

A Critical Analysis of the Chinese Translation of "Zero Report"—Towards the Standardization of Terminology from the Perspective of Global Health Communication*

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The term "zero report," an essential component of public health surveillance systems, is used to denote the reporting of zero cases of a specified disease during a given period. Its Chinese translation, "零报告", has often been misinterpreted by the public as "no report" or "absence of report," resulting in confusion and misinformation. This paper examines the linguistic and cultural factors contributing to this misinterpretation, exploring the semantic discrepancies between "zero" in English and "零" in Chinese. Using a mixed-methods approach that combines theoretical analysis and empirical survey data, the paper highlights the challenges of translating technical terminology across linguistic and cultural contexts. It also provides recommendations for improving the translation of "zero report" and other public health terms to ensure clear global communication.

Keywords: "zero report", terminology translation, public health communication, semantic discrepancies, cross-cultural translation, terminology standardization

1. Introduction

Effective communication is the cornerstone of public health, particularly during crises such as the COVID-19 pandemic. Accurate terminology ensures that health messages are understood by both professionals and the general public, fostering transparency, trust, and compliance. One term that exemplifies the challenges of public health communication is "zero report," a concept widely used in disease surveillance to denote the absence of reported cases during a specified period. While the term has clear connotations in English, its Chinese translation, "零报告," has caused significant misunderstanding. Many interpret it as "no report" or "absence of report," which misrepresents its intended meaning and undermines the purpose of the reporting system.

As Wei and Feng (2021, p. 69) point out, many medical terms originating from Western countries have inconsistent or non-standard Chinese translations, which can create confusion for the general public when trying to communicate scientific and medical information. By examining the case of "zero report," this study

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attempts to facilitate the understanding of cross-linguistic and cross-cultural challenges in public health communication. It highlights the importance of culturally sensitive translation practices and offers practical recommendations for improving the accuracy and effectiveness of terminology translation in global health contexts.

2. Terminology in Public Health Communication

2.1 The Role of Terminology in Public Health Communication

Terminology in public health serves as a crucial tool for facilitating clear communication between health authorities and the public. Accurate terminology ensures that critical information is disseminated effectively, particularly during crises such as pandemics. Terms like "zero report," "herd immunity," and "contact tracing" are integral to disease surveillance and outbreak management, forming the basis of public health directives.

Translation in public health contexts goes beyond linguistic equivalence; it involves ensuring that terms are accessible and meaningful to the target audience. This requires translators to account for linguistic, cultural, and contextual factors, as the success of public health campaigns often hinges on the clarity of their messages. Misunderstood terms can lead to confusion, misinformation, and reduced compliance with health measures, undermining efforts to control disease outbreaks.

The importance of accurate public health terminology has been highlighted in numerous global health emergencies, including the SARS epidemic, the H1N1 influenza outbreak, and the COVID-19 pandemic. During these crises, terms like "zero report" have become part of the public lexicon, yet their translation has often posed challenges, creating barriers to effective communication.

2.2 Terminology Standardization and Its Implications

The standardization of public health terminology is essential for ensuring consistency and clarity in communication. As Lowe *et al.* (2022, p. 534) argue, unclear and inconsistent terminology, among other factors, may decrease the effectiveness of public health communications and adherence to public health measures. However, achieving standardization is often challenging, particularly in multilingual contexts where cultural and linguistic differences complicate the translation process.

Efforts to standardize terminology must account for the dynamic nature of language and the evolving landscape of public health. During the COVID-19 pandemic, for example, the term "social distancing" was translated into Chinese as "保持社交距离" (maintain social distance), but variations in usage across regions and contexts created inconsistencies. Similarly, the term "zero report" requires a standardized translation that captures its technical meaning while addressing the semantic and cultural challenges associated with "零报告".

The lack of standardized terminology can also hinder international collaboration in public health. As Huang (2016) notes, inconsistent translations create barriers to knowledge exchange and coordination between countries, undermining efforts to address global health challenges. Establishing multilingual terminology databases and fostering cross-cultural collaboration are critical steps toward achieving standardization.

3. A Survey into the Translation of "Zero Report"

To investigate the semantic and cultural challenges associated with the translation of "zero report" into Chinese as "零报告", a mixed-methods approach was employed, integrating theoretical analysis and empirical

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data collection through a public survey. This combination allowed for both a conceptual exploration of linguistic and cultural untranslatability and a practical examination of public understanding and perception.

