



REVIEW ARTICLE

Food access-availability of breastfeeding women in times of COVID-19 confinement

Acceso-disponibilidad alimentaria de la mujer que amamanta en cuarentena por COVID-19

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ABSTRACT

Introduction: the current COVID-19 pandemic has changed the way people eat, mainly because of its economic effects; access and availability are key determinants in the food chain.

Objective: to describe the perception of the effects of COVID-19 pandemic on the determinants of food access and availability in the dietary changes of breastfeeding women living in coastal areas during the year 2020.

Methods: qualitative study, with a phenomenological approach. The convenience sample consisted of 15 breastfeeding women who underwent a semi-structured interview. The results obtained were analyzed using the content analysis technique by means of the triangulation of those interviewed.

Results: food access is maintained, despite the decrease in economic income, due to governmental social aid, support from the families of origin, in addition to the prioritization of food as a basic need. The food availability of the commune is not significantly affected, so that the household continues to have adequate availability of essential foods, which are non-perishable.

Conclusions: the pandemic has not generated major changes in feeding during the breastfeeding process, but it should be noted that they were more selective in food during the breastfeeding process.

Keywords: Pandemics; Covid-19; Feeding; Lactation; Women.

RESUMEN

Introducción: la actual pandemia de COVID-19 ha cambiado la forma de alimentación de la población, principalmente por los efectos económicos que esta conlleva, el acceso y disponibilidad son condicionantes claves dentro de la cadena alimentaria.

Objetivo: describir la percepción de los efectos de la pandemia COVID-19 en los determinantes de acceso y disponibilidad alimentaria en los cambios de alimentación de las mujeres que amamantan, residentes en zona costera durante el año 2020.

Métodos: estudio cualitativo, con enfoque fenomenológico. La muestra por conveniencia estuvo constituida por 15 mujeres que amamantan a las que se les aplicó una entrevista semiestructurada. Los resultados obtenidos se analizaron mediante la técnica análisis de contenido por medio de triangulación de informantes.

Resultados: el acceso alimentario se mantiene, a pesar de la disminución del ingreso económico, debido a la ayuda social gubernamental, apoyo de las familias de origen, además de la priorización de la alimentación como necesidad básica. La disponibilidad alimentaria de la comuna no se ve afectada significativamente, por lo que, en el hogar continua la adecuada alimentación.

Conclusiones: la pandemia no ha generado mayores cambios en la alimentación durante el proceso de amamantamiento, sin embargo es necesario resaltar que estas mujeres fueron más selectivas en los alimentos durante el proceso de amamantamiento.

Palabras clave: Pandemia; Covid-19; Alimentación; Lactancia; Mujer.

INTRODUCTION

The pandemic has certainly affected the world economy, which exacerbates food access and food availability, associated with problems of malnutrition mainly in the most vulnerable sectors of the world. The increase in unemployment during the pandemic has risen considerably, which directly affects people's economy and the acquisition of food not only in terms of quantity but also in terms of quality.⁽¹⁾

The economic determinant is closely related to the food security that exists in a population, household or individuals, and this depends on food access, which refers to the food that can be obtained or purchased through economic income, geographic location and food prices, i.e., food access is influenced by product prices, geographic location, dietary patterns, among others.⁽²⁾

Likewise, food availability is also a crucial factor in the economic determinant, where it is recognized that it is related to food acquisition, variety and quantity of foods tangibly present in the community or family circle of the individual, therefore, it involves the supply of local foods in quality and quantity, which are safe and culturally acceptable.⁽³⁾

The eating behavior of a person is affected by different determinants, whether social or food itself, being able to see two main pillars, "those that influence the availability of food and those that influence the choice of food".⁽⁴⁾

A survey conducted by the *Universidad del Desarrollo in Chile* on purchasing behavior and eating habits in times of COVID-19 shows that 4 out of 10 families report that their diet has changed in recent weeks and that more than half of the families report that they do not eat normally during these weeks.⁽⁵⁾ In this context, it is important to highlight the importance of those families in which one of its members is a breastfeeding woman, since she requires optimal food and nutrition; therefore, it is essential to make the right food choices, which could be harmed due to the consequences of the current COVID-19 pandemic.

