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ORIGINAL ARTICLE

# Translating results into action: the global impact of the World Breastfeeding Trends Initiative

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## Abstract

The World Breastfeeding Trends Initiative (WBTi) provides a participative framework to bridge the gaps in policies and programs on breastfeeding. This concurrent mixed-methods study investigated how and why carrying out WBTi evaluations in countries influences their breastfeeding policies and outcomes. We used data from WBTi's Global Repository to evaluate performance scores in 98 countries and conducted semi-structured in-depth interviews to investigate the impact of WBTi process, using the Managing for Development Results structure and actor-network theory. Countries that conducted WBTi multiple times seem to have better breastfeeding policies and practices than countries that have assessed only once. The central feature of the process and its subsequent impact is the dialectical interaction between the technical and political elements of the WBTi exercise. We believe that WBTi's framework is a promising monitoring and evaluation tool that could be used to engage dialogue in other public health areas.

**Keywords** Breastfeeding · Policy change · Public health dialogue · Infant and young children feeding · Global health

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## Key messages

- The WBTi's process offers countries an opportunity to examine their breastfeeding realities and provides an effective problem-solving path to bridge their gaps.
- The central feature of the process and its subsequent impact is the dialectical interaction between the technical and political elements of the WBTi exercise.
- The WBTi's process acts as a precursor, demonstrator, and catalyzer for change that could act as a framework to engage dialogue in other public health areas.

## Introduction

Breastfeeding has an essential role in protecting and promoting the health of women, children, society, and the environment [1–4]. Yet, progress to raise global breastfeeding rates has been slow since 1995, and these vary drastically among countries around the world [5]. Exclusive breastfeeding percentages among infants under 6 months of age range from 1 to 89% across countries [6]. Compliance of countries with the International Code of Marketing for Breastmilk Substitutes, as well as policies and programs that support and promote breastfeeding, support or hamper breastfeeding [7–11]. In the most recent report from The Global Breastfeeding Collective, no country yet shows a high level of yet compliance with international regulations and recommendations [5].

Since 2005, use of the World Breastfeeding Trends Initiative (WBTi) as a national and global resource for monitoring and evaluation of breastfeeding policies, programs, practices, and outcomes has been growing. Its users are able to assesses implementation of the Global Strategy for Infant and Young Child Feeding [12, 13]. And the WBTi assists countries to bridge gaps in policies and programs by stimulating action through national coalition building. The process entails an analysis *of* and *for* policy [14], is voluntary for each country, and requires three steps [12]:

(i) *Assessment* by focusing on a range of indicators it provides a global view of key factors affecting policies and practices.
(ii) *Local Discussion and Consensus the national core group* (a national coalition) discusses national strengths and gaps identified in existing national policy and programs.
(iii) *Reporting and Call to action* The core group uses assessment findings to *call for action* among the governments, funders, and others concerned.

Members of the Breastfeeding Promotion Network of India (BPNI) and the International Baby Food Action Network (IBFAN) Asia designed and conceptualized WBTi. They were appointed as the "WBTi global secretariat" by IBFAN to coordinate this global work. Designers of WBTi envisioned stimulation of positive change by engaging concerned partners, including civil society, academia, health professionals, and public officials to comprise *the core group.* A national coordinator trained in the WBTi process leads it and mobilizes a national core group. The core

group includes persons or organizations that are not involved in commercial interests around infant feeding (e.g., infant formula or the breast pumps industry). The core group conducts the survey of 15 indicators divided in two parts: Part 1 includes indicators for Breastfeeding Policies and Programs, and Part 2 covers breastfeeding practices. Designers of WBTi intended reassessment every 3–5 years adding time and consistency to the process that allows analysis of trends for breastfeeding practices and policies [11, 12].

