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Baby led weaning: an integrative review of scientific evidence from 2011 to 2019

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ABSTRACT

Introduction: Baby-led weaning (BLW) is an alternative approach to introducing food to infants that has become popular. **Objective:** To investigate the scientific evidence regarding the BLW method and its modified version, Baby-Led Introduction to Solids (BLISS). **Methods:** The research was carried out between June 2018 and June 2019, through the databases US National Library of Medicine National Institutes of Health (PubMed) using the following keywords: 'BLW', 'Baby-led weaning', 'BLISS', and 'Baby-Led Introduction to Solids'. All original articles from in English published between 2011 and 2019 have been included. **Results:** Twenty-five studies were included in the analysis. Research on BLW/BLISS focused mainly on the themes: characteristics, behaviors and attitudes of mothers and children, knowledge of mothers and health professionals about feeding methods, weight and body mass index evaluation of children, evaluation of energetic and nutrient intake of children and evaluation of episodes of choking and gag reflex. **Conclusion:** Most research deals with BLW-related experiences and there is still little evidence on the method in terms of adequacy of energy and nutrient intake and growth in childhood. Positive points to child can be observed such as prolonged breastfeeding, greater independence when feeding and better response to satiety. The methods of food introduction do not differ in relation to the occurrence of episodes of choking.

Keywords: infant; infant food; weaning; supplementary feeding.

INTRODUCTION

According to the Food Guide for children under two years[1], based on the recommendations of the World Health Organization[2], food introduction (FI) should happen at six months of age. Food should be initially offered by parents/caregivers, kneaded with a fork (thick, puree consistency), in a spoon; the evolution of consistency must be gradual, even the same as that of the family, at the child's 12 months of life[1,3].

The baby-led weaning (BLW) is an alternative approach to FI, described by British authors[4,5], which has gained popularity. In a simple search with the term BLW in the Google search tool, you have approximately 13,200,000 results in 0.44 seconds (query on 10/09/2019). The increase in the practice of this method was mentioned in United Kingdom[6-8], United States[9], New Zealand[10,11] and Canada[12]. Briefly, the authors describe as fundamental principles for BLW[4,5]: 1) The child should be breastfed exclusively with

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breast milk up to six months of age. In addition to age, for the onset of FI, signs of child readiness must also be observed (for example, sitting without support, bringing objects to the mouth, being interested in food), and breastfeeding must be maintained on demand; 2) The food must be offered to the baby in pieces ("finger-foods"), in its original form, instead of puree; 3) Babies must feed themselves, take food with their hands and bring it to their mouths, without the help of caregivers; 4) Babies participate in family meals and all consume the same foods, since the beginning of FI.

Despite the increasing popularity of the method, health professionals demonstrate concerns about some issues such as energy and nutrient intake and risk of choking[11,12]. In addition, few studies of the method are available in the literature. The Brazilian Society of Pediatrics published an update on BLW in which it explains some aspects that have not yet been clarified: does the method have an impact on children's growth and development?; are energy and nutrient intakes sufficient?; the behavior of parents/caregivers is influenced?; is there a risk of choking and suffocation?[13].

Arantes et al.[14] published the first Brazilian review on BLW, with studies published between 2011 and 2016. Thirteen studies were evaluated, the main findings being: BLW babies were less selective, consumed the same family foods and were less prone to excess weight; mothers who opted for the BLW had higher schooling and were more likely to have breastfed for longer and, despite showing concern about the disorder and food waste, most encouraged the practice. The study cited did not address results from the follow-up cohort of children who had their dietary introduction through a modified BLW approach, in order to try to elucidate some questions about the BLISS method (Baby-Led Introduction to SolidS)[15].

