




Baby-led weaning: Health professionals 'knowledge and attitudes and parents' experiences from Spain. A mixed methods approach

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Abstract

Baby-led weaning or self-regulated small chunk feeding by the baby has emerged as an alternative to the traditional method of complementary feeding. Parents and healthcare professionals often differ in the benefits and drawbacks about it. The research aims were to describe the knowledge of health professionals about complementary feeding and baby-led weaning (BLW) method and the attitudes towards its recommendation, and to explore the knowledge, experiences and attitudes of parents who have used this method to feed their children. A mixed methods research was carried out. A questionnaire was completed by 38 health professionals and 10 interviews were conducted with participating mothers. A total of 52.6% of health professionals recommended initiating complementary feeding at 6 months of age, a guideline followed by the mothers who used BLW. Some 86.8% of the professionals knew the BLW method and 76.3% knew its benefits, but the mothers consulted mainly informal sources of information sources to learn about and implement it. The health professionals stated that it facilitated family transition, enabled the infant to adapt better to flavours and textures, promoted chewing and the development of fine motor skills, improved growth and might also be a protective factor against obesity. The mothers noted that the method was natural, encouraged infant autonomy and promoted healthy eating habits. The health professionals expressed varied opinions concerning the risks entailed in the method. The main conclusions are that the majority of health professionals participating in the study know the BLW method, its benefits; however, they do not recommend it in all cases. Mothers listen to the advice of professionals but continue to rely on other informal sources of information.

KEYWORDS

attitudes, baby-led weaning, experiences, knowledge, mixed methods

1 | INTRODUCTION

The initiation of complementary feeding (CF) is considered a particularly vulnerable period in infant development as regards ensuring that energy and nutritional requirements for growth are met

(World Health Organization, 2003). At this stage, parents gradually introduce infants to solid and liquid foods other than breast milk or formula (Fewtrell et al., 2017) with the eventual aim of attaining an adult feeding pattern. The World Health Organisation (WHO) recommends starting CF from 6 months onwards, considering exclusive

breastfeeding to be the ideal form of nutrition prior to that age because of its benefits for the mother and infant alike (WHO, 2003). The introduction of new foods does not imply eliminating milk—and especially breast milk—from the diet; rather, this continues to be a fundamental food until the age of 2 years (Fewtrell et al., 2017; WHO, 2003).

There is no unanimity on the exact age of onset of CF. Although expert investigators (Schiess et al., 2010) recognise that different factors determine the timing of initiation, it is not recommended that begins before 4 months of age (Fewtrell et al., 2017). In Spain, around the sixth month of life is the recommended age to introduce CF safely. Naylor and Morrow's study (2001) shows that this is when infants can handle, chew and swallow food safely and sit without support. Another sign that CF can be safely introduced is loss of the extrusion or tongue-thrust reflex (Gómez, 2018). For greater safety, however, parents should also wait until the infant shows interest in prepared food, pointing at it, putting its hand in its mouth and trying to grab the parents' plates or cutlery in search of food (Cichero, 2016). Once the infant has developed sufficiently to ingest solids, the parents must select a timely, gentle and age-appropriate manner to feed their child, either by traditional spoon-feeding (serving mashed or pureed food) or by encouraging the infant to feed itself (Fewtrell et al., 2017; WHO, 2003).

Increasing numbers of parents are showing an interest in alternatives to traditional spoon-feeding to initiate CF. The baby-led weaning (BLW) method is one of these alternatives, and although it lacks a formal definition (Cameron et al., 2012a; D'Auria et al., 2018), it is becoming an increasingly widely used approach. Although the term has been used previously (Walker, 2002), it was used by Rapley (2006) and later by Rapley and Murkett (2008), to refer to a particular way of introducing food, it is a method in which the infant directs the process of wean by choosing when to eat. Rapley, a nurse, has described this approach as a method where the infant directs the weaning process, choosing what and when to eat. In this process, parents limit themselves to preparing safe, healthy foods (Rapley, 2011) by providing a variety of foodstuffs that present a range of colours, flavours and textures, cut into in small pieces (fingers, sticks) that infants can grasp with their hands, instead of spoon-feeding mashed or pureed foods (Rapley & Murkett, 2008). According to Brown and Lee (2013b), BLW in its strictest form would mean spoon-feeding only 10% of the time.

CF is necessary for both nutritional and developmental reasons and the recommendations avoid harmful effects on the health (infections, allergies, celiac disease or diabetes among others) of the infant (Fewtrell et al., 2017). The manner in which CF is introduced can influence later stages, since feeding experiences in the first year of life can condition future eating behaviours related, for example, to the child's weight (Taylor et al., 2017). Choosing this approach as a method of initiating CF has a number of benefits. It is considered a natural method that promotes breastfeeding (Brown & Lee, 2011; Fu et al., 2018; Komninou et al., 2019; Morison et al., 2016), respects infant development as regards learning about eating habits and enables infant self-regulation and autonomy (Komninou et al., 2019;

What is known about this topic

- Baby-led weaning is considered a method that promotes breastfeeding while respecting infant development as regards learning about feeding habits.
- It has emerged as an alternative to the traditional method of complementary feeding.
- Parents and healthcare professionals often differ in the benefits and drawbacks about it.