Many have studied operationalization and implementation of the WBTi process and its relation to breastfeeding outcome improvements [8, 11, 12, 15, 16]. Although the literature shows consensus that WBTi assessment should be repeated every 3–5 years, we found no scientific evidence of the effect of doing so. Nor have any studies explored the complex interaction and collaboration of the various actors during the WBTi assessment process and the impact of these on policies and programs.

This concurrent mixed-methods study investigated how and why the process and frequency of WBTi assessments influence policies, programs, and practices in support of breastfeeding by evaluating the performance scores in 98 countries and investigated the impact of WBTi process between the years of 2005–2020.

## Methods

### Theoretical approach and design

As a framework to understand WBTi's impact, we adapted the Managing for Development Results structure [17] and combined this with concepts of research impact [18] and actor-network theory [19]. We designed a concurrent exploratory mixed-methods study [20]. The quantitative approach aimed to quantify the impact of the WBTi; the qualitative part aimed to gain a deeper understanding of the impact of WBTi's process. We interpreted the results concurrently, aiming to triangulate outcomes of each approach [21].

### Quantitative methods

We retrieved data from WBTi's Global Data Repository on March 3, 2020 [22]. The database includes information on participating countries' policies and programs, and practices related to breastfeeding and infant and to young child feeding. The national score for policies and programs for breastfeeding (Score 1) ranged from 0 to 100 and for breastfeeding practices (Score 2) ranged from 0 to 50 [12]. We included in the study all countries worldwide that conducted a WBTi assessment in 2005–2020 ($n = 98$). Among those, we identified two groups: (i) countries with a single assessment ($n = 57$) and (ii) countries with multiple assessments ($n = 41$). We hypothesized that countries that performed WBTi assessment multiple times would present better policy and practice scores. Higher scores would mean better implementation of policies and programs and improvement of practices supporting breastfeeding.

We conducted a descriptive and comparative investigation. In the first, we described and quantified the variables measured in countries that conducted multiple WBTi assessments and those having conducted a single assessment. We then applied measures of frequency, central tendency, variation, and position to characterize WBTi's data based on these properties. In the comparative analysis, we examined the differences between the mean scores of countries that had conducted multiple WBTi assessments and with those with a single WBTi assessment in the study period by performing a *T* Test. We used Stata Statistical Software: Release 16. All tests conducted were two-tailed. The statistical significance was set for $p$ value $< 0.05$.

## Qualitative methods

We conducted online semi-structured interviews with actors from seven countries that had carried out two or more WBTi assessments. The countries spanned five world regions. In March–June 2020, we conducted interviews in two phases: first, about the *conceptualization phase* ($n = 2$) for insights about the WBTI process that helped us to design research; and second, in the *data collection phase,* interviews ($n = 7$) to collect data to evaluate specific objectives.

In the data collection phase, we interviewed national coordinators of the WBTi assessment process in their countries. We recruited these participants via e-mail following the purposive sample principles [23]. Selection criteria included the following: (i) continental representation and (ii) a minimum of two WBTi assessments (because we aimed to understand the impact of repeating WBTi). All participants read and signed the informed consent form that explained their rights. Due to the profile of the participants (public health professionals) and the absence of contact with any patient data, the study did not require ethical approval under Dutch legislation (Wet Medisch Onderzoek—WMO). One author (IUW) conducted seven online interviews using video-chat over March through May (3 months). The author, IUW, conducted five in English, one in Spanish, and one in Portuguese, audiotaped and transcribed them verbatim, and then translated the transcripts of interviews conducted in Spanish and Portuguese into English.

We structured the interview guide according to the proposed conceptual framework. In the conceptualization phase, IUW performed a pilot test of the guide with senior staff from WBTi Global Secretariat (hosted by IBFAN Asia) and a national coordinator who had conducted the WBTi process only once. The pilot indicated that the word *impact*, derived from the theoretical framework, is difficult for participants to understand; we then substituted it with the terms *change or influence* for the data collection phase.