The objective of the research was to describe the perceived effects of the COVID-19 pandemic on the determinants of food access and availability on dietary changes among breastfeeding women living in coastal areas during the year 2020.

METHODS

A qualitative, phenomenological design was used, since it is a study that recognizes the experience of the participants and their perceptions regarding the current pandemic situation, due to the fact that this type of methodology states that "The phenomenological approach to research arises as a response to the radicalism of the objectionable. It is based on the study of life experiences, with respect to an event, from the perspective of the subject; the interpretation that the individual, who is evaluated, has with reference to his/her experience is compiled".⁽⁶⁾

The instrument applied was a semi-structured interview, which is "more flexible because it begins with a question that can be adapted to the answers of the interviewees",⁽⁷⁾ where questions can be added if considered convenient, in order to obtain more information for the research.

The sample consisted of 15 women, reaching the saturation point. The inclusion criteria were:

- A woman who is breastfeeding (breastfeeding stage).
- Current residence in the commune of Penco.
- Older than 18 years old
- Have access to internet, since the interview was conducted online.
- Breastfeeding mother willing to participate who signed the informed consent document provided by the interviewer.

The collection of information was through a semi-structured individual interview, the application was carried out by the group of researchers by audio recording through remote platforms accessible to the interviewee such as: zoom, meet or WhatsApp video call, according to availability that the interviewee had. The day of the interview and time, were for the convenience of the interviewee due to the context of the present pandemic and her status as a breastfeeding mother, all this with the aim of obtaining better data collection, reliability, validity and objectivity.

The validation of the instrument was carried out by 5 academic experts from the *School of Medicine of the Universidad Católica de la Santísima Concepción* and subsequently a pilot test was conducted to evaluate the flow of questions, presence of sensitive questions, appropriate categorization of variables, clarity of the instructions to the interviewer and the flow of the process. After conducting the interviews, a digital transcription of each one of them was made, establishing subcategories: food access and food availability.

The analysis of the information was carried out through content analysis, understood as "discovering the significance of a message, whether it is a speech, a life story, a magazine article, a memorandum, etc. Specifically, it is a method that consists of classifying and/or codifying the various elements of a message into categories in order to make its meaning appear in an adequate manner."⁽⁸⁾

In order to reduce interpretation biases and have greater credibility of the results obtained, the triangulation of informants was used, understood as a "confrontation technique and tool for comparing different types of data analysis with the same objective, it can help to contribute to validate a survey study and enhance the conclusions derived from it".⁽⁹⁾

RESULTS

In relation to the economic effect and food access, the participants state that it has affected them, but by prioritizing first need foods compared to what they were used to, they have not observed a great impact on food access, since they have previous savings, unemployment insurance and paid medical leave. Therefore, although the pandemic has had an economic impact, it has not influenced the food access of the mothers interviewed, given that they have received assistance mainly from their families of origin. Other respondent mothers referred that keeping their jobs stable has not presented difficulties in food access.

"It has affected us a lot since, as I said, at the moment, I am really unemployed, depending on savings... now we have to prioritize certain things, as everything is running out, we start buying, because we no longer have so much money."

"It doesn't make it difficult for us to access food, because my parents support us.... Indeed, to treat ourselves, yes".

"I work, but I am on leave, so I get paid for all my leave."

"It did for me because I became unemployed... it didn't make access difficult because my partner continued with his normal salary... I asked for social benefits at the municipality so it didn't affect my food access."

In relation to access to food selling entities, it is important to note that there is a perception of changes due to the closure of supermarkets, affecting the ease of acquiring food, since the establishments that remain open have long lines to enter, followed by restrictions on the quantity of products when shopping, all due to quarantines and sanitary cordons. In addition, the free fairs of the commune were affected, which had restrictions on their operation, which further complicates the picture of mothers to buy food such as fruits and vegetables, it should be noted that in the free fairs the prices of these products are cheaper.

"You could see the long lines to get food".

On the other hand, mention is made of those uncommon products such as vegan products and products suitable for people diagnosed with allergy to cow's milk protein (ACMP), there is perceived impediment in their access and acquisition, since in the commune of residence these food products are not found or are found in little variety and supply.

