

Millenium, 2(24)

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## GANHOS EM CONHECIMENTOS E ATITUDES DOS PAIS APÓS FREQUENTAREM UM CURSO DE PREPARAÇÃO PARA A PARENTALIDADE

PARENT`S GAINS KNOWLEDGE AND ATTITUDES AFTER TAKING A PARENTHOOD PREPARATION COURSE

CONOCIMIENTOS Y ACTITUDES DE LOS PADRES TRAS UN CURSO DE PREPARACIÓN A LA PARENTALIDAD

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RECEIVED: 17<sup>th</sup> December, 2023

REVIEWED: 27<sup>th</sup> April, 2024

ACCEPTED: 10<sup>th</sup> May, 2024

PUBLISHED: 05<sup>th</sup> June, 2024

DOI: <https://doi.org/10.29352/mill0224.34004>

## RESUMO

**Introdução:** Cada vez mais os pais revelam dúvidas, receios e falta de experiência, evidenciando a necessidade sentida pelas grávidas de frequentarem cursos de preparação para a parentalidade, de forma a obterem mais informações sobre a gravidez, a preparação do enxoval, o parto, os cuidados ao recém-nascido e até o envolvimento do pai do bebê e da restante família.

**Objetivo:** Construir e testar a validade de conteúdo de um instrumento para avaliar os ganhos em conhecimentos e atitudes dos futuros pais após a frequência de um curso de preparação para a parentalidade.

**Métodos:** O instrumento foi construído com base numa revisão da literatura e dos programas de preparação para a parentalidade e submetido a um painel de peritos para calcular o Índice de Validade de Conteúdo (IVC). O questionário foi intercalado com feedback controlado para determinar se os itens que compõem o instrumento são representativos do domínio de conteúdo que pretendem medir, partindo do pressuposto de que a opinião do grupo é mais válida do que a opinião individual.

**Resultados:** No subdomínio Gravidez e Puerpério, no que respeita aos domínios Conhecimentos e Atitudes, os valores de consenso relativo variaram entre 15,3% e 16,6%. No subdomínio Recém-Nascido, os valores relativos de consenso variaram entre 80,0% e 83,7% em ambos os domínios, o que significa que a maioria dos programas de cursos de preparação para a parentalidade tem uma base significativa de concordância nestas questões.

**Conclusão:** Foi possível aferir se a informação que os peritos consideram útil e fundamental avalia os ganhos em conhecimentos e atitudes dos futuros pais após a realização de um Curso de Preparação para a Parentalidade.

**Palavras-chave:** conhecimentos; atitudes e práticas em saúde; pais; parentalidade; gravidez; educação pré-natal

## ABSTRACT

**Introduction:** More and more parents are showing doubts, fears and a lack of experience, highlighting the need felt by pregnant women to attend parenting preparation courses in order to obtain more information about pregnancy, preparing the trousseau, childbirth, caring for the newborn and even involving the baby's father and the rest of the family.

**Objective:** To develop and test the content validity of an instrument for assessing the knowledge and attitudes of future parents after taking a parenthood preparation course. Design: Development and content validity of an instrument to measure knowledge and attitudes after taking a parenthood preparation course.

**Methods:** The instrument was developed based on a review of the literature and parenthood preparation programs and afterward submitted to an expert panel for content validity by calculating the Content Validity Index. The questionnaire was interspersed with controlled feedback to determine whether the items that composed the instrument were representative of the content domain they were intended to measure.

**Results:** In the Pregnancy and Puerperium sub-domain about the Knowledge and Attitudes domains, the relative consensus values varied between 15.3% and 16.6%. In the Newborn sub-domain, the relative consensus values ranged from 80.0% to 83.7% in both domains, meaning that most parenting preparation course programs have a significant basis for agreement on these issues.

**Conclusion:** This innovative study identifies gaps in knowledge in maternal health that need to be addressed in future research. Developing an assessment tool can guide health professionals in an evidence-based decision-making process when adjusting parenthood preparation courses to parent's expectations and needs.