Data analysis included a deductive search for themes [24], guided by the research's conceptual framework. We conducted the thematic analysis using Atlas.ti 8 software functions of open code with display of semantic links. This strategy enhanced our interpretation of patterns and facilitated triangulation with the quantitative results. After the first reading and assimilation of the data, one author (IUW)

selectively coded and searched for keywords and phrases connected to the conceptual framework.

## Results

### Quantitative results

First, we present the results from the descriptive investigation following the comparative analysis. In total, 98 countries performed the assessment, the majority, 58% ($n=57$) once, 28% twice ($n=27$), 8% three ($n=8$), 3% four ($n=3$), and 3% five times (n = 3) (Figs. 1, 2). The descriptive statistics for all countries that have conducted WBTi assessments appear in Table 1.

### Comparative investigation

We compared score 1—Policies and Programs, and score 2—Practices, between two groups of countries, those with a single assessment and those with more than one assessment using an independent-group two-tailed t test (Table 2). Countries with a single assessment had a lower mean score for policies and programs ($M=53.7$) and practices ($M=25.1$) compared to countries with multiple assessments ($M=58.8$ and $M=28.8$, respectively). Countries that conducted multiple WBTi's were associated with higher scores than countries that only conducted WBTi once.


**Fig. 1** Countries, by the number of WBTI assessments between 2005 and 2020 ($n=98$)

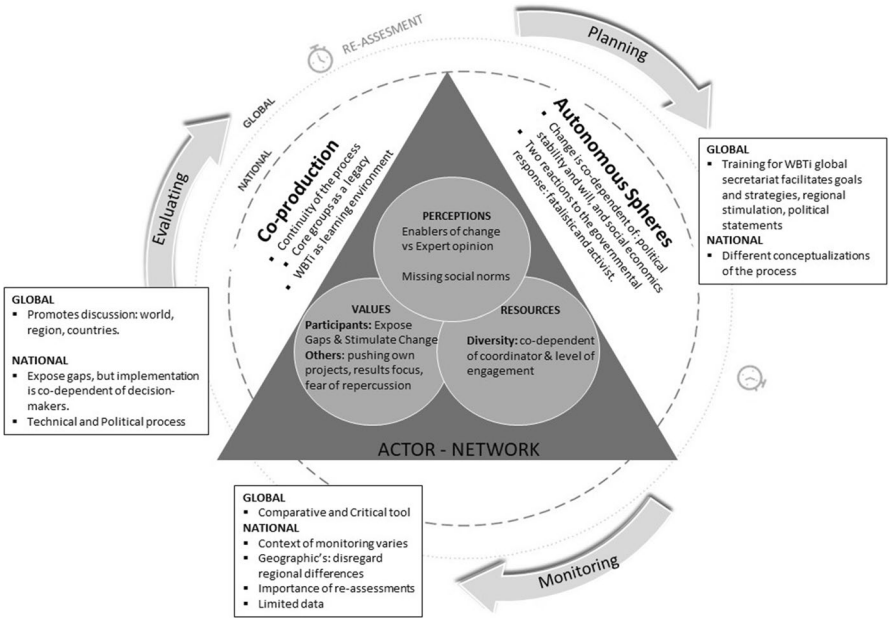


**Fig. 2** Visual representation of the qualitative analysis: themes and sub-themes and their main results

**Table 1** Descriptive statistics for countries that performed WBTI assessments between 2005–20 ($n=98$)

| | Score 1 (0–100) Policies and programs | | | Score 2 (0–50) Practices | | | Number of assessments | | |
|---|---|---|---|---|---|---|---|---|---|
| | *M* | SD | Min–max | *M* | SD | Min–max | *M* | SD | Min–max |
| All countries ($n=98$) | 57 | 14.8 | 19–91 | 27.5 | 9.5 | 0–46 | 1.6 | 0.97 | 1–5 |
| Single ($n=57$) | 53.7 | 15.4 | 19–87.5 | 25.1 | 10.6 | 0–46 | 1 | 0 | 1–1 |
| Multiple ($n=41$) | 58.8 | 14.3 | 26.5–91 | 28.8 | 8.7 | 0–44 | 2.6 | 0.9 | 2–5 |

## Qualitative results

We present the demographic profiles of interviewees followed by the results from the deductive thematic analysis. Demographic profiles of seven participants interviewed and their quotes appear in Table 3. Often the WBTi national coordinators were members of *International Baby Food Action Network* (IBFAN). Most ($n=6$) were active in civil society. Excluding interview I.7, all the interviewees had a dual role.