"There was a huge difference ... there are no vegan products as such ... access to products for moms who have ACMP is very difficult within the commune".

When asked how access has influenced the breastfeeding period, mothers express that they have perceived changes, since staying longer at home has a positive influence on breastfeeding, given that it increases the number of feedings and they even report that the infant could be at the mother's breast all day long, which has boosted up breast milk production.

On the other hand, it is evident that infants born in the pandemic have achieved successful exclusive breastfeeding, where they report that having more privacy, being calmer, without worries about being in a public place, it has generated greater comfort and by spending more time with their child, the mother-child bond has been strengthened. But, at the same time, there is scarce information on how to obtain exclusive breastfeeding due to myths about breastfeeding, heard from close relatives and acquaintances, which generates a state of confusion, in addition to dealing with the anguish and uncertainty due to the situation of being in pandemic.

"Being with pandemic has not been a negative impact on breastfeeding ... quite the contrary, by the fact of always being at home, being able to be calmer, not having to be with the worries of having to be breastfeeding outdoors, which is uncomfortable, or having to be in other public places".

There are two mothers who state that they are deficient in first need products, which are legumes and vegetables; one participant reports that it has been more difficult to access the fairs due to their restrictions, since it is necessary to request permits to go out to buy within a time limit.

"What I have had a hard time with is the issue of fairs ... what is missing is the vegetables, that is not handled as before".

It is possible to identify modification in food due to the fact that, they had to prioritize foods giving more relevance to those they consider essential, all this was in the context where the coastal commune effectively had changes in food access due to the different restrictions mentioned, added to the state of pandemic alert that occurred due to food supply.

In relation to food availability in pandemic, most of the respondents report that they incorporate or suspend food from their usual diet, in order to maintain a healthier and more nutritious diet for their breastfeeding mother stage.

On the other hand, it is stated that there is little availability of special products such as products suitable for vegans, and varieties, especially vegetable drinks, and some respondents report that there are changes in the availability of food due to the frequency of food purchases at home, currently they buy groceries for one or up to three months, unlike before when they only shopped for a week or at most for a month, and as for vegetables and fruits, they shop weekly.

"The pandemic changes everything because before the pandemic I used to shop for a week or a month ... and now I shop for two or three months so that I wouldn't be out of stock.

One of the mothers openly expresses that the frequency of shopping changed, due to the fact that, now she shops as the food merchandise in the household runs out, which has affected the availability of food, but not significantly.

"Now I do not buy every month ... I used to buy milk every month and for example when I saw that I had two left I would buy more ... as everything runs out I buy more, because I no longer have so much money."

For the rest, it is spontaneously exposed that the prices of food products have had a rise, especially those such as legumes, vegetables, vegan products, among others.

"Vegetable milk is one of the most expensive foods within the vegans then I had to decrease consumption ... potato and onion that also had a price increase".

Therefore, it can be inferred that the pandemic affects the frequency of food purchases, leading to stocking up for a long period of time or, on the contrary, buying as food products run out in the home, this in turn causes that food availability in the home in some cases has been affected, families prioritize the purchase of essential foods, in order to avoid food deficiency, however, it is important to note from the account of the respondents that food is available in a limited way. On the other hand, the prices of products have been altered, appreciating a rise.

In response to the question of food preferences and priorities when making purchases, these express that they are more inclined to non-perishable products, highlighting legumes, flour and sugary cereals.

"We like everything that is drier, what is most available is: rice, noodles and legumes."

They also refer to indispensable household products such as sugar, coffee, tea, salt, oil, as well as protein foods, dairy products and derivatives.

"Everything, especially dairy products, frozen foods, meats"

In addition, foods suitable for people with ACMP and vegans are mentioned. Although natural foods without preservatives and organic foods are mentioned, these are in the minority of cases and of lesser preference, along with fruits, vegetables, nuts and those foods for occasional consumption ("snacks"), also sweet foods are preferred due to the current stress caused by the pandemic.

"We have made a habit now of buying little packets of individual cookies"

Therefore, it is implied that preferences and priorities in the purchase of food remain the same as in the period without pandemic, since there is no change in the availability of food in the community or within the home, which is influenced by the fact that there is no change in the preferences of mothers despite being in breastfeeding period and pandemic.