**Keywords:** health knowledge, attitudes and practice; parents; parenting; pregnancy; parenthood education

## RESUMEN

**Introducción:** Cada vez son más los padres que muestran dudas, miedos y falta de experiencia, lo que pone de manifiesto la necesidad que sienten las mujeres embarazadas de asistir a cursos de preparación a la paternidad para obtener más información sobre el embarazo, la preparación del ajuar, el parto, los cuidados del recién nacido e incluso la implicación del padre del bebé y del resto de la familia.

**Objetivo:** Desarrollar y probar la validez de contenido de un instrumento para evaluar las ganancias en conocimientos y actitudes de los futuros padres tras realizar un curso de preparación a la paternidad. Diseño: Desarrollo y validez de contenido de un instrumento para medir conocimientos y actitudes tras realizar un curso de preparación para la paternidad.

**Métodos:** El instrumento se desarrolló basándose en una revisión de la literatura y de los programas de preparación para la paternidad y después se sometió a un panel de expertos para la validez de contenido mediante el cálculo del Índice de Validez de Contenido. El cuestionario fue intercalado con retroalimentación controlada para determinar si los ítems que componían el instrumento eran representativos del dominio de contenido que pretendían medir.

**Resultados:** En el subdominio Embarazo y Puerperio sobre los dominios Conocimientos y Actitudes, los valores de consenso relativo oscilaron entre el 15,3% y el 16,6%. En el subdominio Recién nacido, los valores de consenso relativo oscilaron entre el 80,0% y el 83,7% en ambos dominios, lo que significa que la mayoría de los programas de cursos de preparación para la crianza de los hijos tienen una base significativa de acuerdo en estas cuestiones.

**Conclusión:** Este estudio innovador identifica lagunas en el conocimiento de la salud materna que deben abordarse en futuras investigaciones. El desarrollo de una herramienta de evaluación puede guiar a los profesionales de la salud en un proceso de toma de decisiones basado en la evidencia a la hora de ajustar el curso de preparación para la paternidad a las expectativas y necesidades de los padres.

**Palabras clave:** conocimientos, actitudes y prácticas en materia de salud; padres; crianza; embarazo; educación prenatal

DOI: <https://doi.org/10.29352/mill0224.34004>

## INTRODUCTION

Parenthood is currently a relevant issue, not only because of its innovative phase but also because of the changes it brings to the lives of those involved. It usually brings about a transformation in the life of any human being, being a cycle in which enormous challenges and a constant need to adapt are expected (Bodin et al., 2021).

According to the Portuguese Nursing Council (Ordem dos Enfermeiros, 2015), parenting is "assuming the responsibilities of being a mother/father; behaviors designed to facilitate the incorporation of a newborn into the family unit; behaviors to optimize the growth and development of children; internalizing the expectations of individuals, families, friends, and society regarding appropriate or inappropriate parental role behaviors". As for Cruz (2014), parenting is defined as a set of actions carried out by parents to promote the healthy development of children, which also emphasizes the need for support from third parties, using available information and resources that culminate in an environment conducive to the primary objective.

Parents are showing doubts, fears and a lack of experience, highlighting the need felt by pregnant women to attend parenting preparation courses in order to obtain more information about pregnancy, preparing the trousseau, childbirth, caring for the newborn and even involving the baby's father and the rest of the family (Alizadeh-Dibazari, Abdolalipour, & Mirghafourvand, 2023). Parents' relationships with their children and their actions towards them contribute profoundly to their development at all levels. To this end, nowadays, there are various ways of motivating parents to act, to have knowledge and greater confidence, and this is where health education comes in since it aims to promote individual and collective behavioral changes in order to improve health-related knowledge, attitudes, and skills (Green & Kreuter, 2005).

The World Health Organization considers health education "any combination of learning experiences that aim to help individuals and communities improve their health by increasing knowledge or influencing attitudes". Health education in parenting often governs how parents act since, after acquiring knowledge, they gain self-confidence and attitudes that will automatically result in applied literacy (World Health Organization, 2012).

