wrapped[4,9,11,12,13]; 3) having toys or stuffed animals in the baby's crib or bed[4,9,11,13]; 4) having fewer than six prenatal consultations[14,15]; 5) covering the baby up to the head[9,11,13]; 6) smoking near the baby[4,9,11,12]; 7) smoking during pregnancy[4,9,11,12,13]; 8) mother drinking alcohol during pregnancy[4,9,11,12,13]; and 9) using drugs during pregnancy[4,9,11,12,13].

The independent variables analyzed were demographic and socioeconomic characteristics, where maternal age, family monthly income, and SEI (social exclusion index, according

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DOI: 10.15343/0104-7809.202347e11052021I

to the city's Research and Planning Institute[16]) were dichotomized by the median; the level of education (high school and higher education); presence of a partner, belonging to the Pastoral da Criança program, and if they have heard about SMSL (yes or no).

The variable "belonged to the Pastoral program" was included in this study, since campaigns regarding SIDS prevention were initially disseminated by these organizations[11].

Four groups of mothers were created (Group 1: mothers who heard about SIDS and answered fewer questions about SIDS risk and protective factors correctly; Group 2: heard about it and answered more correctly; Group 3: did not hear about it and answered fewer questions correctly, and Group 4: did not hear about it and got more questions right) and were compared in relation to the following variables: maternal age, social exclusion index in the neighborhood where they live, level of education, and family income. The chi-square test was applied to test the association between the dependent variable (number of correct answers about the factors associated with the Syndrome, dichotomized by the median) and the independent variables (socioeconomic and demographic data).

After the exploratory analysis, it was verified that the data met the pre-disposition of normality, homogeneity, and variance and, thus, the one-way analysis of variance (ANOVA) was performed for age, income, and level of education, and a generalized linear model was made, considering the gamma distribution (asymmetric form) for social exclusion. In all analyses, a significance level of 5% was considered.

This research was submitted to the Research Ethics Committee of the Faculty of Dentistry of Piracicaba (FOP/UNICAMP) under CAAE number: 43754015.5.00005418 and approved according to protocol no. 042/2015.

RESULTS

Thus, approximately two thirds of the mothers (72.34%) stated that they had already heard about sudden infant death syndrome (SIDS), and those who had never heard anything about it were 2.86 times more likely to answer the fewest questions about the risk and protective factors for this syndrome (p=0.0001).

Regarding the question about how SIDS occurs, most of the analyzed mothers were correct in answering that death occurred before the child was one year old, in an unexplained way, in the crib or bed. However, of those women who got it right, almost half of the mothers (48.1%) did not know how to correctly answer how the syndrome happens; however, most mothers (90.4%) knew that the best way to put the child to sleep was in the dorsal decubitus position and 62.9% believed that this position prevented the child from drowning or choking (Table 2).

For the results of the comparison between the four groups of mothers in relation to the following variables maternal age, social exclusion index in the neighborhood where they live, level of education, and family income (Table 3), it was observed that mothers who had already heard about SIDS had a significantly higher average age, level of education, and monthly income (p<0.05). There was no significant difference between the two groups of mothers who had not heard about SIDS (those who answered more or less questions correctly). As for the neighborhood's social exclusion index, the group of mothers who had not heard about SMSL, but who answered more correctly, did not differ from the other groups who had heard about it, as well as there were no statistically significant differences between the groups of mothers who had not heard

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about it and answered less questions living in neighborhoods with the worst rate of social exclusion and the mothers who had already heard about it.

Table 1 – Association between the median of correct answers about SIDS risk and protective factors and socioeconomic and demographic variables. Piracicaba/SP, Brazil, 2015.