**Table 2** Results of two-tailed *t* test for score 1 and 2 by the number of assessments

| | Score 1—Policies and programs | | | | | Score 2—Practices | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | SD | CI 95% | *t* | Diff | *M* | SD | CI 95% | *t* | Diff |
| Single ($n=57$) | 53.72 | 15.42 | 49.63–57.82 | − 2.08* | − 5.03 | 25.25 | 10.57 | 22.35–27.96 | − 2.36* | − 3.66 |
| Multiple ($n=41$) | 58.76 | 14.26 | 56.0–61.5 | | | 28.81 | 8.72 | 27.12—30.5 | | |

*$p<0.05$

## Thematic analysis

We present narrative summaries of the main findings in four themes: (i) Planning, Monitoring, and Evaluating, (ii) Actor-Network, (iii) Co-production, and (iv) Autonomous Sphere (see Table 3 for illustrative quotes from the interviews for each). We provide an overview of the themes and sub-themes and main results in Fig. 2.

### Planning, monitoring, and evaluating theme

This theme explored actual or intended changes due to WBTi and its impact [17]. The interviewees expressed their views about how the assessment process, as well as repeating it, improved breastfeeding policies, programs, and practices in their respective countries.

**Planning** All WBTi national coordinators first participated a training conducted by the WBTi global secretariat, usually organized regionally. All participants emphasized the crucial value of this training for three reasons: (i) the training taught the goals and strategies; (ii) it was carried out as a simulation exercise in the region and created an environment conducive to collaboration, including friendly comparison among countries about strategies and results; and (iii) it created a political statement and a visible global platform to raise awareness of breastfeeding.

On the national level, conceptualization of the assessment took place in varied settings. For some countries, the setting was online; for others, in face-to-face meetings, as proposed by the WBTi. One participant argued that conceptualization of the WBTi process enhanced change and was essential to move toward a *call to action*—where countries disseminated the discoveries to the respective governments, funders, and others.

**Monitoring** All participants acknowledged WBTi as a crucial tool to understand the global breastfeeding situation and monitor trends in a standard way. On the national level, however, participants expressed reservations and exposed two limitations of the process: First, the existence and availability of data and data quality and timing. WBTi did not do primary research; it relied on other data and information sources.

**Table 3** Demographics of participants, themes, and quotes

| ID | Region | Number of WBTi's conducted | Sex | Age group | Current position | Affiliation | Themes and quotes |
|---|---|---|---|---|---|---|---|
| I.1 | Africa | 3 | Female | 50–70 | Researcher | IBFAN member + Academia | *Planning* "It starts with the process. Initiation. (…) If you do [it] very well, you will see change […] You have [to] really conceptualize this process very well." *Evaluating* "The whole process is helping us open our eyes. We are not blindly picking up policy now." *Co-production* "The person who was working on the data initially (…) has improved his ability to analyze data, based on the experience [in the] work with WBTi. They also [started] looking at it differently. In the Health Surveys, [they try to] translate these results into workable solutions. (…) So, basically [WBTi] helps us with research into programming and practices." *Autonomous Spheres* "And they [government] are the ones to make the final decision. (…) It takes time to safely be able to agree on a certain subject or issue." |
| I.2 | Middle East | 2 | Female | 50–70 | Medical Doctor | IBFAN member + Health Provider | *Monitoring* "Not all the information was easy to get. Like the rate of exclusive breastfeeding […] Our source [was] the demographic health survey. […] It's more or less up to date." *Perceptions* "It's good to have stakeholders from different parties, not only from NGOs. Because NGOs usually have the passion. But sometimes they don't have the tools to make […] a change." *Autonomous Spheres* "Political stability. The effect of WBTi would have been much greater if things were much better politically. The must is the political will." |