What this paper adds

- Health professionals look for scientific evidence before making recommendations, since they use written advice for education in complementary feeding provided by the health centre or by health guides from scientific associations or autonomous communities.
- Professionals know the BLW method and its benefits; however, do not always recommend it.
- Mothers continue to rely on other informal sources of information, in addition to health professionals.

Utami & Wanda, 2019). In addition, it promotes participation in family meals and enjoyment at mealtimes (Brown & Lee, 2011; Cameron et al., 2013; Komninou et al., 2019), reducing infant irritability (Fu et al., 2018; Komninou et al., 2019) and maternal anxiety (Brown, 2016; Brown & Lee, 2011; D'Auria et al., 2018), and endows infants with greater control over satiety (Brown & Lee, 2013b), which may be a protective factor against the risk of overweight and obesity (Brown & Lee, 2013b; Townsend & Pitchford, 2012). However, the literature reports some concerns about strict adherence to BLW, such as nutrient deficiencies (especially zinc, iron and vitamin B12), lower energy intake and increased risk of choking (Brown et al., 2017; Cameron et al., 2012b; Cichero, 2016; D'Auria et al., 2018). To address these potential risks, a modified form of the strict BLW method has emerged, known as the Baby-Led Introduction to SolidS (BLISS) (Cameron et al., 2015; Cichero, 2016; Daniels, Taylor, Williams, Gibson, Fleming, et al., 2018; Daniels, Taylor, Williams, Gibson, Samman, et al., 2018; Utami & Wanda, 2019), which consists of providing infants with food that they can pick up and feed to themselves, ensuring that each meal is high in iron and energy and that food is presented in an age-appropriate manner to safeguard against choking (Cameron et al., 2015).

Nevertheless, health professionals and researchers remain reluctant to recommend the BLW method until there is more scientific evidence regarding the potential risks (Brown et al., 2017; Cichero, 2016; D'Auria et al., 2018), even though parents who have used this method of CF are openly recommending it to other parents irrespective of expert opinion (Brown et al., 2017; Cameron et al., 2012b; D'Andrea et al., 2016; Fu et al., 2018; Garcia et al., 2019; Komninou et al., 2019; Moore et al., 2012; Utami & Wanda, 2019). As key actors in providing evidence-based information on CF,

health professionals should have the capacity to influence parents' decision-making (Wright et al., 2004). However, although recent research in Spain has identified the characteristics of parents who use BLW, we did not find studies that have examined the opinions of health professionals (Pérez-Ríos et al., 2020). Therefore, exploring the knowledge, experiences and attitudes of both health professionals and parents, in a specific context, as a first approach jointly, could help to describe the issue to a better understanding. In this way, the overall goal of this study was to explore this method at two levels: (i) to describe the knowledge of health professionals about CF and the BLW method and the attitudes towards its recommendation as an alternative to traditional CF in a specific region of Spain, and (ii) to explore the knowledge, experiences and attitudes of parents who have used BLW to feed their children.

2 | METHODS

2.1 | Study design

In order to explore the knowledge, experiences and attitudes of both health professionals and parents, we designed a mixed method research. Combining quantitative and qualitative research components can expand and strengthen the study's conclusion (Schoonenboom & Johnson, 2017), to better understanding in a specific context. To describe health professionals' knowledge and attitudes, a cross-sectional study was carried out. To explore parents' knowledge, experiences and attitudes, we used a qualitative, phenomenological approach that enabled us to clarify and describe the meaning of parents' perceptions, feelings and experiences (Giorgi et al., 2017).

Data collection was accompanied by a study information sheet and all participants gave their verbal and written informed consent. The data obtained in this study were treated in accordance with Organic Law 3/2018, on 5 December, on the protection of personal data and the guarantee of digital rights, and with the General Regulation on the Protection of Data of the European Union, EU 2016/679 (RGPD), which came into force in Spain on 25 May 2018. This study was approved by the University of León Ethics Committee (ETICA-ULE-001-2020) and the León and El Bierzo Health Region Ethics Committee for Medical Research (Spanish initials: CEIm; FG-DGE-04 ed. 1), which guarantees compliance with all ethical and legal aspects. The study was carried out in accordance with each of the basic principles of the Helsinki Declaration.

2.2 | Setting

The study population consisted of 45 health professionals working in paediatric care. To recruit parents with children over 6 months of age who had employed the BLW method, we sought the help of an association promoting breastfeeding and natural parenting.