According to Mendes (2009), attitudes are shaped throughout the socialization process, arising from extensive personal experiences related to the object of the attitude and/or social interactions with individuals who express that attitude. They represent the result of the cognitive, emotional, and behavioral processes through which the person's experiences with the attitude object occur. In addition, they refer to points of view, perspectives, reactions, or established ways of thinking about aspects of parenting or child development, including the roles and responsibilities of parents. Attitudes can be related to cultural beliefs based on shared experience (National Academies of Sciences, Engineering, and Medicine et al., 2016). In short, attitudes are a combination of these two aspects. They are formed by combining the parents' interaction processes with society in general and the variables relating to each person's personal experience (cultural aspects, mental, emotional, and behavioral processes). Conversely, knowledge refers to facts, information, skills acquired through experience or education, and understanding of an issue or phenomenon. In general, knowledge relates to cognition, attitudes relate to motivation, and practices relate to forms of engagement or behavior, but all three can come from a common source (National Academies of Sciences, Engineering, and Medicine et al., 2016). In other words, knowledge refers to accumulating facts, information, and skills acquired through experience and education, enabling us to understand certain subjects or phenomena. Meanwhile, attitudes are linked to motivation and formed from personal experiences and social interactions. Finally, practices refer to our actions and behaviors about a given subject. Although each of these elements is related to different aspects (cognition, motivation, and behavior), they can have a common origin.

Parents always show uncertainties, fears, and lack of experience. One of the first studies carried out in Portugal on preparing for parenthood highlighted the need felt by pregnant women for parenthood preparation courses (PPC) to obtain more information about pregnancy, trousseau preparation, childbirth, newborn care, and how to involve the baby's father and family in that care (Couto, 2006). This need arises to avoid possible acts of negligence in baby care and even the pregnant woman/mother/puerperal woman, thus preparing parents for this phase of enormous change. Therefore, the PPC have emerged as a tool that aims to establish a balance for the woman who plays the leading role during pregnancy and labor and for the health professionals involved. The community adopts these courses to provide a healthy and harmonious pregnancy, resulting in a participatory, informed, controlled, and satisfying birth for the woman and her family. This form of learning must be progressive and coherent, considering the woman's cultural level and individual understanding (Couto, 2006). Women who attended PPC are most likely to use breathing techniques and taking advantage of the visualization exercises during labor, using less pain medication, and presenting a decreased risk of planned cesarean delivery (Ricchi et al., 2020; Vanderlaan et al., 2021).

In short, PPC aims to prepare parents for the challenges of raising a child, promoting the development of positive attitudes and effective parenting practices. Given the high importance of PPC, it is essential to develop methods of evaluating its effectiveness, not only to understand the gains made by parents in the areas of knowledge and attitudes after PPC but also to obtain data that justifies, at a scientific level, the more significant implementation of these services and even the improvement of some gaps that may exist. After research, it was not possible to identify the existence of questionnaires that make this assessment. So, the opportunity arose to develop an instrument adapted to respond to this need.

DOI: <https://doi.org/10.29352/mill0224.34004>

## 1. METHODS

A questionnaire (Appendix 1) was created after analyzing the PPC programs at four private centers, and one public center (Appendix 2) and reviewing relevant literature. The inclusion of more private centers is due to their higher authorization rates. A methodological study was developed to assess the Content Validity Index (CVI) for content validation through a panel of experts in Parenthood Preparation. To develop and test the content validity of an instrument for assessing the knowledge and attitudes of future parents after PPC. The questionnaire was interspersed with controlled feedback, aiming to determine whether the items that compose the instrument represent the content domain intended to measure, based on the assumption that group opinion is more valid than individual opinion (Gerrish et al., 2015). Content validation is divided into six steps: prepare the content validation form, choose the panel of experts to review, carry out content validation, review the domains and items, score each item, and calculate the CVI (Yusoff, 2019). The panel of experts was composed of 10 specialist nurses in Maternal and Obstetric Health Nursing (midwifery) with five or more years of experience designing or implementing PPC. The literature is inconclusive regarding the minimum number of experts. Representation should be evaluated based on the quality of the expert panel rather than its size (Keeney, Hasson & McKenna, 2011). The number used in this study was deemed sufficient since individuals with at least five years of professional experience have the necessary expertise to guarantee their proficiency (Benner, 1982).

The participants in the panel were selected intentionally and by invitation. Nine of them were female, aged between 37 and 61. A four-point Likert scale was used to operationalize the questioning of the experts on each of the items in the instrument, where they were asked to say: totally agree (4), partially agree (3), partially disagree (2), or totally disagree (1) for each item. Only one round was carried out. Since the overall consensus was not reached in the first round, the results of the two rounds were analyzed by calculating the CVI for each item. This method measures the proportion or percentage of experts who agree on certain aspects of the instrument and its items, considering a minimum agreement of 80% (Boateng et al., 2018).

