



# **A Cross Sectional Study on Knowledge and Attitude Regarding Exclusive Breast Feeding among Women of Reproductive Age Group in Chennai, Tamil Nadu**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

**Aim & Objectives:** To assess the knowledge and attitude on exclusive breast feeding among reproductive age group women in Chennai.

**Materials and Methodology** This is a cross sectional quantitative descriptive study. The data was collected by handing out physical questionnaire forms to volunteers or by sending a link of the google form format of the same questionnaire. The data was collected from February 2021 to September 2021. The both physical and online forms data collected were compiled with help of Microsoft Excel. These compiled data were then analyzed using SPSS 16.0 software. All the frequencies and percentages were also obtained from this.

**Results:** In this study a total of 342 volunteers participated, all belonging to the reproductive age group i.e., 15 years to 45 years. Majority of the participants were among the age group 20 to 30 years belonging to both married and unmarried category. Out of the 342 volunteers, 74.2% (254) of the participants planned to breast feed their infants for several months. 60% of participants had scored more than 75% overall. The lowest score seen was 26/40 points. So no one in my study had low knowledge (less than 20). The knowledge percentage and attitude percentage here are 68.6% 65.4% respectively. My interpretation of the knowledge and attitude is that we need to increase the knowledge about the term "Exclusive Breast Feeding" and also encourage the mothers to breast feed their infants.

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**Conclusion:** Although most have scored more than 75%, some important questions were chosen incorrectly. This might be mostly due to the fact that there is lack of knowledge with respect to the term “exclusive” breastfeeding. This suggests that there has to be more awareness created amongst the youth population, who are tomorrow’s mothers. The need for them to know the importance of these matters lies in hands being doctors. It should be taught from school level itself.

*Keywords: Breast milk; exclusive breast feeding; mothers; participants.*

## 1. INTRODUCTION

What is breastfeeding? It is the practice of a primate nursing her infant. This includes humans too. Then what is exclusive breast feeding? Exclusive breastfeeding means that the infant receives only breast milk. No other liquids or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines [1]. This is how WHO defines it. Reconstructing the detailed dietary behaviour of extinct hominins is challenging but the teeth time capsule has revealed that the Neanderthals who roamed Eurasia 2 million years ago had breastfed their young for 6 to 9 months exclusively and fully weaned after the age of two [2]. They had supplemented their young with solid foods for about 5 to 6 years along with breast milk. This is the same method that doctors of today suggest and this method was first used by the *Australopithecus* sp. a millennia ago [3,4].

In ancient India, breastfeeding practice were widely practiced without any taboo according to the ancient Hindu scriptures like Charka Samhita which says “the milk and the breasts are a symbols of longevity” in 200 BC - 400 BC. But despite this fact, the present condition has witnessed a state of decline in this practice especially by the higher segments of the society [5]. Ancient Indians gave and ancient Greeks were fed diluted wine and honey and eggs at six months of age [6,3]. We all would’ve heard about Woodward’s gripe water. Its original formula contains alcohol and sugar in addition to sodium bicarbonate and dill oil.

In spite of all these there was a drop in breastfeeding habits especially among women of higher social status who would often hire wet nurses for them [7]. But even this practice was coyed upon among many people around 500 years back. So, after introduction of bottled feeding, wet nursing was replaced by the practice of bottle feeding and artificial supplements [8]. A study in The Lancet found that breastfeeding can prevent 8,00,000 child

deaths a year across the globe and yield \$300 billion in savings [9].

About a million years ago, the total hominid species were a total of 55,000 worldwide. Is it because of the breastfeeding practice that made stronger babies and fought the extinction or was the breastfeeding itself a cause for the extinction being a calorie rich process? Are the present mothers more aware of breastfeeding and its merits? Why is public breastfeeding being frowned upon even by women? Is there a decline in the trend of breastfeeding infants? Should there be more awareness created for exclusive breastfeeding?