			Median of Correct Answers				
Variable	**Category**	**n**	**Less Correct (≤11)**	**More Correct (>11)**	**OR**	**CI (95%)**	**p**
Maternal age	≤32	269 (53.9%)	156 (58%)	113 (42%)	1.00		
	>32	230 (46.1%)	130 (56.5%)	100 (43.5%)	1.01	0.71-1.44	0.9977
Education	High School	164 (32.66%)	95 (57.92%)	69 (42.07%)	1.05	0.72-1.54	0.8377
	Complete Higher Education	338 (67.33%)	191 (56.50%)	147 (43.49%)	1.0		
Monthly family income	≤ 4 minimum wages	303 (60.9%)	176 (58.08%)	127 (41.91%)	1.10	0.76-1.58	0.6614
	> 4 minimum wages	194 (39.03%)	108 (55.67%)	86 (44.32%)	1.0		
SEI	≤-0.11	254 (52.58%)	148 (58.2%)	106 (41.7%)	1.00		
	>-0.11	229 (47.41%)	128 (55.8%)	101 (44.1%)	1.10	0.76-1.58	0.6643
Companion present	Yes	431 (88%)	242 (56.14%)	189 (43.85%)	1.0		
	No	59 (12%)	35 (59.32%)	24 (40.67%)	1.13	0.65-1.98	0.7481
Belongs to Pastoral da Criança Program	Yes	162 (32.9%)	97 (59.87%)	65 (40.12%)	1.19	0.81-1.74	0.4201
	No	331 (67.1%)	184 (55.58%)	147 (44.41%)	1.0		
Heard about SIDS	Yes	361 (72.34%)	183 (50.69%)	178 (49.30%)	1.0		
	No	138 (27.65%)	103 (74.63%)	35 (25.36%)	2.86	1.85-4.42	0.0001

SEI - Social Exclusion Index: median (-0.11)
Income - Monthly family income: median (minimum wages in force at the time: R$788.00)
Heard about Sudden Infant Death Syndrome - SIDS
OR: *Odds Ratio*
CI: Confidence Interval

Table 2 – Relative frequency of mothers who correctly indicated the answers regarding protective and risk factors for SIDS. Piracicaba, SP, Brazil, 2015.

Protective Factors	**% correct**
The baby sleeping in the crib alone	10.5%
Keeping the room well ventilated	46.6%
Using a pacifier	3.7%
Breastfeeding	38.8%
Baby sleeps with feet against the bottom (the foot) of the crib	4.5%
Tucking the blanket into the foot of the crib	11.5%
Using a firm mattress for the baby to sleep on	30.47%
The baby sleeping on stomach	90.4%
Protective Factors	**% correct**
Baby sleeping in bed with mom and/or dad and/or siblings	37%
The baby sleeps with a lot of clothes, well wrapped	23.5%
Having toys or stuffed animals in the baby's crib or bed	58.5%
Make fewer than six prenatal appointments	30.6%
Covering the baby up to the head	82.6%

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DOI: 10.15343/0104-7809.202347e11052021I

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Protective Factors	% correct
Smoking near the baby	69.5%
Smoking during pregnancy	74.9%
Mother drinking alcohol during pregnancy	72.3%
Using drugs during pregnancy	80.2%

Table 3 – Comparison between groups of mothers in terms of age, education level, income, and social exclusion index in the neighborhood where they live. Piracicaba, SP, Brazil, 2015.

Mothers Groups - Heard about SIDS	Median of Correct Answers	Maternal age Mean ($SD)	Education level* Mean ($SD)	Monthly income Mean ($SD)	SEI Mean (SD)
(1) Yes	Less	32.6 (5.9)a	8.9 (1.4)a	5.1 (1.8)a	-0.08 (0.37)a
(2) Yes	More	32.1 (5.3)a	9.0 (1.2)a	5.1 (1.8)a	-0.08 (0.37)a
(3) No	Less	28.4 (6.2)b	7.5 (1.6)b	3.5 (2.0)b	-0.21 (0.34)b
(4) No	More	28.6 (6.7)b	7.8 (1.5)b	3.5 (1.7)b	-0.13 (0.44)ab

*SD - Standard deviation: means followed by different letters vertically differ from each other (p≤0.05)

DISCUSSION

Most of the mothers interviewed had already heard about the Sudden Infant Death Syndrome (SIDS) and had a average age, schooling, and monthly income significantly higher than those who had never heard about this syndrome, corroborating the literature which states that unfavorable socioeconomic conditions, added to younger age and less education, interfere with access to health information and increase the risk of SIDS[3,4,8]. In the present study, more than 90% of the analyzed sample knew the correct way to put the child to sleep, believing that this position prevented the child from drowning or choking. About two-thirds of the mothers stated that they had already heard about SIDS, especially through radio and TV programs. It is worth emphasizing that most of the analyzed mothers knew that the best way to put the child to sleep was in the supine position (back), despite not knowing about SIDS.

