



ORIGINAL ARTICLE

Women's sense of coherence and its association with early weaning^{☆,☆☆}



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KEYWORDS

Sense of coherence;
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Abstract

Objective: To investigate whether there is an association between sense of coherence levels and early weaning.

Method: This study had a quantitative nature and a cross-sectional design. Factors associated with early weaning (interruption of maternal breastfeeding) were investigated in a sample of 425 women older than 18 years, mothers of children up to 36 months of age who were not twins, with no sensory or motor deficiencies, without distinction of ethnicity or social class. The chi-squared test, with a significance level of 5%, was used to evaluate the association between the dependent variable (early weaning) and the independent variables (socioeconomic, demographic factors and sense of coherence level). Variables with $p \leq 0.20$ were tested by the multiple logistic regression model. Odds ratio and the respective 95% confidence intervals were estimated. All statistical tests were performed using the SAS 9.2 software.

Results: The results showed that mothers with greater sense of coherence were 1.82 times more likely to maintain breastfeeding for longer periods ($p=0.02$).

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PALAVRAS-CHAVE

Senso de coerência;
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Conclusions: The identification of mothers with low sense of coherence allows the early intervention of health professionals, contributing to decrease the rates of early weaning in the population.

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Senso de coerência da mulher e sua associação com o desmame precoce**Resumo**

Objetivo: Investigar se há associação entre níveis de senso de coerência e desmame precoce.

Método: O presente estudo tem natureza quantitativa e delineamento transversal. Foram investigados fatores associados ao desmame precoce (interrupção da oferta do leite materno à criança) em uma amostra de 425 mulheres com idade superior a 18 anos, sem distinção de etnia ou classe social, mães de crianças com até 36 meses, que não fossem gêmeos ou apresentassem deficiências sensoriais ou motoras. Foi feito o teste de qui-quadrado, com nível de significância de 5%, para testar a associação entre a variável dependente (desmame precoce) e as variáveis independentes (socioeconômicas, demográficas e nível de senso de coerência). As variáveis que apresentaram $p \leq 0,20$ foram testadas no modelo de regressão logística múltipla. Os Odds Ratio e os respectivos intervalos de 95% de confiança foram estimados. Todos os testes estatísticos foram feitos pelo programa SAS 9.2.

Resultados: Os resultados apontaram que mães com maior senso de coerência possuem 1,82 vez mais chance de manter o aleitamento por mais tempo ($p=0,02$).

Conclusões: A identificação de mães com baixo senso de coerência permite a intervenção precoce dos profissionais de saúde, contribui para diminuir as taxas de desmame precoce na população.

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Introduction

It is estimated that an increase in breastfeeding at a worldwide level would prevent 823,000 deaths annually in children under 5 years of age.¹ However, there are still many barriers to be overcome in order to achieve the goals established by the World Health Organization (WHO), which recommends that breastfeeding should be exclusive up to six months of age and supplemented with other types of food up to two years or more.²

Among the several barriers to breastfeeding, maternal level of schooling,³⁻⁵ use of pacifier,^{6,7} type of delivery,⁸ and maternal age,⁴ among others, can be highlighted as leading to early weaning (interruption of the supply of breast milk to the child).⁹

Pregnancy, delivery, postpartum, and the onset of breastfeeding are potentially anxiogenic and stressful situations, and may be associated with early weaning and even postpartum depression processes.^{10,11} In general, some individuals cope better with stressors, depending on their coping resources. According to the salutogenic theory of Aaron Antonovsky,¹² individuals have internal and external resources that can be used when facing stressful situations and, thus, maintain their health. The sense of coherence (SOC) is the central concept of the salutogenic theory and is nominated as a global guideline that can guide individuals in situations that keep them healthy or trigger illnesses.¹³

The SOC of an individual consists of three dimensions: comprehensibility (cognitive aspects), manageability (behavioral aspect), and meaning (motivational aspect). The stronger the SOC of the individuals, the more adequately they deal with stressors and consequently maintain their health. The proposal of Aaron Antonovsky is that SOC refers to a construct with universal meaning, which can be found in human beings regardless of their culture, gender, social class, and the religion they profess.¹⁴

As the literature indicates an association between a high SOC and health maintenance, regarding several investigated aspects,¹⁵ the authors proposed to investigate whether maternal SOC is associated with early weaning. These results can contribute to the identification of mothers potentially prone to early weaning, thus subsidizing the public sectors for planning and implementing social policies.