## 2. RESULTS

The initial instrument sent to the experts included 71 questions, and after content validity analysis, the final questionnaire had 52 questions. In Table 1 we can see which responses that obtained, from the experts, agreement.

**Table 1** - Main questions per domain and sub-domain that reached consensus.

		Domains	
		Knowldege	Attitudes
	<b>Pregnancy and Puerperium</b>	<ul style="list-style-type: none"> <li>- Caption the representative image of the female reproductive system</li> <li>- Childbirth can be eutocic or dystocic. A eutocic birth is a birth...</li> </ul>	<ul style="list-style-type: none"> <li>- The pregnant woman should go to the maternity ward when she has uterine contractions lasting 20 to 60 seconds at regular intervals</li> <li>- The pregnant woman should go to the maternity when there is a rupture of the amniotic sac (waters)</li> <li>- After giving birth, the woman should change the dressing every time she does intimate hygiene</li> <li>- After giving birth, it is normal for the woman to feel sad and nervous</li> <li>- The woman can resume sexual activity as soon as she feels ready for it</li> <li>- If the birth is by caesarean section, the woman doesn't need to worry about her intimate hygiene</li> <li>- The woman should go to the maternity ward when she loses her mucous plug</li> <li>- In hygiene after childbirth, the woman should not dry the perineum</li> <li>- The woman should use lukewarm water for her intimate hygiene after childbirth</li> <li>- After childbirth, it is important to clean the perineal area frequently, several times a day if possible</li> <li>- Breastfeeding strengthens the baby's immune system and strengthens the mother-child bond</li> </ul>
	<b>Newborn</b>	<ul style="list-style-type: none"> <li>- Where can you register the baby?</li> <li>- The newborn's first appointment should be</li> <li>- What are the newborn's signs of hunger?</li> <li>- After birth, the newborn can</li> </ul>	<ul style="list-style-type: none"> <li>- The most important thing during breastfeeding is the baby's comfort</li> <li>- The best position for breastfeeding is with the baby facing the mother, next to the mother's body, fully supported and with arms free</li> <li>- Breastfeeding support material should be washed with running water and soap</li> <li>- Breastfeeding is a very difficult task compared to the benefits it brings</li> <li>- Before bathing the baby, I should warm up the room, close the doors and windows and prepare all the material</li> <li>- For the baby to be able to breathe well during feeding, its nose should be above the nipple and free</li> <li>- All breastfeeding aids should be sterilized or boiled for 5 minutes in a pan of water</li> <li>- The mother can breastfeed standing up</li> <li>- To prepare the baby's bath, I should first add cold water and only then add hot water until it reaches 36º/37º</li> <li>- I should choose clothes that make it easier to change the diaper, so I don't have to undress the whole baby</li> <li>- When I change the baby's diaper, it's best to clean the perineal area from front to back</li> <li>- I'll choose nice clothes for my baby, even if they're not very practical</li> <li>- I should always change my baby's diaper before every feed</li> <li>- When I hold my baby I should always be careful to hold his head and have his body well supported</li> </ul>

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Knowlege	Domains	
	Attitudes	
	- Vaccines are safe, effective and protect the baby from life-threatening diseases	
	- The baby needs a calm and safe environment to sleep, It should be positioned on its stomach, with its head tilted	
	- I can breastfeed the baby when it's hungry, with no restrictions on schedules or strict regimens	
	- I will take my baby to the health center to be vaccinated, according to the guidelines of my family nurse	
	- The baby can sleep in the middle of the parents from time to time	
	- After feeding, it's best to keep the baby in an upright position for about 15 minutes before putting it to bed	
	- Breastfeeding helps the mother's uterus to recover its normal size more quickly and also helps to prevent postpartum bleeding	
	- I should breastfeed the baby whenever it cries	
	- To avoid colic, I should make sure that the baby swallows as little air as possible during feeding	
	- To calm the baby's crying, the best technique is the 5 S's: d) Calming the baby's cry/ Swaddle, Side position, Shush, Swing, Suck	
	- To release gas I can gently bend his legs towards his belly and massage his belly	
	- For the baby to sleep well at night, I must keep him awake during the day	
	- If the baby cries after feeding it is because he is hungry and the milk is insufficient	
	- Breast milk is the most complete and suitable food for a baby's healthy growth and development	
	- To help my baby sleep better, I should wrap him tightly in a blanket, so he feels as if he's still in the womb	
	- While breastfeeding, I can eat anything, without restrictions	
	- Babies can cry for different reasons, not just because they're hungry	

The rest of the questions in both domains did not reach the methodologically defined consensus, as shown in Table 2.