## 2. MATERIALS AND METHODOLOGY

This is a cross-sectional study. The study was conducted using physical copies of the questionnaire and the same in google forms in both Tamil and English language. Both married and unmarried women participated in this study. In order to maintain it unbiased both populations studied were almost equal in number, unmarried being 53% and rest married. 342 forms were collected from February 2021 to September 2021 and compiled in Microsoft Excel AR and analyzed using SPSS software and scores were graded using Flubaroo add-on app available online. All the frequencies and percentages were also obtained from this.

The questionnaire had 3 parts. In the 1st part 9 questions, the participants were supposed to choose the most correct response from options given below the question. The 2nd part, participants can choose any number of options that they find correct. It had 5 questions. The last part had 8 questions and they had to answer true or false for the given statement.

The scoring was done by Flubaroo app. It gave a point to each correct response. The questionnaire had a total of 40 correct responses and thus maximum points attainable were 40. Thus based upon the score attained, their knowledge was scored as high knowledge 30-40, moderate knowledge 20-30 and low knowledge less than 20.

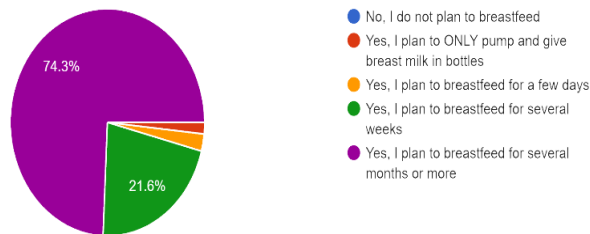
### 3. RESULTS

#### 3.1 Section 1

9 questions here. The participants were asked to choose to the most correct response from the options given.

1. Do you plan to breastfeed after birth of your baby?

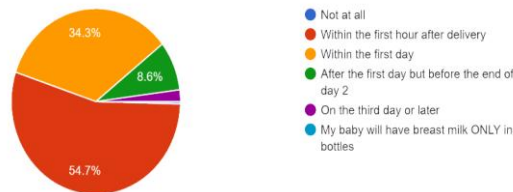
1. Do you plan to breastfeed after birth of your baby?



74.3% of them chose to breast feed for several months or more. 21.6% chose to breast feed their infant for several weeks. Only 4 people chose to use pumped breast milk in bottles.

2. How soon after birth should your baby FIRST latch on to your breast to feed?

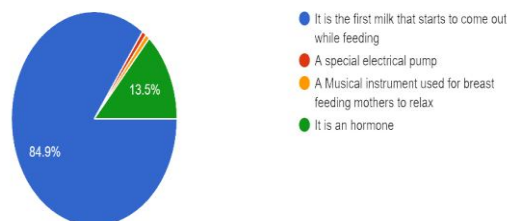
2. How soon after birth should your baby FIRST latch on to your breast to feed?



This question could've been answered solely out of experience but surprisingly, only 54.7% women said the baby should latch on the mother within first hour of birth. Nearly 34.3% said the latching happens within first day.

3. Do you know what a colostrum is?

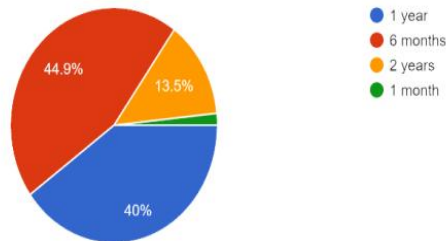
3. Do you know what a colostrum is?



This question was answered almost unanimously by almost 85% (290). Out of the other 3 options 2 were ridiculous one being musical instrument and other a special electric pump. The last option was "it is a hormone". 13.5% had chosen this option.

4. Ideally, how long do you think you have to exclusively breast feed?

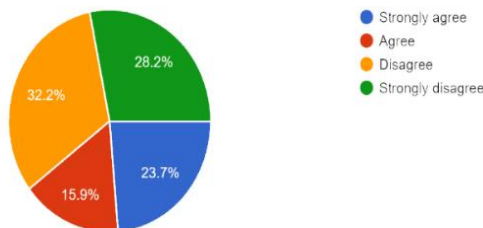
4. Ideally, how long do you think you have to exclusively breast feed?



This is one of the important questions in assessing the knowledge, option 1 year was chosen by 40% and 6 months by 45%. This is very important in weaning.