2.3 | Participants

Thirty-eight health professionals (response rate of 84.4%) participated in the study. They were selected by non-probabilistic convenience sampling. Doctors, nurses and midwives who provided community and hospital paediatric care in the Bierzo Health Region (Spain acronym: GASBI) in the province of León (Spain) were included. All of them have the possibility of informing parents about CF in the healthy child check-up (in consultations) or even in the care of the sick child (in the hospital). On the other hand, 10 mothers with children older than 6 months and who had used the BLW method were included in the parent's study sample.

2.4 | Measurement

For the health professionals, we administered a 36-item (Martinez Rubio et al., 2018) containing questions on how to introduce CF and knowledge about BLW. To collect data from mothers, we held semi-structured interviews using an interview guide based on the framework proposed by Cameron et al. (2012a). In this way, a pilot test was not necessary. The content of the interview is 22 items about personal experience about the BLW method, its recommendations and its possible benefits or disadvantages.

2.5 | Data collection

To recruit data from health professionals, we visited potential participants (study population) at their workplace. If they agreed to participate in the study, they were given informed consent to complete the questionnaire. A date and time for collecting the completed questionnaire was agreed with them. With prior authorisation from the Lactabebé association, the parents' data were obtained after attending the periodic meetings held with the members of the association in a Lactabebé centre. Parents were first informed about the study and then asked to inform other parents that they met the inclusion criteria so that they could participate in the study, thus increasing the sample size using the snowball method. In this way, the initial sample of five mothers was expanded until the data reached the saturation point. Each interview lasted approximately 10 min and all interviews were audio recorded. All data were collected in January 2020, before the restrictions against COVID-19.

2.6 | Data analysis

All statistical analyses were performed using SPSS version 26.0. A descriptive statistical analysis was carried out, showing frequencies and percentages of the data. To analyse the qualitative data, we conducted a manual thematic content analysis, following the procedure described by Berenguera et al. (2014). It is structured into the following steps: (i) to create the citations and code them, (ii) to

elaborate the categories, (iii) to group the categories in superior categories and (iv) to segment the text by categories. Two members of the research team carried out a qualitative analysis of the data. The results were shown to the whole research team, to reach a consensus while maintaining reflective and critical attitude. The codes and categories were extracted from the data, although some of the categories obtained in García's research (García et al., 2019) served as a guide for establishing some items in this analysis. Finally, three main categories were established, concerning knowledge, experiences and attitudes related to BLW (and 17 codes).

3 | RESULTS

As shown in Table 1, the questionnaire was completed by 38 health professionals (response rate of 84.4%), the majority of whom were women (86.6%) and had extensive work experience. A total of six participants provided hospital care, while the remaining 32 worked in community care centres.

Table 2 shows the main socio-demographic characteristics of the parents. In total, 10 mothers who had used BLW method when they introduced CF to their children participated in the study. The mean and standard deviation of age was 36.4 ± 5.13 years, 80% reported using exclusive breastfeeding compared to 20% who put into practice the mixed breastfeeding method (breast milk and formula at the same time). Ninety per cent of the mothers had received secondary or university education.

3.1 | Health professionals' knowledge and attitudes quantitative analysis

Table 3 describes health professionals' knowledge of CF. Of the respondents who voluntarily participated, 84.2% knew that information on this subject could be given by doctors, nurses and/or midwives working in paediatrics. According to 52.6%, 6 months was the recommended age at which infants should start CF, although almost 30% of respondents might recommend it from as little as 4 months

of age. However, if the infant required it, 94.8% of the sample indicated that they would recommend starting CF sooner, specifying their reasons for this (shown in Table 3). In addition, 32 of the 38 responses indicate the need for flexibility in case it is necessary to delay CF.

In relation to the procedure for introducing CF depending on whether the infants had been breast- or formula-fed, 28.9% of respondents indicated that they would employ the same procedure regardless while 68.4% would not. When providing information about CF, 79% used a written advice sheet to inform parents/carers. Of these, 42.1% used sheets provided by their health centre or region that they had helped to draw up. Only four respondents (10.5% of the sample) used health guides issued by a scientific association or autonomous region.

Some 42.2% recommended starting CF with cereals, whereas a similar percentage advised starting with fruits, vegetables or cereals without distinction. Only 15.8% would recommend starting CF exclusively with fruit. In relation to the method of starting CF, 52.6% recommended spoon-feeding, while 36.9% reported not specifying a particular method and leaving it up to the parents. Of the sample, 71.1% considered that the ideal time to begin chewing stimulation was as soon as the infant showed interest, while only seven respondents recommended starting such stimulation at between 8 and 9 months of age.

Table 4 gives the questionnaire descriptors of health professionals' knowledge of BLW, showing that 86.8% knew about this method of initiating CF and 76.3% knew about its benefits. Regarding the recommendation of method used to start CF, a 15.8% said they would never recommend it, giving as their main reasons several of the disadvantages reported in the literature and described here in the introduction.