**Table 2** - Number of questions per domain and sub-domain that reached consensus or not.

Sub-Domains		Domain			
		Knowlege	% consensus reached	Attitudes	% consensus reached
Pregnancy and Puerperium	With Consensus:	2	16,6%	11	15,3%
	Without Consensus:	10		2	
Newborn	With Consensus:	4	80,0%	31	83,7%
	Without Consensus:	1		6	

From this, we can see that the sub-domain where the experts mostly disagreed was Pregnancy and the Puerperium, concerning the Knowledge and Attitudes domains, where the relative consensus values varied between 15.3% and 16.6%. In the Newborn sub-domain, the relative consensus values ranged from 80.0% to 83.7% in both domains, meaning that most PPC programs have a significant basis for agreement on these topics.

Although the syllabus of several PPC presented indicates that it is essential to address these topics, making it relevant to ask about them in a questionnaire to evaluate their effectiveness, experts enrolled in this study made several suggestions (Table 3), that were incorporated into the final questionnaire (Appendix 3).

**Table 3** – Experts suggestions to improve the questionnaire.

1. Some terms should be adapted to a more accessible language, without using so many scientific terms, so that they are understandable to all types of participants.
2. The relevance of some questions to the participants should be taken into account, in the sense that many of them are only relevant to health professionals.
3. Some questions need additional information and even some corrections and/or rewording.
4. Some answer options need corrections and/or rewording in order to meet the literature in a more appropriate way
5. Change some questions in order to generalize them and make them more transversal, combating the imposition of some choices that must be made on a personal level.
6. Consider the possibility that some questions are not relevant to this questionnaire.
7. The questionnaire should be more concise and less extensive.

DOI: <https://doi.org/10.29352/mill0224.34004>

### 3. DISCUSSION

Prenatal education programs have been recommended for pregnant women to help them through pregnancy, childbirth, and the development of parenthood (Heim et al., 2019). According to Santos e Dias (2021), there are several issues that professionals need to address when it comes to parenting. These areas include preparing for childbirth, monitoring breast care, and providing guidance on breastfeeding. They also cover topics such as selecting suitable clothing for the baby, protection from harmful substances, proper nutrition, hygiene care for newborns, and immunization through vaccinations. It is also essential to discuss the importance of practicing physical activity during pregnancy and promoting contact and interaction between mother and baby while still in the womb.

Kehinde et al. (2023) point out that although studies show that breast milk is the only living substance produced exclusively for the newborn, many women lack knowledge about the benefits of breastfeeding due to inadequate prenatal education.

According to Serçekus and Mete (2010), the topics to be addressed concern learning appropriate eating habits, physical exercise, information about vaginal or cesarean delivery, breathing exercises that can be useful for intrapartum pain, issues related to breastfeeding, newborn care, preparation for dealing with the new postpartum situation.

The Portuguese Nursing Council (Ordem dos Enfermeiros, 2012) states that the relevant content mentioned in the PPC includes a division into seven domains - labor, analgesia in childbirth, breastfeeding, puerperium, newborn care, stem cell collection, and sexuality in pregnancy and puerperium. These areas include the following topics: physiology of labor, pelvic dynamics during labor, natural childbirth versus medicated childbirth, role of the father/partner in labor, pain in labor, non-pharmacological methods of labor pain management, advantages of breastfeeding; physiology of lactation; WHO/UNICEF recommendations; breastfeeding techniques; extraction and conservation of breast milk; prevention and treatment of breastfeeding difficulties; puerperium review consultation; postpartum depression; family planning; hygiene and comfort of the newborn; vaccination and physiological needs of the newborn.