In summary, in the BLISS[15] study, carried out in New Zealand, pregnant women were recruited for an intervention for 12 months with subsequent follow-up at the child's 24 months of age, divided into a control group and BLISS. Both groups received standard health care in the country. The BLISS group received eight additional meetings with parents for support and education on BLISS from before birth to the child's 12 months of age. The additional meetings covered: exclusive breastfeeding, responsive feeding, minimizing the risk of choking and what types of food to offer at meals. The main difference between BLW and BLISS is that the latter includes 12 recommendations aimed at preventing the risks of suffocation, low energy consumption and nutrient deficit, such as iron[15].

As it is a new approach to FI, few studies that group the findings on the subject are available in the literature.

Thus, the aim of this study was to investigate the scientific evidence on the methods of FI, BLW and its modified version, BLISS.

METHODS

This is an integrative literature review as established by Mendes et al[16-18].

As a guiding question, it was established: 'What are the scientific evidences regarding the methods of food introduction "Baby-Led Weaning" (BLW) and its adapted version "Baby-Led Introduction to Solids" (BLISS). The article search was conducted from June 2018 to June 2019 by searching the PubMed database using the following keywords: ''BLW', 'Baby-Led Weaning', 'BLISS', and 'Baby-Led Introduction to Solids'. All original articles found in the English language were included, with thirty-eight papers.

The exclusion criteria were: studies that were not freely available (n=1); in languages other than English (n=2); study protocol (n=1); short communication (n=1) – since these data were described later in another study); and literature reviews (n=8).

RESULTS

Twenty-five studies were included in the analysis (Table 1). The main topics addressed were: characteristics, behaviors and attitudes of mothers; characteristics, behaviors and attitudes of babies; knowledge of mothers and health professionals; assessment of weight and body mass index; assessment of energy and nutrient intake; and evaluation of choking and gag reflex.

Characteristics, behaviors and attitudes of mothers who adopted BLW/BLISS

A survey of 655 mothers compared women who adopted BLW with those who practiced the traditional method of FI. They observed that BLW mothers were more likely to have higher education, to be married and to return to work twelve months after delivery. In addition, they were less anxious and more confident about FI[6].

Mothers who adopted BLW demonstrated lower levels of restriction, pressure to eat, monitoring and concern about the child's weight compared to mothers who adopted the traditional method (TM), which could have a positive impact on weight and style of eating of the child[6]. Brown also observed that mothers of the BLW had low food restriction, less anxiety, introversion and obsessive-compulsive symptoms and less concern with weight, presenting healthier characteristics of eating behavior and well-being[19]. The lesser control in the feeding of BLW babies by the parents was also observed in another study[20].

Rapley & Murkett[5] demonstrated that BLW-adept mothers breastfed longer. These women reported less early FI (closer to the recommended one, at six months of age), offered less daily meals of food and more dairy meals, when compared to those who chose TM. Other studies confirmed that mothers who adhered to BLW/BLISS were more likely to breastfeed exclusively for longer and to introduce food after six months of age[10,21].

Considering experiences with the BLW method, mothers who adopted it reported better participation of babies in meals, greater exposure to family foods[6], greater sharing of family meals[10,20], less agitation at meal times, greater use of food[21], less concern with

nutrient intake[7,22] and a greater propensity to offer homemade foods instead of processed foods[9]. They also reported that they did it because they found the method simple, convenient and adaptable to the family's style and meals[7]. Despite reporting confidence in the child to determine their food intake, mothers showed some control over their children's food choices, such as limiting or regulating the amount of foods considered to be less healthy[22].

As a negative point, mothers reported disorder and dirt. However, they were not overly concerned and used some strategies such as bibs and cloths under the baby's chair[6,11,22,23].

Brown and Lee[6] demonstrated that, when adopting BLW, family food often became healthier, so that the baby would receive the same food from the family. However, another study reported that more than half the time, parents offered their children the same foods they were consuming, suggesting that BLW does not provide changes in the parents' diet during the process[9].

Characteristics, behaviors and attitudes of babies who received FI by the BLW/BLISS method

A study carried out with 510 children indicated that, although the majority of children started to eat finger foods between the ages of four and seven months, many of them still did not eat alone at eight months of age. Children who walked and talked at the age of one were more likely to be interested in "finger foods" in advance[24].