The protective factors to avoid SIDS were correctly listed by the mothers, demonstrating their knowledge on how to avoid this type of death, and 90.4% of the mothers stated that sleeping on their backs is one of the protective factors. As for the other factors that had a low number of correct answers, such as the baby sleeping with their feet touching the foot of the crib (4.5% answered correctly), they may be associated with reduced exposure by means of access to information by these women, demonstrating the importance of the media in Brazil and the need for the correct dissemination of this information as tools for health education and SIDS prevention[7,17,18,19].

The sleeping position has been shown to be the most relevant factor in several studies on SIDS. Children under six months of age who sleep in the prone position are between three and nine times more likely to be affected by sudden death when compared to those who sleep on their backs, with the correct positio-

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ning and proper orientation[3,4,8,9,11,12,13]. Findings such as these have been known since the first epidemiological studies carried out in the United States and Europe in the 1990s, which already indicated sleeping in the prone position as an important risk factor[3,4,5,6,7,9,11,12,13]. However, in Brazil, it was only in 2009, by the initiative of the Pastoral da Criança program in partnership with the Brazilian Society of Pediatrics, during the National Vaccination Campaign against Poliomyelitis, that the National Campaign "Sleep on your Belly Up"[11] was instituted. Here the "speech" came out of the scientific environment and went into the practical part of guiding mothers, where until then, the importance of sleeping in the supine position was not talked about in childcare consultations.

Co-sleeping was cited as a risk factor for SIDS by just over a third of the mothers. However, when faced with the issue of co-sleeping described in reverse, that is, when the "baby sleeping alone in the crib" was mentioned as a protective factor, only about 10% of the mothers agreed that such information can prevent a baby's death. Sleeping together is considered when one of the parents and the infant sleep close to each other, either in the same bed or in different beds, in such a way that they can share well-being, breastfeeding, bonding, and monitoring. Co-sleeping, or a place where the infant sleeps on the same surface as the parents, even if it is common, continues to be an important risk factor for SIDS. Personal, social, and cultural reasons why parents share the bed may include the convenience of breastfeeding, creating a bond, and surveillance as the only way to keep the infant safe, as well as believing that sharing the bed allows for greater surveillance of the child during sleep[20]. Sharing a bed with parents or siblings is an important risk factor for SIDS, as can be seen in the work in Passo Fundo (RS) that investigated infant sleep practices in relation to maternal factors, demonstrating that among ten children who died, nine of them shared a bed with their parents and one shared it with five other people[21]. It should be noted that sharing a bed is also associated not only with a greater chance of SIDS, but also with injury or death of the infant resulting from suffocation, strangulation, and crushing[20].

The habit of having pillows, blankets or toys in the child's crib was indicated by more than half of the mothers as a risk factor for SIDS. However, in relation to loosened bedding, which can also obstruct the child's airways, leading to asphyxia, there was little indication, suggesting that it is not clear to the mothers present what care should be taken with the child's sleeping environment. The study by Tâmega[22], in which the mysteries related to sudden death were analyzed, demonstrated that the use of a soft mattress, thick and fluffy blankets, blankets with the presence of animal fur, and covering the child's head are also factors that can increase the risk of SIDS, and the child may also rebreathe the CO_2 released during their own breathing. He also points out that the combination of the prone position with the use of a soft mattress increases the risk of the syndrome by up to 20 times. In the present study, one third of the mothers were correct about the firmness of the mattress and the majority (82.6%) answered adequately about the risk of covering the baby up to the head.

Regarding pregnancy and prenatal care, one third of the mothers were correct in indicating that a lower number of consultations is a risk factor for SIDS. Prenatal consultations are considered as a protection against sudden infant death syndrome, as they are opportunities for mothers to obtain knowledge from nursing staff and the responsible doctor[4,6,15]. In the present study, despite the small number of mothers knowing that prenatal consultations are protective factors, most mothers recognized that smoking, alcoholism, and drug use during pregnancy predispose the child to death. According to the American Society of Pediatrics[11], it is not known for sure why the

DOI: 10.15343/0104-7809.202347e11052021I

use of drugs and alcohol is related to the increased risk of sudden death, it is only known that such addictions cause more vulnerability toward SIDS.