As shown in Figure 1, 73.6% of health professionals strongly or somewhat agreed that BLW facilitates the transition to family meals. However, percentages were more divided regarding the statement 'BLW generates less concern or anxiety in mothers', as only 28.9% strongly or somewhat disagreed with this statement. Meanwhile, 68.5% strongly or somewhat agreed with the statement that the BLW facilitates infant adaptation to new tastes and

TABLE 1 Description of the sample of health professionals

	Academic degree <i>n</i> (%)				
	Paediatrician 14 (36.8%)	Other ^a 4 (10.5%)	Midwife 7 (18.4%)	Nurse 13 (34.2%)	Total 38 (100%)
Gender					
Males	4 (10.6%)	1 (2.6%)	0 (0%)	0 (0%)	5 (13.2%)
Females	10 (26.3%)	3 (7.9%)	7 (18.4%)	13 (34.2%)	33 (86.8%)
Years of experience					
<10	3 (7.9%)	0 (0%)	2 (5.3%)	1 (2.6%)	6 (15.8%)
11–20	2 (5.3%)	3 (7.9%)	2 (5.3%)	3 (7.9%)	10 (26.3%)
21–30	7 (18.4%)	1 (2.6%)	0 (0%)	2 (5.3%)	10 (26.3%)
>30	2 (5.3%)	0 (0%)	3 (7.9%)	7 (18.4%)	12 (31.6%)

^aGeneral practitioner acting as paediatrician, childcare specialist.

TABLE 2 Description of the sample of mothers

Socio-demographic variables	n = 10 (100%)
Residence	
Rural	4 (40%)
Urban	6 (60%)
Previous children	
Yes	4 (40%)
No	6 (60%)
Sex of child	
Boy	4 (40%)
Girl	6 (60%)
Feeding type	
Exclusive breast feeding	8 (80%)
Mixed Breast feeding	2 (20%)
Artificial lactation	0 (0%)
Educational level	
Primary	1 (10%)
Secondary	4 (40%)
University	5 (50%)

textures, whereas we obtained a wider range of responses in relation to whether BLW helps prevent parents from becoming overly involved in feeding, since 36.8% strongly or somewhat disagreed with this statement. Some 81.6% agreed with the statement that BLW stimulates chewing versus suction and 71.1% agreed that it promotes the development of fine motor skills. Most notably, 65.7% agreed that BLW helps prevent obesity, but it is striking that 21.1% did not answer this question. More than 50% strongly or somewhat agreed with the statement that BLW helps prevent conflict over food, while 41.3% strongly disagreed with the statement 'Weight gain may be insufficient with BLW'. Similarly, 52.7% strongly disagreed that BLW causes nutritional deficiencies, 73.4% agreed that BLW promotes infant development and 50.6% agreed that BLW is more convenient.

3.2 | Knowledge, experiences and attitudes of mothers using strict BLW qualitative analysis

Three main categories were identified from the analysis concerning knowledge, experiences and attitudes related to BLW, and 17 codes. [Table 5](#) shows the categories and codes that were identified from the data.

3.2.1 | Knowledge

The first of the categories obtained is related to the mothers' knowledge of BLW, the basic aspects and the sources from which they obtained their information.

TABLE 3 Descriptors of health professionals' knowledge of complementary feeding

Knowledge of complementary feeding	N (%)
38 (100%)	
Who provides information on CF at your place of work?	
Doctor	5 (13.2%)
Nurse	1 (2.6%)
Both	32 (84.2%)
From what age do you recommend CF?	
4 months	11 (28.9%)
5 months	7 (18.4%)
6 months	20 (52.6%)
Are you flexible as regards starting CF sooner in response to factors in each individual case?	
Yes	36 (94.8%)
No	2 (5.3%)
If you are flexible, please indicate your reason	
Low weight gain	9 (23.7%)
The infant frequently demands feeding throughout the night	1 (2.6%)
The infant shows interest before the recommended age	3 (7.9%)
The mother is returning to work	1 (2.6%)
All the above	18 (47.4%)
Other reasons	2 (5.3%)
No response	4 (10.5%)
Are you flexible as regards delaying CF in response to factors in each individual case?	
Yes	32 (84.2%)
No	6 (15.8%)
If you are flexible, please indicate your reason	
Prematurity	4 (10.5%)
Delayed motor development	2 (5.3%)
Excessive weight gain	2 (5.3%)
Refusal to try food	3 (7.9%)
The infant shows no interest in food	2 (5.3%)
All the above	13 (34.2%)
Other reasons	4 (10.5%)
No response	8 (21.1%)
Do you follow the same procedure with breastfed children as for those exclusively fed formula?	
Yes	11 (28.9%)
No	26 (68.4%)
No response	1 (2.6%)
Do you use a written complementary feeding advice sheet?	
Yes	30 (79%)
No	6 (15.8%)
No response	2 (5.3%)
If so, please indicate its provenance	

TABLE 3 (Continued)