**Table 3** (continued)

| ID | Region | Number of WBTi's conducted | Sex | Age group | Current position | Affiliation | Themes and quotes |
|---|---|---|---|---|---|---|---|
| I.3 | Asia | 2 | Female | 30–50 | Activist | IBFAN focal point + Civil Society | *Values* "I keep reassuring (…) 'This is our country report, we need an honest review for our good, sometimes bad answers doesn't mean it's bad for our country, maybe those bad answers will lead us to a better program that will lead us to better interventions'" |
| I.4 | Asia | 5 | Female | 50–70 | Activist | IBFAN focal point + Civil Society | *Values* "To be able to show our situation to our ministry."<br>*Co-production* "Every 3 months [we have] meetings with the Department of Family Health. (…) [We] discuss the gaps and if (…) the problems [are] any better." |
| I.5 | Latin America | 2 | Male | 50–70 | Professor | IBFAN member + Academia | *Monitoring* "Changes are not as fast as one would like. These advances and setbacks are not a one-way line."<br>*Evaluating* "WBTi (…) is not intended to make policies; it basically has a diagnosis." |
| I.6 | Latin America | 2 | Male | 50–70 | Professor | IBFAN member + Academia | *Planning* "The theme of the WBTi (…) has the advantage that it makes everyone discuss and talk about a particular topic [breastfeeding]." |
| I.7 | Asia | 5 | Male | 30–50 | Public servant | Government | *Co-production* "WBTi is also a chance to connect globally with similar organizations. (…) it gives us a platform [and] opportunity to learn from each other." |

Qualitative data were particularly challenging to access since these were not available in the public domain. The second limitation was time. According to the participants, the change process was slow and non-linear. They stressed the need to monitor periodically.

**Evaluating** Participants saw WBTi as a tool that promoted discussions. On a macro level, it was a conversation among participants around the world, in regions, and in countries; on a micro-level, a dialogue among citizens, academics, and policymakers within countries. They reported that this combination stimulated change. Participants noted that, although WBTi fulfilled its role of diagnosing problems and pointing out ways to solve them, implementation was dependent on the willingness of decision-makers and the countries. Participants also indicated that aspects of evaluating the WBTi were distinct in each of their countries. The first focused on the report itself that objectively portrayed the countries' strengths and gaps, and informed policies. The second, translation of results into action, turned the process and the report into an advocacy tool.

#### Actor-network theme: resources, perceptions, and values

Actors and their networks constituted the center of the WBTi process. This theme explored the participants' resources, perceptions, and values governed by formal and informal rules [19].

**Resources** This sub-theme referred to practical means, relationships, or instruments that actors used to accomplish their goals. All participants acknowledged the value of a diverse group. The extent of diversity and engagement varied across countries. Diversity depended on the network of the WBTi national coordinator. Where coordinators had connections with governmental officials, they described communicating and continuing to work together as natural and easier than did coordinators who worked through official channels. The latter described the process of trying to include others in the core group as formal and more difficult. This was also a determinant for the level of engagement within the core group and the process's subsequent continuity.

**Perceptions** This sub-theme reflected the images actors had of their worlds, the other actors, and networks, and of the elements of a [policy] problem. All interviewees perceived diversity to be essential. Some acknowledged that not all participants had the same extent of influence. This perception entailed two elements: *expert opinion* and *enablers of change*. The first was having a crucial role as a decision-maker in the consensus-building. Depending on the core group member's level of expertise, his or her opinion carried more or less weight. Such a participant might act as a deal-breaker in the consensus process. The second concerned the level of power, pragmatically speaking, that this group member possessed to enable change.