The participants, when answering the questions about the differences in food selection both during and without the pandemic period, reported that the changes perceived at the beginning of the breastfeeding period prior to the pandemic, were that they stopped consuming foods such as broccoli and onions to avoid meteorism, as well as condiments and dressings, decreasing the consumption of fast foods, on the other hand they incorporate or reinforce a higher intake of fruits, vegetables, dairy products and legumes in their diet, also, they ordered their feeding times, since they usually spend many hours without eating.

"I stopped eating some foods because I was breastfeeding and now that my daughter is a little older I have started eating again...foods that bloat, and I started eating more fruits and vegetables when I started breastfeeding."

On the other hand, due to the possible contagion and the confinement that this entails, the participants make known that they have incorporated beneficial foods for this maternal period such as fresh vegetables, fruits and legumes, they have also decreased the consumption of cereals and condiments, they have preferred white and/or lean meats, they have also increased the intake of water, on the other hand, and in favor of maintaining a healthy diet is added the order of feeding schedules.

"I have incorporated water into my life ... eat more fruits, more vegetables, salads ... now with breastfeeding ... I am more organized with my schedule ... I have stopped drinking and all the sweets I ate before breastfeeding".

There were specific cases where fish and fruits were no longer consumed due to less availability, mentioning that the consumption of sweets and dough preparations increased.

"We learned to make new preparations such as cupcakes."

Other interviewees state that their diet remains normal, where the vegan interviewee stands out who exposes that, her diet being based on vegetables she does not observe important changes during the pandemic.

"For us who consume more plant-based foods, the change was not so great".

In addition, there are cases of mothers who began breastfeeding during the pandemic, where one of them says that her diet has changed significantly due to breastfeeding her child, since before her feeding schedules were very distant, the foods she consumed were not healthy and were in large quantities.

"My diet before breastfeeding was actually not very good and has changed significantly."

On the contrary, the other mother interviewed makes it known that, although her diet remains normal to that before breastfeeding, she is currently consuming more dairy and as described by her, her diet is balanced and healthy.

"Twice a day, milk, lots of dairy products, in my house I used to eat more dairy products with my daughter, fruit twice a day and lunch twice a week, vegetables always accompanied with salad, bread at breakfast and not at lunch, bread at breakfast and at eleven o'clock, always trying to alternate proteins, meats, chicken".

DISCUSSION

The determinants of food, according to the Food and Agriculture Organization of the United Nations (FAO) in its bulletin No. 10 of this year, states that the effects of COVID-19 have mainly hit the most vulnerable, who have lost their jobs, income or means of subsistence, which makes the purchase and consumption of healthy food, and even the purchase of their usual food, become an additional economic challenge.⁽¹⁰⁾ This research on the effects of COVID-19 in relation to food access shows that an increase in unemployment has an impact on the decrease in the economic income of the interviewees, however, this has not led to a reduction in food purchases because they maintain a strong relationship of direct support with their families of origin, social assistance and previous savings for their economic livelihoods. This is validated by the fact that at the national level, unemployment has been on the rise, which is detrimental to household financial income, as stated in the COVID-19 social survey of the Ministry of Social Development, which mentions the impact on the labor market and with it the decrease in income in 59.4 percent of the country's households.⁽¹¹⁾

On the other hand, a modification in the food supply is perceived, since food that is considered essential is prioritized over other household expenditures, especially non-perishable food due to its long durability, it is evident that according to the FAO interim issues paper on the impact of COVID-19 on food security and nutrition, "many households will shift to so-called *"inferior goods"* as a cost-saving measure, as well as to foods with longer shelf life, which may well be more processed and less nutritious in industrialized countries".⁽¹²⁾ Therefore, it can be affirmed according to what the mothers say, that they have begun to choose non-perishable foods which have lower prices and greater durability, which is crucial for this period of pandemic where a shortage may arise or increase the days of quarantine, which is why the University of Chile developed the practical guide on proper use of food in pandemic where it recommends that the most important thing is to take care of the family budget and prioritize foods with a good nutritional contribution, seasonal and locally produced.⁽¹³⁾