Knowledge of complementary feeding	N (%)
Written by myself	2 (5.3%)
Provided by my health centre (I did not participate in writing it)	8 (21.1%)
Provided by my health centre (I participated in writing it)	16 (42.1%)
From a website for parents	1 (2.6%)
Health guide of a scientific association or autonomous community	4 (10.5%)
No response	7 (18.4%)
Which food group do you recommend for starting CF?	
Cereals	16 (42.2%)
Fruit	6 (15.8%)
Vegetables	0 (0%)
I do not specify a method	16 (42.2%)
What method do you recommend for starting CF?	
Spoon	20 (52.6%)
Bottle	4 (10.5%)
I do not specify	14 (36.9%)
At what age do you recommend encouraging chewing?	
From 8 to 9 months	7 (18.4%)
From 12 months	1 (2.6%)
As soon as the infant shows interest	27 (71.1%)
No response	3 (7.9%)

Definition of BLW and basic aspects

The participants defined BLW as infant-driven, where infants eat according to their needs and abilities and their instincts are respected:

Baby-led weaning... when the child shows certain feeding skills to be able to feed himself/herself, or, good, to be able to give him/her the food in pieces such as, for example, that not have the sign of extrusion, and that you can stand upright sitting, that is what I think it can be directed by the baby (M1)

Three basic aspects of these definitions were highlighted. The first was that infants control what and how much they eat:

Give solid pieces to babies without forcing them to eat... Allow them to gradually replace the breast with food according to their needs (M3)

The second was that food is offered in solid pieces in sizes adapted to the infants' needs and safe to eat:

I gave him the food cut into long strips... courgette, for example... so that he could pick it up easily (M6)

TABLE 4 Descriptors of health professionals' knowledge of the BLW method

Knowledge of the BLW method	N (%)
Do you know about the BLW method of starting CF?	
Yes	33 (86.8%)
No	5 (13.2%)
If so, what was your source of information?	
Infants' mothers/family members	4 (10.6%)
A course/lecture	7 (18.4%)
A website	2 (5.3%)
A colleague	7 (18.4%)
All of the above	8 (21.1%)
Other source	7 (18.4%)
No response	3 (7.9%)
Do you know about its benefits?	
Yes	29 (76.3%)
No	8 (21.1%)
No response	1 (2.6%)
Do you recommend it?	
Never	6 (15.8%)
Sometimes	22 (57.9%)
Always	10 (26.3%)
If not, please indicate why	
Concern about choking	3 (7.9%)
Low-energy intake	1 (2.6%)
Little scientific evidence	1 (2.6%)
Risk of unhealthy diet	1 (2.6%)
All of the above	3 (7.9%)
No response	29 (76.3%)
Do you currently have families who use this method?	
Yes	26 (68.4%)
No	12 (31.6%)

The third was to make sure infants have the necessary skills, as they must be able to sit and show an interest in food:

My daughter was always trying to eat the food from my plate, we sat her in the high chair and she stayed there, but only if we gave her food from our plates (M4)

Sources of information

Most of the mothers said they had heard about BLW from someone else in their circle, usually a woman. To a lesser extent, some participants mentioned other sources such as stories of personal experiences from other mothers in parenting groups, or information from healthcare providers:

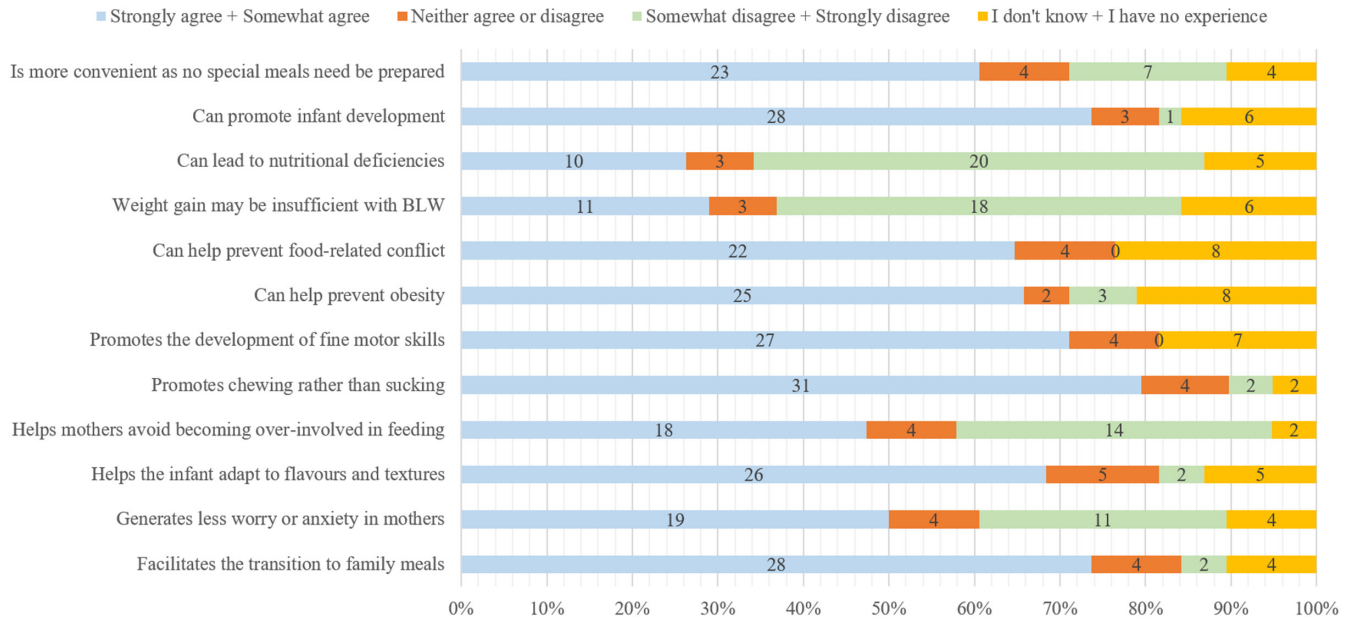


FIGURE 1 Benefits and risks of BLW according to health professionals, in relation to the following statements (total sample)

TABLE 5 Categories and codes identified from the data

Categories	Codes
Knowledge	Definition of BLW and basic aspects
	Sources of information
Experiences	Starting
	Introduction to solids
	Satisfaction with BLW
Attitudes	Favourable attitudes towards BLW:
	Natural method
	Encouraging infant autonomy
	Promoted healthy habits
	Ease of preparation
	Unfavourable attitudes towards BLW:
	Fear of choking
	Eating the wrong way
	Mess
	Waste of food
	Time
Criticisms of the mother	

My sister-in-law told me about BLW because she had done it with her two children and found it very convenient... through the people I know... several professionals (M6)

They gathered written information from books, popular magazines and the internet (e.g. social media and websites):

Messing around on Facebook, by chance I ran into a group of BLW... I looked a bit like the rules of the group, and I liked what they said... and then I got in. I was rather to see the publications or comments of other mothers... and I said: but if this is what I do! (M8)

I heard about BLW from a childcare magazine... through the magazine, I learnt about the paediatrician Carlos González and I got a lot of good ideas from reading his books (M10)

3.2.2 | Experiences

Mothers also recounted their experiences with the method, how they started and their level of satisfaction.

Starting

The majority of mothers started BLW at 6 months, coinciding with a visit to the paediatrician and the recommendation to start CF. Only one mother had started the method before (at 5 and a half months) and three of them started it when their child was 7 months old. Most of the infants had been exclusively breastfed, and only two of mothers had used mixed feeding.

Introduction to solids

All the mothers started BLW with fruit (mostly banana) because they considered this the easiest food for the infant. They observed that their paediatricians had given them free rein as regards the food with which to start CF.

My paediatrician told me that it didn't matter whether I started with vegetables or fruit, that I should give whatever I considered best (M1)

Then they tried a variety of vegetables:

The next thing we gave him was tomatoes and courgette because it was late summer and these were the fresh products available (M5)

Satisfaction with BLW

All the participants reported having a satisfactory experience and considered BLW an effective method for them and their children. One indication of this is that they said they would recommend the method to others.

They should trust their instincts, which in my experience is the best and easiest thing to do when you're still breastfeeding... It's a very interesting way of introducing food, without getting stressed or worrying so much about quantities, without falling prey to the idea that we all have to eat the same thing (M9)

3.2.3 | Attitudes

The third of the categories that emerged was related to attitudes towards BLW.

Favourable attitudes towards BLW

Four reasons emerged as to why participants had decided to use the method.

The first of these was the naturalness of the method:

On a sensory level, my son enjoyed it much more because he ate real food, learning about flavours and textures (M4)

I think it's the most natural method... it's more natural than purees or baby foods, and I think it's what we must have done at first (M9)

Encouraging infant autonomy was also considered a major benefit:

Yes, totally, because I did not have to be aware. I put the food adapted to her needs and she took it with her hands without my intervening. I didn't have to be pending if she ate so much or not... the truth is that she has been of much use to then independence to eat (M10).

In their experience, BLW promoted healthy habits:

In a world where we're heading towards obesity, in the end it's a health pill that we're giving them (M6)

It was an easy way to make sure my son had a good relationship with food (M9)

Lastly, the mothers also highlighted ease of preparation:

So you don't have to carry stuff around or prepare things beforehand, and if you go out for the day... there's no problem (M8)

Unfavourable attitudes towards BLW

Participants also expressed concerns about using the method and mentioned some of the drawbacks.