**Values** With this sub-theme, we aimed to recognize internal motivations of actors and the directions they would like to move. When we asked interviewees about their motivations to participate, two emerged: to expose the gaps and stimulate change. In the view of the participants, other members of their core groups had more diverse motivations. Funding partners showed interest in promoting their projects and ideas. Intergovernmental agencies focused on results of the assessments rather than the process itself. Some governmental bureaucrats feared (bad) results that would tarnish the country's image. As coordinators of the process, the interviewees recognized a major challenge to steer the group to own and conceptualize the process and to report to stimulate positive change.

### Co-production

This theme explored the complex inter-relationship between knowledge production and governance [18]. All participants highlighted the importance of continuity for the WBTi process and the core group, regardless of whether the group undertook another WBTi exercise. The WBTi process produced a core group in each participating country and that group could become a legacy. Even outside the context of WBTi, the groups worked continuously to strengthen breastfeeding. Although all interviewees desired continuity, efforts to continue working together after the WBTi process were not successful in all countries. They reported reassignment of public officials to other departments as the principal barrier.

The WBTi process also created a learning environment. Participants conceptualized this in two ways: learning from each other and learning through the process.

### Autonomous spheres

This theme revealed ways actors who made up the political system made sense of the data and recommendations from the WBTi process and reports [18]. The WBTi process was not immune to prior interests nor to independent political dynamics. Many participants recognized that politics had a role in shaping and interfering with how the political systems take action according to the data and recommendations from the WBTi process. They highlighted how change depends on political stability, the country's social and economic conditions, and the political will to promote them. Interviewees stressed how the government determines the pace of change.

## Discussion

This research enhanced the understanding of how the frequency and process of WBTi assessments in countries influenced policies, programs, and practices of breastfeeding nationally and globally. Countries that conducted WBTi multiple times scored slightly better on breastfeeding policies, programs, and practices compared to countries that assessed only once. Those results are congruent with the qualitative investigation. The participants affirmed that the change process is slow and non-linear, and that the pace of change is politically and socially determined.

The interviews also revealed that the impact of the WBTi process is co-dependent on the (i) technical aspects—how well the actors conceptualized the assessment and the quality of data available—and (ii) political elements—how the country translated the into action. The WBTi re-evaluations, as well as engagement of various actors, are among the mechanisms that help explain why WBTi may expert positive influence on policies, programs, and practices of breastfeeding. Therefore, a central feature of the process and its subsequent impact is the dialectical interaction between the technical and political elements of the WBTi exercise.

From a *technical* perspective, the magnitude of the WBTi process's impact relates to how the exercise is conceptualized, initiated, and sustained. WBTi is based on participatory actions. Thus, the extent of impact and the nature of change relates to the extent of diversity, integration, and involvement of all actors. This participatory process enhances the quality of the data. The assessment is coordinated, mediated, and carried out by varied members of society; these factors may increase the internal validity and credibility of the process by making it more transparent and reliable [25, 26]. Availability and quality of data are a major problem for practice indicators that are only based on national health surveys. These two aspects—conceptualization and data quality—impeded translating the results of WBTi into accurate scores. Both likely interfered with comparing the scores across countries, and between those having undertaken one assessment, or more. One way to ameliorate data quality would be to schedule the WBTi assessments soon after the completion of the countries' latest health survey. Researchers adopted this coordination strategy in several other studies that use health survey results in strategic planning and programming [27, 28].