5. Formula feeds during first 6 months is good for baby growth

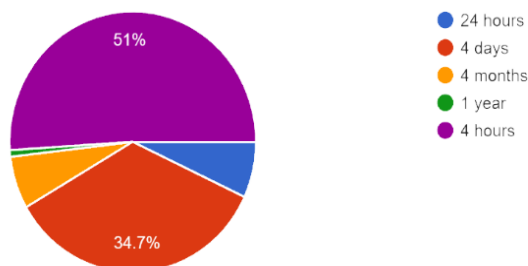
5. Formula feeds during first 6 months is good for baby growth



This question saw how many of them agreed to this statement and surprisingly 3 options of 4 were almost equal. Strongly agree being 23.7% disagree being 32.2 % and strongly disagree being 28.2%.

6. How long can you store pumped breast milk in refrigerator?

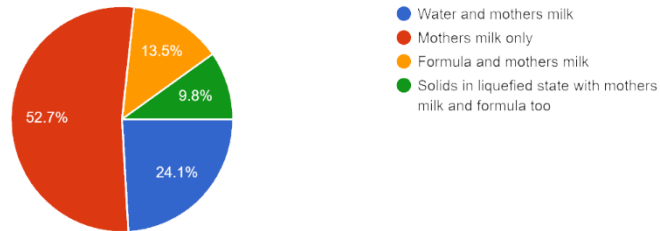
6. How long can you store pumped breast milk in refrigerator?



This is one of two questions where a majority had answered wrong. The correct answer is 4 days which was chosen by only 34.7% while 4 hours were chosen by 51%. If the question was how long can you store a pumped breast milk in room temperature, the 51% would've been right.

7. Best combination of food to give during the first 6 months of child birth

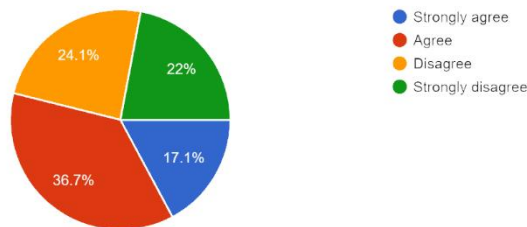
7. Best combination of food to give during the first 6 months of child birth



Another important questions, answered perfectly by 52.7%. Mother's milk only.

8. Exclusive breast feeding also includes giving water

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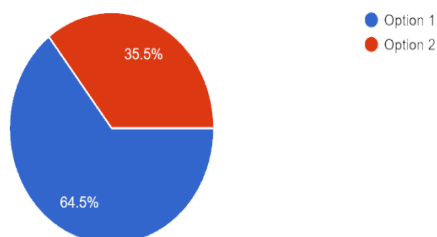


24.1% chose water and mother's milk.

This is the second question answered incorrectly by the majority participants. The correct option (strongly disagree and disagree) were chosen by only 22% and 24.1% respectively.

9. Which among the following depicts correct position for breast feeding?

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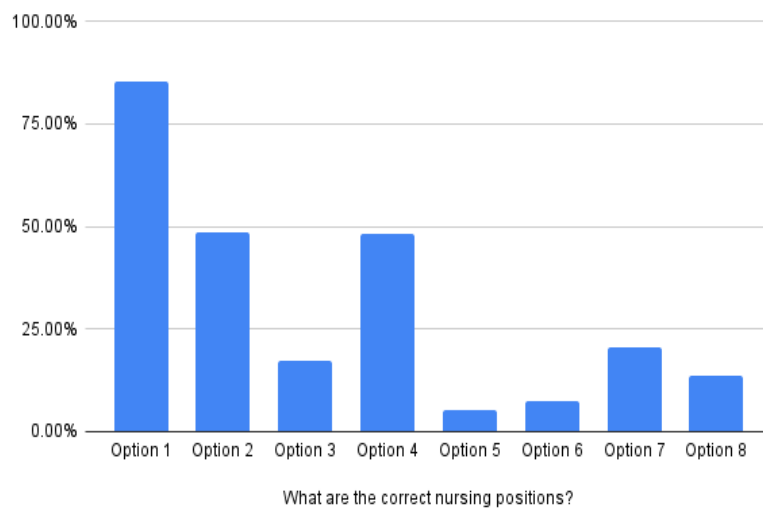


Two options here. Option 1 shows correct latching, chosen by 64.5%. The rest who answered wrongly were mainly belonging to the unmarried category, hence this shows that this question has been answered out of experience mainly.