First, all the mothers recounted mild episodes of choking and fear of it. However, none of them had to perform resuscitation manoeuvres, reporting instead that their children had been able to cope with the situation by means of the coughing mechanism. Such episodes were most frequently caused by apple and breadcrumbs:

I had a bit of a scare one day because he choked on a piece of apple... thank goodness he started coughing and he got it out by himself (M5)

My fear was that he would choke... But then when I saw that he could cope perfectly well with the situation, I felt reassured (M6)

Participants also mentioned the fear that their children would not eat the right amount or quality of nutrients:

At first I was afraid that he'd be hungry, because I saw other babies eating huge plates of puree and mine didn't seem to be eating as much, but his growth was normal so I stopped feeling worried (M10)

BLW requires infants to hold food in their hands, and the mothers reported that this was messy:

One of the disadvantages is that you have to clean a thousand times more, because of course they leave the high chair or the table plastered with food (M3)

They also observed that this led to a lot of food wastage:

One disadvantage for me... a lot of the food was wasted... in the highchair or on the table, all the food

is scattered, and they too fill themselves with food from top to bottom... a lot of food is wasted (M7)

The method requires patience on the part of those who practice it, in order to give infants time to eat at their own pace. This is not possible in all contexts:

They don't use this method at the nursery. Obviously not, not there... It's the time (M5)

The participants also observed that they were criticised by others who did not always understand the method:

My mother-in-law remarked that my baby had a whole lifetime ahead for chewing. She said to me: "for what? Whole life was doing in this way, so, you should do it in the same way, with purees" (M1)

Patience, a lot of patience, because you'll get a lot of criticism from those around you saying that your child isn't getting enough food. But remember that there weren't any blenders 100 years ago, children ate their parents' food and we haven't become extinct as a species (M3)

4 | DISCUSSION

The results show the description of two samples participating in this study, in order to describe the knowledge and recommendations of health professionals about CF and the BLW method and explore the knowledge, experiences and attitudes of mothers who have used BLW method to feed their children.

Our results also show that most of the health professionals considered that the ideal age to start CF was around 6 months of age, but that they would be willing to start CF earlier or later in response to other factors. These findings indicate that they were following the recommendations of national (Pérez-Ríos et al., 2020) and international (Fewtrell et al., 2017; WHO, 2003) organisations regarding the initiation of CF. The variety of responses concerning initiation of CF may have been due to the high percentage of respondents (68.4%) who reported adapting the recommendations according to whether the infant had previously been breast- or formula-fed. Some gave the same recommendations for initiating CF irrespective of previous type of feeding, but others did not, instead recommending that breastfed infants should not begin CF until 6 months, whereas formula-fed infants could start earlier. Our results are lower than those reported in other studies (Martinez Rubio et al., 2018) conducted in Spain, as around 40% of professionals used the same pattern for both types of feeding. Other researchers (Schiess et al., 2010) have attributed this variation in the initiation of CF to cultural and socio-demographic factors. For example, formula-fed infants in Belgium are generally

introduced to solids at around 4 months of age, whereas in Germany most infants start CF at 6 months, regardless of whether they were breast- or formula-fed. By way of comparison, the average age for starting CF (in this case, BLW) reported by the mothers in our study was 6 months of age, since this is the ideal age from which infants can direct weaning. Although the general rule for starting CF is from 6 months (Fewtrell et al., 2017; Gomez Fernández-Vegue, 2018; WHO, 2003), there is a lack of consensus on how to introduce solids, rendering it difficult to establish standard information to give to all parents. In fact, a fair percentage of the health professionals surveyed (around 40%) provided a written recommendation sheet which they themselves had helped to write. This underlines the importance of establishing evidence-based protocols in healthcare to improve the quality of care delivered by health professionals.

In relation to the food recommended for starting CF, most of the health professionals surveyed indicated cereals as the first food group that they would recommend for starting CF, followed by fruits and vegetables. This finding is in line with other studies that support this type of food for starting CF (Martinez Rubio et al., 2018; Tully et al., 2019). With regard to the mothers' experiences, we found that fruit (mainly bananas) was among the foods chosen to start CF (BLW in this case), and other researchers have reported similar results when considering this type of simple, baby-friendly food (Cameron et al., 2012b). In contrast, Komninou et al. (2019) found that vegetables were considered the ideal food for starting BLW.

In relation to the BLW method, a high percentage of health professionals in our study knew about this feeding method and its benefits and cited various main sources of information of a formal and informal nature alike. On the other hand, participant mothers mainly reported using informal sources of information (other mothers in their immediate circle, the internet), but also mentioned formal sources (health professionals). In previous study, other mothers using BLW have generally been cited as the preferred informants (Utami & Wanda, 2019), rather than health sources. In addition, Fu et al. (2018) found that BLW parents are more likely to seek information from interactive media rather than from health professionals. The problem that arises with these informal sources is that they can be contradictory (Moore et al., 2012). According to Komninou et al. (2019), parents using traditional CF seek advice from health professionals, whereas BLW parents do so significantly less often. Furthermore, García et al. (2019) observed that one of the problems reported by parents was the lack of practical advice from health professionals, and D'Andrea et al. (2016) found that few health professionals were familiar with the specific practice of BLW.