The use of a pacifier as a protective factor for the syndrome is defended by several authors[1,9,11,1,12,13,14], claiming that children who use a pacifier during sleep have a decrease in sympathetic activation and an increase in parasympathetic activity, in addition to activating the heart rate when compared to those who do not use pacifiers, improving the child's behavioral responses to the environment. However, it is noteworthy that the use of a pacifier during the first six months of the child's life contributes to reducing exclusive breastfeeding, which is an important protective factor both for the occurrence of SIDS and for the general health of the baby[23,24,25,26]. Therefore, when recognizing the risk of early weaning, the argument for introducing the pacifier is to occur only after breastfeeding has stabilized, that is, when the mother-child binomial has already learned the correct way to perform this act, which normally occurs 15 days after birth[8]. The risk of SIDS is rare in babies in the first month of life, different from the second and fourth months, in which they have higher rates of this type of death, especially due to the baby's ability to move more[27]. In the current study, 38.8% of the mothers knew that breastfeeding protects the child against the syndrome. Regarding pacifier use, 3.7% of the sample cited its use as a protective factor for SIDS. This reduced number may favor the dissemination of erroneous information regarding the association between the use of a pacifier as a protective factor for SIDS, given that, with a pacifier, the baby tends to sleep more and, consequently, the parents are not able to observe any alterations that could occur to the child, especially during the night. However, when the baby is on exclusive breastfeeding (EBF), the parents wake up more often during the night to feed the baby, thus preventing accidents.

It is worth mentioning that it is necessary to educate the public about the consequences of using artificial teats (such as pacifiers). These effects can impact the development of the baby as a whole, including an increased risk of SIDS, early weaning, dental arches, and mouth breathing, among others[24,25,27].

This study had an interesting design from the point of view of public health, taking place alongside a vaccination campaign in the municipality. According to Vennemann *et al.*[28], a meta-analysis showed that immunized children may present a lower risk of SIDS, thus, demonstrating the importance of vaccination and awareness campaigns for the prevention of sudden infant death being carried out together. Furthermore, vaccines are safe and scientific studies have not found an association between vaccination and SIDS[29,30]. This study also contributes to identifying the need for greater dissemination of the most diverse factors associated with SIDS, whether protective or risk factors, among pregnant women and mothers of children under 12 months of age, with the aim of helping to prevent this syndrome, especially during prenatal care and childcare consultations.

An interesting datum from the present study was the absence of citing health professionals as disseminators of information about SIDS, showing that the mass media and social media play an important role in the dissemination of correct information, in the awareness of changes in protective habits for the infant, and in the construction of knowledge through the dissemination of aspects related to the syndrome. Similar data can be observed in the work carried out by Bezerra *et al.*[18], in the city of Recife, PE, in which they found that 64.3% of the sample obtained information about SIDS through the media and not from health professionals.

This work has some limitations, especially regarding the lack of verification that the interviewed mothers understood what sudden infant death syndrome was, as well as whether they put the information obtained into practice. Des-

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pite increasing the mothers' knowledge concerning SIDS and its risk and protection factors, other limitations should be reported, such as the decrease in this study's power to generalize the results by using a sample from a healthcare service, which may not reflect the reality of other populations with different access to health information. Moreover, these data can be accompanied by sampling bias, since the study uses a specific population in a cross-sectional study and in children aged less than 36 months, combined with the knowledge of their guardians. As for the cross-sectional design of the present study, it does not allow for establishing temporal cause and effect relationships between the practice of actions to avoid SIDS carried out by mothers and the knowledge acquired at the time of the interview.

However, it is worth emphasizing that the results found do not refer to an absolute truth about the reasons for SIDS, as the items mentioned in the interview with the mothers only reflect the risk factors, not necessarily the cause of the syndrome itself. More studies are needed to confirm risk factors as possible causes of SIDS.

CONCLUSION

From the present study, it was possible to identify that most of the interviewed mothers had already heard about the sudden infant death syndrome (SIDS) and they had a mean age, education level, and monthly income significantly higher than those who had never heard about it, and, consequently, answered more questions related to SIDS correctly.

This shows that women who lived in neighborhoods with a poorer social exclusion index, that is, poorer neighborhoods, had never heard about SMSL. However, among all the factors related to the syndrome, the sleeping position was the one with the highest number of correct answers by the mothers.