Morison and colleagues observed that babies who followed BLW tended to feed themselves since the onset of FI when compared to those who received TM[25].

Brown and Lee indicated that BLW infants showed greater capacity to respond to satiety when compared to those who received TM, between 18 and 24 months of age[26].

Morison et al.[25], when evaluating 155 children, observed a preference for carbohydrate source foods in the BLW group compared to the TM group, who preferred sweets. Despite this, it was observed that babies using the BLISS method had lower food selectivity at 12 months of age[21].

Knowledge of mothers and health professionals about the BLW method

Qualitative study, carried out with 20 health professionals and 31 mothers who adopted BLW, showed that health professionals had little direct experience with BLW. Despite observing several positive points (more opportunities for family meals, less fights at meal times, healthier eating behaviors, possible advantages in the child's development and greater convenience for the family), most were not comfortable in indicating the method due to fear of choking risk and a possible deficiency in iron and energy intake by children. However, mothers considered the method to be healthy, more convenient and less stressful and most did not report concerns about asphyxia[11].

A similar result was found in a survey conducted in Canada with 65 mothers practicing BLW and 33 health professionals. The risks of choking and inadequate energy and iron intake were the concerns reported by health professionals, and these were not reasons for fear for most mothers. Although all mothers recommended BLW, less than half of health professionals would do it[12].

In a study that assessed the understanding of the UK's FI guidelines conducted with 3,067 parents, it was observed that participants considered BLW the most reliable method for introducing food at 6 months of age, with the internet being the most influential source counseling[27].

Weight assessment and Body Mass Index (BMI) of children who received FI by the BLW/BLISS method

Considering the perception of size, mothers who followed the BLW believed that their babies were larger than those in TM, even though no difference in the children's birth weight was observed. In addition, no association was observed between children's weight at six and twelve months of age and the style of FI[7].

Brown and Lee showed that infants who received FI through BLW were less likely to be overweight than those who received it through TM, between 18 and 24 months of age[26].

However, a study conducted with parents of 155 children between 20 and 78 months, found an association between BLW and lower BMI values, increased incidence of low weight in the BLW group and increased incidence of obesity in the TM group[28].

In the data from the BLISS[15] study, when evaluating 166 children at 12 and 24 months of age, there were no differences in the z-scores of the BMI for age at both times. At 24 months, 6.4% of infants were overweight in the control group, compared to 10.3% in the BLISS group[21].

Assessment of energy and nutrient intake of children who received FI using the BLW/BLISS method

A study with 23 families of 5-month-old children (14 BLISS and 9 BLW), showed that the amount of calories and iron offered to children was similar between the groups, although the BLISS group had a greater variety of energy foods and sources iron (including red meat)[29].

Morison et al.[25] assessed the food intake of 51 infants (n=25 BLW, n=26 TM) between six and eight months of age, and found no significant difference in energy intake. However, children in the BLW group appeared to consume more total and saturated fat, and less iron, zinc and vitamin B12 compared to children who received traditional FI.

Taylor et al.[21] and Erickson et al.[30], as part of the BLISS[15] study, when evaluating infants at 12 and 24 years of age, confirmed the absence of difference in energy intake[27]. However, compared to the control group, babies in the BLISS group consumed more