### 3.2 Section 2

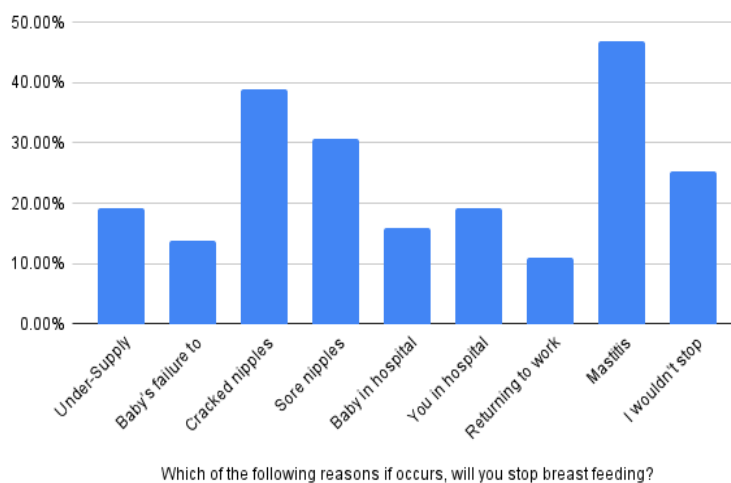
In this section, there were 5 questions, and the participants were free to choose any number of options that they may feel right.

#### 1. What are the correct nursing positions?



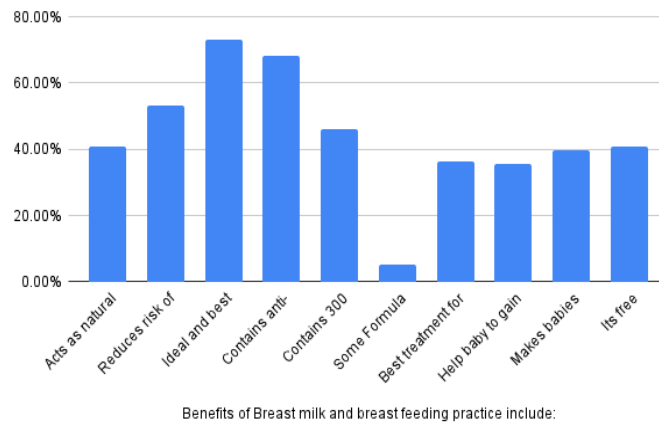
In this question, all options were correct. The participants seemed to select the most commonly practiced positions, which are option 1,2,4 and 8. And the graphs clearly show this trend.

#### 2. Which of the following reasons if occurs, will you stop breast feeding?



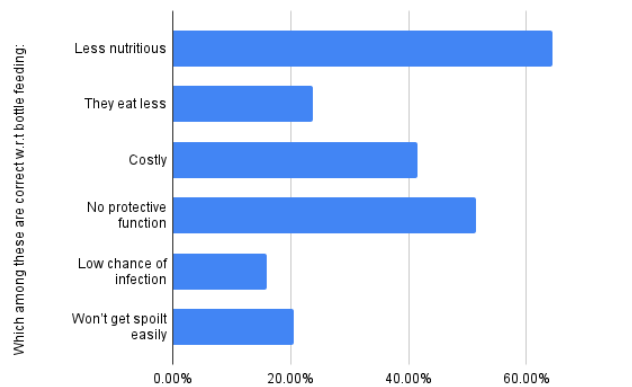
The one and only correct option is “I wouldn't stop breast feeding at all”. But only 25.3% chose to select this option. It could be because options like “mastitis” – 47%, “cracked nipples” – 38.8% and “sore nipples” – 30.6% seemed to be more drastic, compelling and a good enough reason to stop the feeding.