Author Statement CREdiT

Conceptualization: Anselmo, MG; Lodi, JC. Methodology: Anselmo, MG; Lodi, JC; Possobon, RF. Validation: Anselmo, MG. Statistical analysis: Cortelazzi, KL; Possobon, RF. Formal analysis: Anselmo, MG; Lodi, JC, Possobon, RF. Research: Anselmo, MG; Lodi, JC; Miracles, CS; Cresoni, VD. Resources: Anselmo, MG; Lodi, JC; Miracles. Preparation of the original essay: Anselmo, MG; Lodi, JC; Miracles, CS; Cresoni, VD. Writing-revision and editing: Possobon, RF; Lodi, JC. Visualization: Anselmo, MG; Lodi, JC; Miracles, CS; Cresoni, VD. Supervision: Possobon, RF. Project management: Possobon, RF.

All authors read and agreed with the published version of the manuscript.

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Received: 22 june 2021.
Accepted: 02 march 2023.
Published: 06 july 2023.

REVISTA O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202347e11052021I

Annex 2

Socioeconomic and Demographic Questionnaire

1- How old are you? _____ years. Neighborhood:_____.

2- Does the child's father (or your partner/husband) live at home with you? ( )Yes No

3- Do you belong to any pastoral? ( )Yes ( ) No

4- What is your level of education? (up to what grade did you study)

( ) Illiterate
( ) Literate
( ) Incomplete 1st to 4th grade
( ) Completed 1st to 4th grade
( ) Incomplete 5th to 8th grade
( ) Completed 5th to 8th grade
( ) Incomplete high school
( ) Completed High School
( ) Incomplete higher education
( ) Completed higher education

5- What is your monthly family income (adding together all those you live with)?

( ) up to 1 Minimum Wage
( ) from 1 to 2 Minimum Wages
( ) from 2 to 3 Minimum Wages
( ) from 3 to 4 Minimum Wages
( ) from 4 to 5 Minimum Wages
( ) more than 5 Minimum Wages

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Appendix 3

Questionnaire - Sudden Infant Death Syndrome

If you are the MOTHER of a child up to 36 months of age, please complete the questionnaire below. Your information is important, as it may help other mothers to avoid Sudden Infant Death Syndrome in their babies.

6- Have you ever heard of Sudden Infant Death Syndrome (when the baby dies unexpectedly)? ( ) Yes ( ) No

<u>If YES,</u> where did you hear it?
( )Doctor/PCC/Hospital ( )TV/radio/magazine ( )Church/Pastoral ( )Relatives/friends.

7- In your opinion, Sudden Infant Death Syndrome happens when the child dies:
( ) inside the mother's belly.
( ) choking on breast milk, before completing one year of age.
( ) before the age of five, suddenly, in an accident or due to illness.
( ) before completing one year of age, in an unexplained way, in the crib or bed.
( ) of illness, before completing one year of age.

8- In your opinion, to avoid Sudden Infant Death Syndrome, what is the right way to put the child to sleep?
( ) On their side, supported by pillows
( ) On their back
( ) On their stomach (belly down)
( ) In any position, as long as the baby is comfortable
( ) I don't know

9- Why do you think the position you chose is the right one?
( ) For the baby not to drown or choke
( ) For the baby to be better accommodated
( ) I learned from a doctor/at PCC or on TV/radio or from friends/relatives or at church/pastoral work
( ) For the experience I had with the other child
( ) For the baby to breathe better

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Concerning Sudden Infant Death Syndrome, make an X on the option you think is best:

Baby sleeping in the crib alone	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Baby sleeping in bed with the mother and/or Father and/or siblings (co-sleeping)	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Baby sleeping with lots of clothes, well wrapped	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Having a toys or stuffed animals in the baby´s crib or bed.	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Having fewer than six prenatal consultations	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Keeping the room well ventilated	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Covering the baby up to the head	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Smoking near the baby	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Offering tea or water to the baby	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Using a pacifier	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Leaving light on for the baby to sleep	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Breastfeeding	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Smoking during pregnancy	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Mother drinking alcohol during pregnancy	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Baby sleeping with feet touching The bottom (the foot) of the crib	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Tucking the blanket into the crib	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know
Using a firm mattress for the baby to sleep	( ) May Cause Death	( ) May Avoid Death	( ) Has nothing to do with the Syndrome	( ) I don't know