However, the high percentage of health professionals who said that they would not recommend BLW in all cases, without indicating a reason, suggests that their decision to recommend it may depend on the mother's willingness and ability to solve problems related to the infant. They might also be influenced by individual variations in child development, since not all 6-month-old infants are ready for BLW (Wright et al., 2011).

In terms of recognising the benefits of the method, over 65% of health professionals said that the BLW method facilitated family

transition, enabled the infant to adapt better to flavours and textures, promoted chewing and the development of fine motor skills, improved growth and might also be a protective factor against obesity. Meanwhile, the mothers noted that the method was natural, encouraged infant autonomy and promoted healthy habits (such as control of satiety and participation in family meals). These claims agree with parent's perceptions observed in other studies (Arden & Abbott, 2015; Brown & Lee, 2013a; Cameron et al., 2012b; Swanepoel et al., 2020), and broadly similar benefits of the method have been reported in a range of studies (Brown & Lee, 2011, 2013a, 2013b; Cameron et al., 2013; Kominou et al., 2019; Townsend & Pitchford, 2012; Utami & Wanda, 2019).

With regard to risks, not all the health professionals (between 40% and 60%) agreed that BLW alleviated maternal anxiety or over-involvement in feeding, or that it was viewed by mothers as a convenient method or prevented conflict over meals. These views were contrary to those of the mothers who successfully used BLW, for whom, as other studies have shown (Brown & Lee, 2013b), it was a very convenient method compatible with family life, although they expressed some fears (of choking or of criticism from their close circles) which were resolved as they became more informed and took precautions (Brown & Lee, 2013b; Cameron et al., 2012b).

The most varied percentages among health professionals were found in relation to the claims that BLW leads to deficient weight gain and can cause nutrient deficiencies. These concerns were echoed by the mothers interviewed in this study, for whom the failure to eat the right amount or quality of food was a major source of anxiety. In this respect, the literature increasingly recommends the BLISS modification as an ideal method to solve this type of problem (Cameron et al., 2015; Cichero, 2016; D'Auria et al., 2018; Daniels, Taylor, Williams, Gibson, Fleming, et al., 2018; Daniels, Taylor, Williams, Gibson, Samman, et al., 2018; Utami & Wanda, 2019).

4.1 | Study limitations

The main limitation of this study was the lack of representativeness of the sample (health professionals), it is not representative of the population and the results should be interpreted with caution. Another limitation was the cross-sectional design of the study, which made it difficult to make inferences. In addition, data collection from health professionals was carried out through a self-administered questionnaire, where there may be subjectivity and reliability biases. Information was collected from health professionals working in a specific health region. The limitations of the qualitative research were the similar socio-demographic and cultural characteristics of participants (belonging to a pro-breastfeeding association whose opinions may have been biased in favour of the BLW method). However, the objective of this work, exploring knowledge, experiences and attitudes, in a specific context, was to do a first approach jointly, for a better understanding, not the generalisation of the results. In this way, one of the strengths of this study was the use of a mixed method. This innovative approach has yielded information

of great interest from two different perspectives (quantitative and qualitative) and can enrich knowledge in this field of research.

5 | CONCLUSION

In conclusion, we reached the objectives of this work, exploring the knowledge, experiences and attitudes of both health professionals and parents, in a specific context, as a first approach jointly, for a better understanding of BLW method. Most of the healthcare professionals participating in the study are aware of the BLW method and its benefits; however, they do not recommend it in all cases. Concerns about choking, low-energy intake, little scientific evidence or the risk of an unhealthy diet are some of the reasons for not giving a more general recommendation to all parents. Participating mothers affiliated with the Lactabebé association using the BLW method continue to rely on other mothers and informal sources for information, although they listen to advice from health professionals.

It is important to explore other reasons why professionals do not recommend the BLW method. The situation described by our results suggests that there is a gap between healthcare professionals and parents who want to use the BLW method. More research is required when it comes to educating parents who want to use BLW to increase their confidence in healthcare professionals and provide quality care for their children based on scientific evidence backed by expert organisations. For example, teaching parents about nutrition or instructing them in airway clearance manoeuvres could increase parents' perception of health professionals as experts on issues related to the care of their children.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Conceptualisation, NAR, CLP, MGS; methodology, NAR, MGS, EAD; CLP software, CLP; validation, CLP, NAR, RAR, EAD; formal analysis, NAR, CLP, RAR, EAD, MGS; investigation, MGS, NAR; resources, CLP, EAD; data curation, NAR, CLP, EAD, MGS; writing—original draft preparation, NAT, RAR, CLP, EAD; writing—review and editing, NAR, CLP, EAD, MGS; visualisation, MGS; supervision, NAR, CLP, EAD; project administration, NAR; funding acquisition, CLP, EAD. All authors have read and agreed to the published version of the manuscript.

DATA AVAILABILITY STATEMENT

Due to the sensitive nature of the questions asked in this study, survey respondents were assured raw data would remain confidential and would not be shared.

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