3. Benefits of Breast milk and breast-feeding practice include



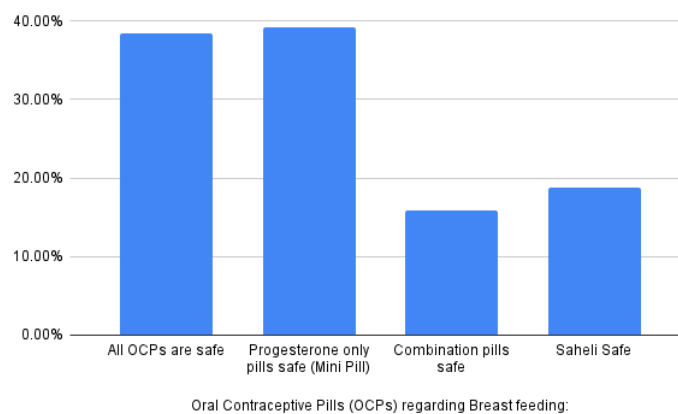
All options are correct answers except one. And only 13 participants felt some formula feeds can replace breast milk, which is wrong.

4. Which among these are correct w.r.t bottle feeding



Here there seemed to equal opinions, but the participants knew that bottled feeding is less nutritious and that it does not have any protective function.

5. Oral Contraceptive Pills (OCPs) regarding Breast feeding



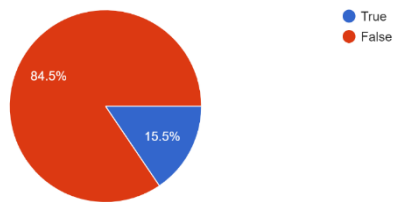
The correct is Mini pill only. Here I was expecting Saheli to be in higher percentage because of its accessibility that our government has given us.

### 3.3 Section 3

In this section there are 8 questions for which participants have to answer either true or false

1. Breast feeding is an ancient technique, newer and better technology can be replaced

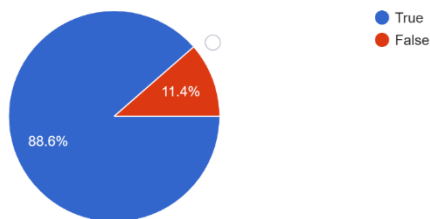
1. Breast feeding is an ancient technique, newer and better technology can be replaced



False was chosen by 84.5%.

2. Breast milk is easier to digest than formula

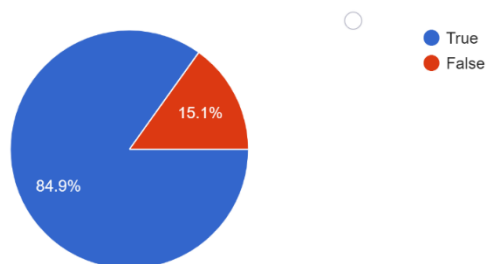
2. Breast milk is easier to digest than formula



True was chosen by 88.6%.

3. Breastfeeding longer can reduce incidence of DM, BP, CA breast and Heart disease

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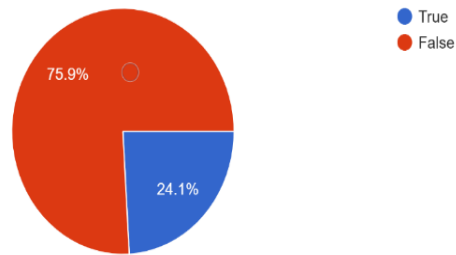


True chosen by 84.5% again



4. Colostrum can be discarded

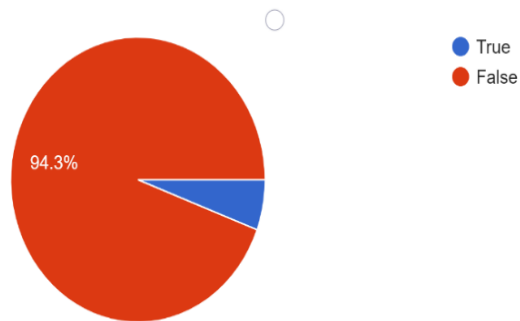
4. Colostrum can be discarded



False chosen by 75.9%

5. Smoking and Alcohol can be done during breast feeding

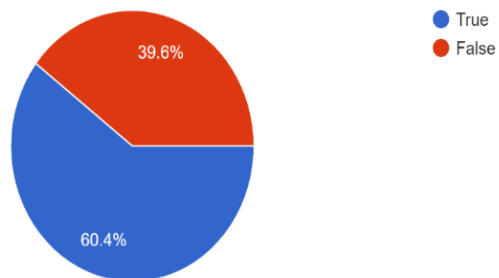
5. Smoking and Alcohol can be done during breast feeding