Although the interviewees have prioritized non-perishable foods, perishable foods have presented a problem of access due to quarantines and sanitary cordons, specifically alluding to free fairs, where the network of Chilean free fairs, which are the main distribution channel for the vast majority of Chileans, has been partially affected by the measures taken. In spite of the call for the mayors to allow the normal operation of the fairs, in certain localities their schedule, frequency or organization has been restricted.⁽¹⁴⁾ This coincides with what was stated by breastfeeding mothers, who see the outlook for acquiring food, especially fruits and vegetables, as well as the fact that prices in this place are cheaper.

According to Rodríguez and collaborators,⁽¹⁵⁾ food and nutrition could be adversely affected by confinement, decreased family purchasing power, economic depression and a potential lack of availability and difficulty of access to healthy and safe food. However, in the present study this is not affected, since basic food supplies are safeguarded, as evidenced by the fact that the participants do not find differences in food selection since food availability has not shown severe changes during the pandemic both at the commune and household levels, especially in non-perishable foods, easy-to-prepare foods and dairy products, on the other hand, despite the fact that different news has revealed the existence of food shortages in various municipalities of the country, highlighting the news made by the *Pontificia Universidad Católica of Chile*, which states that during periods of pandemics, the likelihood of shortages in supermarkets increases, since it is bought in an excessive way, in large volumes of food.⁽¹⁶⁾

This research shows that in the commune of residence of the interviewees there is still the same availability of food, which is essential to continue with supplies at home, in addition, the food of these mothers is not harmed because they organize their purchases so that there is no shortage at home, this organizational action is supported by a food planning manual of the University of Chile that provides some recommendations to plan your diet for two weeks: prefer non-perishable foods such as: legumes, rice, noodles, quinoa, flours, mote (boiled wheat), dried fruits (peanuts, walnuts, almonds) and canned preserves, if necessary.⁽¹⁷⁾

Although the interviewees prefer and prioritize non-perishable foods, these include more foods such as farinaceous foods, rice, legumes, flour and sugary cereals, as well as products that they consider indispensable such as sugar, tea, coffee, salt and vegetable oils, as well as protein foods. Therefore, with regard to the prioritization of foods by mothers, it can be interpreted that it is as much for non-perishable foods as for new foods incorporated from the beginning of breastfeeding.

According to the news from the *Pontificia Universidad Católica de Chile*, it is stated that an adequate planning of your food purchases can cover your needs and those of your family, prolonging your stay at home, avoiding risks of contagion and feeding yourself correctly.⁽¹⁸⁾

The way the mothers interviewed organize themselves, since they report changes in availability due to the fact that the frequency of purchases has decreased, i.e., they go to stock up once every two to three months and buy in large quantities, which generates a greater supply and availability of food at home, however; FAO considers that anxiety and uncertainty regarding food shortages, associated with misinformation, can lead to a behavior called "*panic buying*".

According to *The Caribbean COVID-19 Food Security and Livelihoods Impact Survey*, a survey applied by the Caribbean Community (CARICOM) in 19 Caribbean countries, practically three quarters of the respondents (74%) declared that they are buying more food than usual,⁽¹⁹⁾ referring to this, mothers fall into this type of "*panic buying*", since they used to buy monthly or weekly and currently do not due to the effect of the COVID-19 pandemic.

CONCLUSIONS

According to the results found, it is demonstrated that the feeding in the mothers interviewed who are in the process of breastfeeding has not had changes, since the established determinants of feeding have not been altered in this sample by the COVID-19 context, since regarding food access, it is extracted that, despite a decrease in economic incomes, it has not been affected because the mothers receive external aid and manage to prioritize feeding. In addition to highlighting the support of the municipal networks which were activated to respond to this need.

As for the second determinant of food established, i.e., food availability, it is observed that the commune is not altered in this area, since, although there are occasional restrictions and shortages, these do not generate serious consequences in mothers, which means that there is no less availability of food in households but continues as usual, moreover, what has been altered is the frequency of purchase, as this decreases but is purchased in larger quantities, which responds to the usual food availability that the interviewees have.

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