Table 1: Main findings about Baby-led weaning

Author/Year/Country	Evaluated sample	Main findings
Brown & Lee, 2011[6] UK	655 mothers with children aged 6 to 12 months.	BLW-adept mothers: more likely to have higher education, to be married and to have breastfed, to offer less daily meals of complementary foods and more breast milk; stay at home with the children for longer; less anxious and more confident. BLW: associated with late introduction of food, better participation of babies at mealtimes and greater exposure to family foods.
Wright et al. 2011[24] UK	510 children	Most children started eating finger foods between 4 and 7 months of age. Many still did not feed themselves at 8 months of age. Those who were already walking and talking at the age of 1 were more likely to reach out for finger-food early.
Brown & Lee, 2011[7] UK	604 mothers with children aged 6 to 12 months.	BLW-adept mothers: lower levels of restriction, pressure to eat, monitoring and concern for the child's weight; perception that their babies were significantly larger. BLW has been associated with the low-control feeding style.
Townsend & Pitchford, 2012[28] UK	Parents of 155 children between 20 and 78 months	BLW Group: preference for carbohydrates; associated with lower BMI and higher incidence of low weight Traditional food introduction group: preferences for sweets. Food selectivity was similar between groups.
Rowan & Harris 2012[9] US	10 mothers who adopted BLW with their babies	Food intake was similar in the first three months of weaning. BLW did not lead to dietary changes among parents during food introduction.
Cameron et al. 2012[11] New Zealand	31 health professionals and 20 mothers	Health professionals: little experience with BLW and their main concerns were: increased risk of choking, energy and iron deficiency. BLW-adept mothers: did not report major concerns about the method and recommend this approach to other mothers.
Brown & Lee, 2013[23] UK	36 mothers of children aged 12-18 months who adopted the BLW	BLW-adept mothers: they have become healthier because they fit the child's needs, most trust the baby to eat according to hunger and that will be enough. The method was considered simple, convenient and easily adaptable to the family lifestyle. Despite the initial concern about the risk of choking, mothers were more relaxed as they differed from the gag reflex and realized that the baby was able to resolve.
Cameron et al. 2013[10] New Zealand	199 mothers of babies 6 to 12 months old	Mothers classified into 4 groups: adopted BLW (9%); reported adopting BLW, but used a spoon to feed babies more than 50% of the time (21%); traditional method (70%) and undefined method, they did not adopt BLW, but the baby fed itself with 6-7 months (0%). Higher proportion of BLW supporters met WHO recommendations for breastfeeding, beginning of food introduction and were more likely to share meals with family.
Moore et al. 2014[27] UK	3607 participants	Most were advised to do the food introduction at around 6 months. Knowledge of the guidelines was associated with late food introduction, but did not guarantee adherence. BLW was the most reliable method for food introduction at 26 weeks.
Brown & Lee, 2015[26] UK	298 mothers with children aged 18 to 24 months.	Infants adhering to the BLW: more responsive to satiety and less predisposed to being overweight, regardless of the duration of breastfeeding, the time of introduction of complementary foods and maternal control.
Cameron et al. 2015[29] New Zealand	23 families of children aged 5 months (14 BLISS, 9 BLW)	BLISS Group (compared to the BLW group): greater probability of introducing iron-containing foods from the beginning, greater amount of meat offered daily, greater variety of iron source food offerings. The total calories offered was similar between groups.
Brown, 2015[19] UK	604 mothers with children aged 6 to 12 months.	BLW-adept mothers: lower levels of restrictive eating, anxiety, introversion, obsessive-compulsive symptoms and emotional eating, with more appropriate eating behavior.
Arden & Abbott, 2015[22] UK	15 mothers of babies between 9 and 15 months.	BLW adept mothers: high confidence in the baby's ability to choose the moment, type and quantity of food consumed and the development of skills related to self-feeding; limiting the availability of certain foods and offering food up to 6 months and concerns about ensuring balanced nutritional intake; recognition of the importance of breast milk; BLW as a creative style with affection.
Fangupo et al. 2016[35] New Zealand	184 families	35% of babies choked at least once between 6 and 8 months of age; 8,814 episodes of gag reflex; no difference between the types of food introduction.
D' Andrea et al. 2016[12] Canada	65 practicing mothers and 33 health professionals	BLW-adept mothers: in practice, they offered food in the form of puree. Health professionals: reported concerns about choking, inadequate energy and iron intake, thus less than half of these professionals support the practice, but BLW mothers indicate the method.
Morison et al. 2016[25] New Zealand	51 infants (25 BLW, 26 Traditional) 6-8 months old.	BLW-adept babies: ate alone and were more likely to eat as a family. No difference in energy intake, but BLW babies seemed to consume more total and saturated fat and less iron, zinc and vitamin B12.
Taylor et al. 2017[21] New Zealand	206 mothers of infants (101 control,105 BLISS)	At 24 months, 6.4% of infants in the control group and 10.3% in the BLISS group were overweight. BLISS babies were breastfed longer, less selective at 12 months, less agitated at the time of eating and cause less food waste. Energy intake, prevalence of overweight, iron deficiency anemia and risk of choking were similar between groups.
Brown, 2017[36] UK	1151 mothers of infants aged 4 to 12 months.	Choking was not associated with the type of food introduction.
Erickson et al. 2018[30] New Zealand	206 mothers of infants (101 control,105 BLISS)	BLISS babies: higher consumption of sodium and fat at 7 months and lower consumption of saturated fat at 12 months. Food intake was similar at 24 months of age, excessive sodium intake (68%) and added sugars (75%) of children in both groups.