The Northern Regional Health Administration states that the PPC aims to teach and train pain control techniques; to promote and control anxiety during pregnancy and labor; to provide information on pregnancy, childbirth, and NB in order to facilitate adaptation to motherhood; to provide exchanges of experiences between pregnant women and to present the environment/service where childbirth will take place in the future (Graça et al., 2011).

Based on the results presented, we observed that there was consensus among the experts on several questions in the "Knowledge" and "Attitudes" domains related to the "Pregnancy and Puerperium" and "Newborn" subdomains. These questions covered knowledge about the female reproductive system, eutocic childbirth, baby registration, signs of newborn hunger, intimate hygiene after childbirth, and breastfeeding, among others. McCarter et al. (2023) report that two months after discharge, women feel that they do not receive enough information not only on how to deal with the emotional and physical changes but also on breastfeeding, newborn care, and intimate life.

According to Gaboury J et al. (2017), women were interested in having more time with the nurses. The time the nursing team spends with the patient is directly affected by the patient's condition and the number of professionals on shift. These factors directly affect the time each professional has to carry out education during discharge.

A set of questions was also identified that did not reach a consensus among the experts in both domains. These issues involved topics such as warning signs in pregnancy, induction of labor, stages of labor, types of analgesia during childbirth, and breastfeeding complications, among others.

By cross-referencing the data presented in the literature with the results of this study, some of the experts' comments for improving this instrument are very relevant, such as item reduction, improving scientific writing, making the language more accessible, and reformulating some of the options. However, other suggestions need further assessment before being included in the final questionnaire, such as the relevance of some questions and the fact that they only make sense to health professionals (namely Maternal and Obstetric Health Specialist Nurses). This need for further assessment is based on the fact that if we are evaluating the effectiveness of the PCC, we need to verify the knowledge and attitudes acquired throughout the program and assess the relevance of the courses at this critical stage in parents' lives, to give sustainability to this type of project, making it pertinent for health professionals to recommend them.

In addition to the suggestions made, once this project has been drawn up, it would be pertinent to include some other essential components that the author had not considered when carrying out the initial questionnaire, namely the mother's/puerperal mother's diet and non-pharmacological methods of combating pain.

This study has some limitations, namely the fact that the questionnaire was based on the syllabus of PPC and literature review due to the scarcity of evidence on this subject. Moreover, parents were not included in this content validity process. Further research must focus on item reduction and further validation and reliability assessment. Considering PPC as a relevant nursing intervention, measuring its effectiveness is paramount.

DOI: <https://doi.org/10.29352/mill0224.34004>

## CONCLUSION

A two-domain instrument with four subdomains has been developed, and the CVI has been calculated by a panel of experts. This study indicates that experts consider parents' knowledge and attitudes in PPC to be valuable. These include topics such as the female reproductive system, newborn care, pregnancy and postpartum care, breastfeeding support, vaccination, and safety issues for newborns.

It is essential to teach parents about pregnancy because of the advantages it brings at all levels, particularly in terms of anxiety during the prenatal period, the peripartum period, and even the post-natal period. When parents are informed about the process of parenthood, their fears, insecurities, and uncertainties are reduced, allowing them to live this phase of their lives more relaxed and with fewer slip-ups.

With this instrument, it will be possible to assess whether the information parents obtain after the PPC is useful and fundamental in this transitioning phase, validating it and justifying its contribution to nursing practice.

This innovative study identifies gaps in knowledge in maternal health that need to be addressed in future research. Developing an assessment tool can guide health professionals in an evidence-based decision-making process when adjusting PPC to parent's expectations and needs.

As a suggestion for future research, this this questionnaire should be applied to determine reliability and validity.

## AUTHOR CONTRIBUTIONS

Conceptualization, A.S. and G.C.; data curation, A.S., A.M., A.G. and G.C.; formal analysis, A.S., A.M., A.G., G.C.,and I.O.; investigation, A.S., A.M., A.G. and G.C.; methodology, A.S., A.M., A.G., G.C.,and I.O; project administration, A.S. and G.C.; resources, A.S. and G.C.; software, A.S. and G.C.; supervision, G.C.; validation, A.S., G.C. and I.O.; visualization, A.S., A.M., A.G., G.C.,and I.O.; writing-original draft, A.S. and G.C.; writing-review and editing, A.S.,G.C. and I.O.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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