Methods

This was a cross-sectional study with a quantitative approach. The study included 425 mothers, aged over 18 years, who took their children aged up to 36 months for polio vaccination on the vaccination campaign date, in a medium-sized municipality in the countryside of the state of São Paulo, Brazil, in 2013. To define the participants, the sampling procedure was performed by conglomerate, selecting 15 vaccination sites by drawing lots, three from each of the five macroregions of the municipality (North, South,

East, West, and Center regions), out of a total of 60 vaccination sites available – 48 permanent and 12 temporary. The sample size was calculated considering a test power of 80%, confidence interval of 95%, percentage of early weaning in the group with greater SOC of 30%, and odds ratio of 1.8, obtaining a minimum necessary sample size of 420 individuals.

Data collection was carried out by 15 postgraduate students trained and calibrated by the main investigator. The researchers were stationed at these vaccination sites throughout the day of the vaccination campaign. Data from mothers who did not answer all questions related to the study, especially those related to the outcome variable and SOC, were not included in the study. Mothers whose children were aged up to 6 months were not included in the study. No child caregivers were interviewed other than the mothers themselves.

For the interview, the questionnaire used addressed the socioeconomic¹⁶ and the demographic situation of the mothers (Table 1) as well as the variables identified in the scientific literature as associated with early weaning. To collect data related to time of breastfeeding, the following question was created: “For how many months was this child breastfed?”.

To obtain data on the SOC, the abbreviated version (SOC13) of the Antonovsky’s Sense of Coherence Questionnaire (ASCQ) was used. This tool was validated for the Brazilian population¹⁷ and contains 13 items (Annex 1) that must be answered on a five-point Likert scale, with anchor sentences at the extreme values (1 and 5), such as “never/always, great suffering and annoyance/a huge

pleasure and satisfaction, without goals/full of goals”. The value 1 represents a weaker SOC and the value 5, a higher SOC; some questions had inverted scores. High scores indicate a strong SOC, within a possible range of 13–65 points.

The study outcome variable was early weaning, dichotomized into yes and no, according to the WHO,⁹ which defines early weaning as the total interruption of breastfeeding before the child’s 180th day of life. The independent variables were dichotomized by the median (monthly family income, maternal educational level, age, and SOC) or as “yes or no” (previous experience in breastfeeding [having breastfed at least one child for at least six months], planned pregnancy, and use of pacifier), except for the type of delivery (vaginal delivery or C-section) and time between delivery and first breastfeeding (up to 4 or more than 4 h).

The chi-squared test, with a significance level of 5%, was performed to test the association between the dependent variable (early weaning) and the independent variables (socioeconomic, demographic, breastfeeding risk factors, and SOC). The variables that showed $p \leq 0.20$ were tested in the multiple logistic regression model. Odds ratio (OR) and the respective 95% confidence intervals (CI) were estimated. All statistical tests were performed using the SAS 9.2 program (SAS Institute Inc. 2011, NC, USA).

This study project was approved by the Research Ethics Committee of our institution, under the terms of Resolution 466/12 of CONEP (Protocol: CAEE: No. 06495812.9.0000.5418). All participants signed the informed consent form for this research.

Results

The median score obtained by the mothers at the SOC assessment was 48. Therefore, mothers who had scores lower than or equal to 48 were classified as having a low level of SOC, whereas those with scores higher than 48 had a high level of SOC.

In the simple analysis, early weaning showed an association with a low sense of maternal coherence ($p < 0.01$). This same variable remained in the multiple logistic regression model, i.e., mothers with less sense of coherence were more likely to wean prematurely (Table 2).

Discussion

This study showed that women’s low SOC is associated with early weaning. The postpartum period may represent a challenge for the mother, who does not always have adequate coping resources. The identification of mothers with a low SOC, carried out through a screening process, would allow an early intervention by health professionals and services, by providing affective, informative, and instrumental support. Such actions may contribute to lower rates of early weaning in the population.