Continue...

Table 1: Continuation.

Author/Year/Country	Evaluated sample	Main findings
Daniels et al. 2018[31] New Zealand	162 infants (81 controls, 88 BLISS) at 7 months and 155 at 12 months	Similar zinc intake and plasma concentration among infants in both groups.
Daniels et al. 2018[32] New Zealand	162 infants (81 controls, 88 BLISS) at 7 months and 155 at 12 months	No significant differences in iron intake, plasma ferritin concentration, body iron or prevalence of depleted iron deposits, early functional iron deficiency or iron deficiency anemia at 12 months of age.
Fu et al. 2018[34] New Zealand	876 mothers	BLW-adept children breastfed longer. 2% of the evaluated infants have an incident or more of choking. Of these, 72% were caused by food offered by the parents. 68% of parents who tried or followed BLW, considered it the best way to feed their baby. Most common concerns reported about the method: 29% choking, 19% inadequate iron intake and 14% inadequate energy consumption. Babies who followed BLW were almost twice as likely to consume red meat and less likely to consume fortified cereals.
Morison et al. 2018[33] New Zealand	206 mothers (101 controls, 105 BLISS)	BLISS babies were exclusively breastfed for a longer time and received a food introduction after 6 months. At 7 months, they had greater food variety and at 24 months, more consumption of fruit and vegetable varieties.
Rowan et al. 2018[37] UK	180 parents	Babies from the restricted BLW were more exposed to vegetables and protein foods than those who were fed by the traditional method. The traditional food group had greater exposure to ready meals.
Komninou et al. 2019[20] UK	565 parents	BLW-compliant babies were breastfed for longer and introduced solid foods late. Parents who followed the BLW method exercised less control over the feeding of their babies, used less incentive to increase food consumption, shared their meals more with them, less frequently followed recommendations by health professionals and reported a higher level of pleasure when feeding children. Parents who practiced the traditional method introduced more cereal to babies and were less likely to offer vegetables or mixed meals.

BLISS: Baby-led introduction to solids, BLW: Baby-led weaning, BMI: body mass index.

sodium and fat at 7 months and less saturated fat at 12 months. No difference was observed at 24 months of age, but most children in both groups had excessive sodium intake (68%) and added sugars (75%)[30].

Regarding the status of iron and zinc, data from the BLISS[15] study showed that there were no differences in the amount of zinc and iron ingested[31,32]. Plasma dosage of these nutrients at twelve months also showed no difference between groups[31,32].

Morison et al.[33] evaluated 206 mothers (n= 101 TM and n=106 BLISS) at 7, 12 and 24 months. BLISS babies were exposed to the greatest variety of foods and textures. At 7 months, BLISS participants had a greater variety in basic foods (breads, cereals, rice, pasta, fruits, vegetables, legumes, legumes), non-essential foods (foods rich in salt, sugar or fats), and meats and other protein foods. At 24 months, they showed more varied consumption of fruits and vegetables.