To address a *political* perspective, we analyzed the relation between the WBTi process and its frequency. We looked at translation of the report into action and the pace of change. First, building trust and choice of activities that translate the WBTi findings into action seem to be essential features of the process. During the WBTi exercise, all participants recognized the importance of the dialogue to reach consensus and plant seeds of change in themselves and their peers. The results show how WBTi promoted mindset changes. These results offer guidance for how health research should be conducted, and its results interpreted and disseminated. The initiative surpasses what Gibson [29] calls "the two communities' perspective." WBTi not only provided evidence and results, but also emphasized active dialogue and knowledge dissemination. According to Gibson [29], this strategy increases impact on policies because it concentrates on influencing and shaping values and beliefs, not just on sound arguments.

A second issue is the pace of change. Transitions take time. An advocacy coalition framework affirms that policy change requires a decade or more and depends on the rhythm of the policy cycle [30]. Involvement must endure for an extended period and country contexts are as important as the timing and mechanisms of change because each country has distinct historical, social, and political trajectories. As indicated in our results, policies and practices don't evolve by a rational and linear model, as often portrayed in the literature [31].

Various regional [32], national [33] and global [34] initiatives, partnerships and advocacy research groups aim to monitor and evaluate policies and outcomes

as a basis to advocate for healthier nutrition. The Victorian Salt Reduction Partnership in Australia aims to reduce population salt intake for their population [35]. They cover several nutritional domains to report common challenges. In comparison, the WBTi process may be more successful as it focuses on mechanisms of conflicts of interest, conducting objective, independent monitoring and evaluation, providing clear national and global targets, and translating research into policy and practice. However, similar to other initiatives [32–34], WBTi struggles to foster political commitments, sustain pluralism, and continuously make calls to action. An another global initiative, Becoming Breastfeeding Friendly, that envisions scaling up breastfeeding programs, shares these difficulties [36, 37]. Nevertheless, our study suggests that WBTi's process offers countries an opportunity to examine their breastfeeding realities and provides an effective problem-solving path to bridge their gaps.

Our study has several limitations. First, by using the country as a unit of analysis, we assume that the country is uniform and, consequently, disregard regional differences. Second, due to the COVID-19 pandemic, the sample population in the qualitative study unfortunately could not include public sector representatives proportionate to civil society ones. At the time of the study, public officials' priority was to contain the pandemic, and, for that reason, they were not available. Third, our study does not draw causal inferences. We cannot attribute the translation of research into policy and practice to WBTi alone; we acknowledge that other processes might have influenced WBTi. Pre-existing political will to promote breastfeeding may have resulted in countries investing in the WBTi process (as well as other breastfeeding initiatives) more proactively. We used a mixed-methods design to balance extrapolation of the results in our qualitative investigations. Even so, it is difficult to disentangle what WBTi catalyzed and what resulted from political will already in place.

Future research should analyze the contribution of the several global and regional strategies that seek to support governments to promote breastfeeding, aiming to identify their strengths, pitfalls, and draw lessons from each. It would be beneficial to conduct a study to evaluate the effectiveness of WBTi as an advocacy tool using a different approach, for instance, impact pathway analysis [38]. That may clarify more complexities of the stakeholder analysis and its connections with policy. Longitudinal data should be gathered to establish causal relations about the impact of WBTi over time.

## Conclusion

We investigated how and why the process and frequency of the WBTi assessments influence policies, programs, and practices supporting breastfeeding. The findings suggest that countries with more than one WBTi assessment have better outcomes for policies and programs, and practices in breastfeeding. The WBTi process's impact depended on how well the countries conceptualized their assessments, the quality of data available, and, most importantly, how countries translated their reports into action. The WBTI exercise is a powerful instrument that mobilizes and

empowers civil society and governments. WBTi offers a compelling direct invitation, with clear instructions for how governments and society can and should promote, protect, and support breastfeeding. It became clear that WBTi acts as a precursor, demonstrator, and catalyzer for change that may enhance dialogue in other areas to improve population health.

## Declarations

**Conflict of interest** IUW, TG, and EVS state that there is no conflict of interest. AG and JPD work at Breastfeeding Promotion Network of India (BPNI) which serve as the Global Secretariat of World Breastfeeding Trends Initiative (WBTi).

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