Prado et al.¹⁸ emphasize that the healthcare professional, when attending to mothers who wean their children prematurely, should practice a judgment-free approach and a more careful listening. Mothers should be allowed to talk about the difficulties experienced during this process, which helps them to overcome obstacles that are often rooted

Table 1 Sample profile according to the analyzed variables.

Variable	Category	n (%)
Maternal age	≤30 years	226 (53.17)
	>30 years	177 (46.83)
Level of schooling	≤11 years	275 (64.7)
	>11 years	135 (35.3)
Family income ^a	≤4 MW	273 (64.2)
	>4 MW	138 (35.8)
Planned pregnancy	Yes	266 (62.5)
	No	153 (37.5)
Previous breastfeeding experience	Yes	308 (72.5)
	No	98 (27.5)
Start of breastfeeding	≤4 h	335 (78.9)
	>4 h	69 (21.1)
Type of delivery	Vaginal	124 (29.1)
	C-section	300 (70.9)
Early weaning	Yes	154 (36.2)
	No	271 (63.8)

MW, monthly family income in Brazilian minimum wages.

^a Measured according to the MW value at the time of data collection.

Table 2 Association between early weaning and the analyzed variables.

Variable	Category	Total	Early weaning		Crude OR	95% CI	p-Value	Adjusted OR	95% CI	p-Value
			Yes ^a	No						
SOC	Low	241	101 (41.91)	140 (58.09)	1.78	1.18–2.68	0.0073	1.82 Ref	1.09–3.02	0.0206
	High	184	53 (28.80)	131 (71.20)	Ref					
Maternal age (in years)	≤30	226	86 (38.05)	140 (61.95)	1.16	0.77–1.76	0.5230			
	>30	177	61 (34.46)	116 (65.54)	Ref					
Schooling (in years of study)	≤11	275	103 (37.45)	172 (62.55)	1.23	0.80–1.91	0.3925			
	>11	135	44 (32.59)	91 (67.41)	Ref					
Family income	≤4 MW ^b	273	100 (36.63)	173 (63.37)	1.08	0.70–1.66	0.7951			
	>4 MW ^b	138	48 (34.78)	90 (65.22)	Ref					
Planned pregnancy	Yes	266	94 (35.34)	172 (64.66)	Ref					
	No	153	59 (38.56)	94 (61.44)	1.14	0.76–1.73	0.5792			
Previous breastfeeding experience	Yes	308	65 (21.10)	243 (78.90)	Ref			Ref		
	No	98	80 (81.63)	18 (18.37)	16.61	9.3–29.67	<0.0001	15.67	8.61–28.51	<0.0001
First breastfeeding after delivery (h)	≤4	335	118 (35.22)	217 (64.78)	Ref					
	>4	69	27 (39.13)	42 (60.87)	1.18	0.69–2.01	0.6325			
Type of delivery	Vaginal	124	37 (29.84)	87 (70.16)	Ref					
	C-section	300	117 (39.00)	183 (61.00)	1.50	0.95–2.35	0.0943			
Use of pacifier	Yes	212	102 (48.11)	110 (51.9)	2.93	1.93–4.44	<0.0001	2.29	1.38–3.78	0.0012
	No	208	50 (24.04)	158 (75.96)	Ref			Ref		

OR, odds ratio; CI, confidence interval; SOC, sense of coherence; MW, minimum wage.

^a Reference level of the dependent variable.

^b Minimum wage value at the time of data collection: R\$ 678.00.

Minor SOC: ≤48 points; Major SOC: >48 points.

in the dominant culture of the biological determinism of breastfeeding.

The mean age of the mothers participating in this study was considered adequate for the study of coping strategies, as individuals achieve SOC stability around the age of 30 years.¹⁹ It is therefore correct to say that the SOC level observed in this study appropriately reflects the coping strategies of this sample.^{20,21}

The negative consequences associated with early weaning are well known and are disclosed from a literature consensus.²² However, its causes involve several factors, such as return to work, breast complications, perception of the milk as “weak”, healthcare professionals’ attitude, and use of pacifier.^{5,23,24} It is known that pregnancy, the postpartum period, and the onset of the breastfeeding process are experiences that require significant physiological, emotional, and social changes, demanding adequate adaptive strategies.^{18,25}