In the study by Fu et al.[34], three weaning groups were analyzed, restricted BLW (babies who were rarely or never fed with a spoon and pureed food), traditional spoon feeding, in the form of puree and free BLW (intermediaries between restricted BLW and traditional feeding.) Between 6 and 8 months, babies from restricted BLW consumed more vegetables and protein foods. Exposure to the compound meal (meal offer containing more than one food group) was significantly higher in TM.

A study with 876 mothers observed that babies who followed BLW had almost twice the chance of consuming red meat[34]. Another study, carried out with 565 parents, found that babies who practiced TM consumed more cereals and were less likely to receive vegetables or a mixed meal (meal consisting of more than one food group)[20].

Evaluation of episodes of choking and gag reflex in children who received AI by the BLW/ BLISS method

Despite being one of the concerns of health professionals described in the literature[11,12,27], only three studies have evaluated the risk of choking in children with BLW[35-37].

Fangupo et al.[35], evaluating 184 families[15], observed that approximately one third of the children choked at least once between 6 and 8 months of age. However, there were no differences in the number of choking episodes between the BLISS and control groups at any time. Regarding the gag reflex, 8,814 episodes were reported. Babies in the BLISS group had episodes of gag more often at six months, but less frequently at eight months. In general, more than half and almost all babies received some food at risk of choking at seven and twelve months respectively, with no significant differences between the two groups.

In a study carried out with 1,152 mothers of babies aged four to twelve months, it was observed that 13.6% of the children had some episode of choking, not being associated with the type of FI. However, among children who had choking, those who adopted TM had more episodes of choking when eating finger foods and lumpy purees when compared to babies who followed BLW. BLW was not associated with episodes of choking on any type of food (homogeneous puree, lumpy puree or "finger-food")[36].

The study by Morison et al.[33] evaluated 876 mothers and 2% of them reported that their children had an incident of choking by choking. Of these choking incidents, 72% were caused by food offered by parents.

DISCUSSION

In summary, research with BLW/BLISS seems to suggest that: mothers who adopt the method are satisfied and encourage the approach while health professionals have concerns about energy and nutrient intake and the risk of choking and do not indicate the method; BLW babies breastfeed for longer, are more independent in relation to food, know better signs of satiety, enjoy meals better, and share moments of meals and food consumed with families; the intake of energy, iron and zinc, as well as their anthropometric (weight) and biochemical parameters are not influenced by the FI method; there is no difference in the number of choking episodes regardless of the FI method.

These results suggest that babies exposed to the BLW/BLISS method had more satisfactory dietary characteristics, such as prolonged breastfeeding[6], recognition of signs of satiety[26] and sharing family meals[10,20], allowing a closer relationship. Despite this, this method is still not routinely recommended by health professionals[11,12], indicating the need to update the latter on the positive aspects of the methods, in order to provide adequate guidance to parents who wish to adhere to the BLW.

Regarding choking or asphyxia, although the three studies carried out do not suggest a relationship between the BLW, research on the topic is limited because it is based on self-reported information from mothers/caregivers[35-37]. Further research in this regard is needed to conclude on BLW security at this point.

The clear differences between the BLISS and BLW methods should be highlighted. The BLISS method is a version of the BLW modified to meet the three main concerns of health professionals, parents and authors: the increased risk of ferropenia, the increased risk of growth deficit and the increased risk of suffocation. Based on this, among the 12 recommendations of the BLISS method are: recipes that increase the iron content in the diet and increase energy density; encourage the practice of varied eating; offer a high energy density and an iron rich food at each meal; FI at 6 months of age; suggest recipes and foods with high energy density; encourage the practice of responsive eating; to suggest that in phases of illness and recovery, foods that are easier to eat are offered, in addition to dairy foods; try the foods before offering them to the baby (check if they are soft enough to be mashed with the tongue or gum); list hard foods that should be avoided; avoid foods that crumble in the mouth, that are small or round; and advise on aspects of food safety (how to differentiate the gag reflex from asphyxia and how to proceed in these cases)[29]. Due to these recommendations, not all evidence related to the BLISS practice can be generalized to children who adhere to the BLW.