14 participants felt smoking and alcohol can be used during breast feeding

6. Breast feeding can be done even if the mother is ill

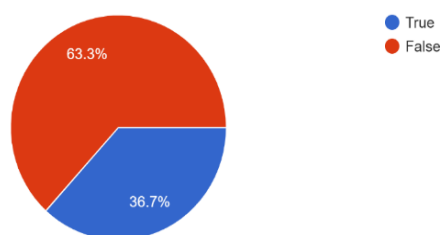
6. Breast feeding can be done even if the mother is ill



True chosen by 60.4%.

### 7. Breast feeding should be stopped if baby is falling sick

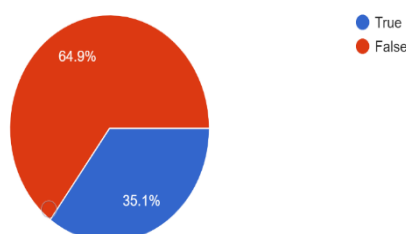
7. Breast feeding should be stopped if baby is falling sick



False chosen by 63.3%

### 8. No clicking sounds or milk leakage happens in a bad latch (attachment of baby to breast)

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False chosen by 64.9%.

## 4. DISCUSSION

My study helped to see how much the reproductive age group of women in Chennai knew about exclusive breast feeding. Most of the questions were answered correctly. To give an exact number, more than 60% of participants had scored more than 75% overall. The lowest score seen was 26/40 points, and the highest being 38/40. The overall idea that I got from the study is that, there is some knowledge with respect to breast feeding and its practices, but not enough of it. To be more specific, the study population seemed to have lack of knowledge in the term “exclusive breast feeding”, and this is the single most important factor to be highlighted in this study. The question 8 in section 1 by itself can reinforce the previous statement. Only 46% chose not to agree. This clearly shows that women should be educated about “exclusive” breast feeding rather than just breast feeding alone.

Because later in life of the child, they are prone to be entrapped in nutritional disorders like Protein Energy Malnutrition (PEM), where early and late weaning are a risk factor. It can cause iron deficiency anemia in children too. In section 2 question 2, the participants were scared by the terms mastitis and cracked nipples thrown at them. But in reality, soreness will resolve on its own in a few days and cracked ones in a matter of 1 or 2 weeks but none of this should stop a mother from feeding her infant, maybe take a break but never completely stop. There are no studies done in Chennai per se, but a study was done among rural women of Tamil Nadu. In that study they found that, The prevalence of exclusive breastfeeding was 34% for the duration of six months, which is lesser than the national average of 41% [9]. A similar trend to our study was also seen in a study conducted in Karachi, Pakistan, where the study population were clinical and pre-clinical UG medical students [10].

The exclusiveness pertains to the duration of feeding also. Although majority got it correct, an almost equal number also chose a wrong answer. Studies show that 6 months is just the right amount of time an infant need to be solely on mother's milk [10].

## 5. CONCLUSIONS

The ancient practice of exclusive breast feeding for 6 months is what we are as present-day modern humans are adapted to as well. Although being a calorie rich process, this was a necessary expenditure that was gambled to make our human race move forward enduring all the difficult situations to make us who we all are today.

Yes, there is insufficient knowledge in regard to exclusively breast feeding, so we can't stop now. More and more mothers and mothers to be are to be educated. Not only them, all women and men should learn to take care of their infant and this should be started at school levels. Questions like section 2 question 3, benefits of breast feeding, from school we were taught about lactational amenorrhea as method of contraception. And this must be done in all aspects covering a wider view of exclusive breast-feeding practice.

## ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

## CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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