The absence of adequate coping strategies to deal with these adaptive processes can lead to harm to the women’s well-being. Among the conditions that affect women in these phases of their lives, depression is noteworthy. International data indicate that 18.4% of women suffer from depression during pregnancy and 19.2% during the three months following delivery.²⁶

Studies in the health area show that a high SOC is associated with a low level of stress, since these individuals are better able to cope with adverse life events (potentially stressful events). Individuals with a high SOC have a good perception of their health and better quality of life, have less fatigue, depression, loneliness, and anxiety when compared to those with a low SOC.¹⁵

In this context, it can be stated that the mothers of this study who had high SOC coped more adequately with the stressors inherent to the pregnancy, delivery, and postpartum phases and, consequently, persisted in breastfeeding and avoided early weaning.

The probable explanation for this association is related to the base components of SOC: *comprehensibility*, *manageability*, and *meaningfulness*. From a salutogenic perspective, mothers with high SOC have a higher level of *comprehensibility*. This component would be related to the woman’s decision to breastfeed, taken in a structured, predictable, and understandable manner.

The second component, *manageability*, may be associated with mothers’ trust in her ability to cope with difficulties related to breastfeeding and to have a positive impact on their own and their children’s lives, using the available resources, whether internal or external.¹⁸ *Meaningfulness* is related to the understanding that their lives have meaning and purpose, and, thus, any investment made

for the appropriate coping with the stressors is valid. Therefore, even in the face of difficulties, they choose to continue breastfeeding.

Although SOC has been shown to be an important health predictor, this construct has not yet been studied in association with other variables already associated with early weaning, such as maternal obesity, absence of the partner,²⁷ and maternal return to work,²³ among others, which would allow the identification of the influence of SOC in overcoming situations of risk to breastfeeding.

The present study contributes to the identification of groups of mothers more prone to early weaning, which allows a potentially more effective approach through the development of specific and detailed strategies.

Low SOC, lack of previous experience in breastfeeding, and the use of pacifier were significantly associated with early weaning. The results of this study indicate that the identification of the SOC level in mothers can contribute to the creation of strategies aimed to reduce early weaning rates.

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Conflicts of interest

The authors declare no conflicts of interest.

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Annex 1. Antonovsky's sense of coherence scale. Adapted by Bonanato et al., 2009¹⁷

The following questions are very important because they talk about you, MOTHER, your ideas and feelings, which are very important in this study. I ask you to answer carefully and pay attention by **choosing only one answer to each question**. There are no right or wrong answers to any of them. Pay attention to the instructions to answer each type of question.

INSTRUCTIONS FOR THE QUESTIONS:

Here are 13 questions about several aspects of your life. Each question has five possible answers. Mark with an X the option that best expresses your way of thinking and feeling about what is being said. **Give only one answer** to each question, please.

1. What you do daily causes:

- Great suffering and annoyance Suffering and annoyance Neither annoyance nor satisfaction Pleasure and satisfaction Huge pleasure and satisfaction

2. To this day, your life has been:

- Without goals With few goals With some goals With many goals Full of goals

3. Are you interested in what is going on around you?

- Never Seldom Sometimes Very often Always

4. Do you feel you are treated unfairly?

- Never Seldom Sometimes Very often Always

5. Do you have confused ideas and feelings?

- Never Seldom Sometimes Very often Always

6. Do you think the things you do in your life make little sense?

- Never Seldom Sometimes Very often Always

7. Have you ever been disappointed by people you trusted?

- Never Seldom Sometimes Very often Always

8. Do you have feelings you wish you did not have?

- Never Seldom Sometimes Very often Always

9. Do you doubt whether you can control your feelings?

- Never Seldom Sometimes Very often Always

10. Have you ever been surprised by the behavior of people you thought you knew well?

- Never Seldom Sometimes Very often Always

11. In some situations, people feel like a failure. Have you ever felt like you were a failure?

- Never Seldom Sometimes Very often Always

12. Do you feel you are facing an unusual situation, and does not know what to do?

- Never Seldom Sometimes Very often Always

13. Sometimes things happen in our lives that we later think we did not give it the adequate importance. When something happens in your life, do you end up considering the importance you gave to the event was:

- Completely wrong Wrong Neither right nor wrong Right Completely right

Thank you for your cooperation. It was very important!

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