An issue not yet addressed when it comes to BLW/BLISS is the issue of allergenic food and FI. In the past, it was traditionally recommended to postpone the introduction of potentially allergenic foods, considering intestinal structural and functional immaturity and increased permeability to proteins with a potential risk of sensitization. In recent years, this recommendation has been modified by the early introduction of these foods, considering that the risk of sensitization and allergic response is the same, as a result of the emergence of immune tolerance after the fourth month of life. The induction of oral tolerance occurs between four and six months of age and is associated with factors of colonization, genetic predisposition, exposure to breastfeeding and immunomodulating agents, such as proteins, lipids, fibers and some vitamins[38]. Therefore, it is important to note that the BLW/BLISS method does not emphasize recommendations for delayed exposure to allergenic foods and should be a point of attention for health professionals, when advising on the method.

Another point that has not yet been explored in research on BLW/BLISS is its effect on child development. New approaches, such as BLW and BLISS, can be advantageous in regulating infant feeding and providing a stimulus for neurological maturation considering the independence of the baby with BLW when feeding[25,26]. However, it is recommended that the use of these techniques be evaluated individually, depending on the neurological maturation of each baby, in addition to monitoring the type of food and nutrient that is being provided, as well as monitoring the child's growth and development[38].

Regarding the limitations of published studies on the BLW/BLISS method, it is necessary to mention the absence of an exact definition of them[39,40]. The study by Arden and Abbott[22] pointed out as one of the main findings, the renegotiation of BLW, in which some mothers reported adopting the method, however they helped their babies to feed when they were not fit and to avoid the disorder, deviating from the initial concept of the BLW[22]. Many of the studies analyzed were performed using online questionnaires, in which the mother indicated the percentage of times the child ate alone and consumed food in the form of puree[6,7,19,23,26,36]. In other studies, the participant only indicated whether he was adept at one method or another[10,28].

Another limitation is the invitation to study participants conducted over the internet[6,7,19,23,26,36], which can lead to a sample bias, selecting people with a higher socioeconomic level[39,40].

Most studies[20,25,29-32] present data that were reported by the participants and should be interpreted with caution. However, studies derived from BLISS[15] seem to suggest that good nutritional guidance on how to perform BLW adapted food introduction can be effective in increasing the supply of energy foods and sources

of iron and zinc[21,31,32], minimizing deficiency risks growth and plasma zinc and iron.

CONCLUSION

There is still little evidence about BLW/BLISS in terms of adequacy of energy and nutrient intake and growth in childhood. Most research published to date explores the experiences of those who carried out the method and there are few controlled studies. However, good guidance from health professionals on food introduction, how to follow the recommendations proposed by the adapted BLISS method, seems to minimize the risks of nutritional deficiencies.

It is possible to observe beneficial effects on the health of infants adhering to BLW/BLISS, such as prolonged maintenance of breastfeeding, greater independence when feeding and a better response to satiety. Despite the disorder and waste that BLW/BLISS can generate, the method provides convenience for the family, since the meal times are shared and the food offered is the same.

Regarding the risk of choking and asphyxia, until now, FI methods do not seem to differ. However, it is noteworthy that the studies that address this aspect are limited because they are based on self-reports.

Finally, some aspects have not yet been addressed in studies related to the theme, such as the introduction of allergenic foods and the impact of the method on children's development, requiring further research in these fields.

It is essential that health professionals are up to date on BLW/BLISS being able to provide appropriate guidance to parents who wish to adopt the method in their children's FI, avoiding losses in the growth and development of children. It is hoped that this review can elucidate scientific evidence about BLW/BLISS, contributing to this update.

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