3.1 Survey Design

The survey was designed to gather data on public familiarity with and understanding of the term "零报告". It comprised two sections:

(1) **Demographic Information:** Questions about age, gender, education level, geographic location (urban/rural), and professional background.

(2) Understanding and Interpretation of "零报告": Closed-ended questions assessed respondents' familiarity with the term and their interpretation of its meaning, while open-ended questions invited respondents to explain their reasoning and provide alternative suggestions for the term's translation.

3.1.1 Question categories

- (1) Familiarity with the Term: Respondents were asked whether they had encountered the term "零报告" before. Options included:
 - (a) "Yes, I have encountered it and understand its meaning."
 - (b) "Yes, I have encountered it but am unsure of its meaning."
 - (c) "No, I have never encountered it."
- (2) **Interpretation of the Term:** Respondents were asked to choose the meaning of "零报告" from a list of options:
 - (a) A report indicating zero cases of disease.
 - (b) No report or absence of report.
 - (c) An irrelevant or unimportant report.
 - (d) Other (with a prompt to specify).
- (3) **Open-Ended Responses:** Respondents were asked to explain how they interpreted the term "零报告" and why. These responses were coded and analyzed qualitatively to identify patterns and themes.
- (4) **Suggestions for Improvement:** Respondents were invited to propose alternative translations or explanations for "零报告" to make it clearer.

3.1.2 Pretesting

Before the survey was distributed, it underwent pretesting with a small group of respondents (n=20) to ensure clarity and relevance. Feedback from the pretest was used to refine the wording of questions and response options.

3.2 Sampling and Data Collection

The survey was distributed through online platforms such as Weibo and Xiaohongshu, which were chosen for their broad reach and diverse user base. These platforms allowed the study to target respondents from various regions and demographic groups, ensuring a representative sample.

Over a two-month period, 261 valid questionnaires were gathered. The respondents were geographically diverse, spanning 24 provinces, municipalities, and autonomous regions across China. The age range was broad as well, including both minors and retirees. This wide-ranging sample allows the survey results to accurately and comprehensively reflect the public's understanding of the term "zero report."

Choices	Respondents having some idea of "zero report" (N=70)		Respondents having no idea of "zero report" (N=191)		Total Sample (N=261)	
	Freq.	Percentage	Freq.	Percentage	Freq.	Percentage
No report	11	15.71%	64	33.51%	75	28.74%
Absence of report	33	47.14%	86	45.03%	119	45.6%
Reporting "zero" cases	26	37.14%	39	20.42%	65	24.9%
None of the above	0	0	2	1.05%	2	0.77%

Table 1Public Perception of "Zero Report"

Survey Result (N=261)

3.3 Data Analysis

The survey data were analyzed using a combination of descriptive statistics and qualitative coding, allowing for a detailed examination of both quantitative trends and qualitative insights.

Data from closed-ended questions were analyzed using descriptive statistics, including frequency distributions and percentages. Key metrics included:

- The percentage of respondents who correctly interpreted "零报告."
- The percentage of respondents who misunderstood the term as "no report" or "absence of report."
- Demographic breakdowns of comprehension rates (e.g., by age, education, and geographic location).

Statistical comparisons were made between different demographic groups to identify patterns and disparities in understanding.

4. Results and Discussion

The analysis of the survey results provides significant insights into how the term "零报告" is understood by the general public in China.

4.1 Survey Results

The survey revealed striking misunderstandings surrounding the term "零报告". Key findings are summarized below:

Misinterpretation Rate: Of the 261 respondents, 45.6% misunderstood "零报告" as "no report" or "absence of report," while only 24.9% correctly interpreted it as "reporting zero cases". The remaining respondents either chose alternative interpretations (e.g., "irrelevant report") or left the question unanswered, indicating uncertainty or confusion.

Awareness Levels: Among respondents who had prior exposure to the term "零报告", 37.14% correctly identified its meaning, while 47.14% misinterpreted it. Conversely, among respondents unfamiliar with the term, only 20.42% arrived at the correct meaning.

Demographic Patterns: Younger respondents (aged 18-30) were more likely to interpret the term correctly compared to older respondents (over 60). Similarly, respondents with higher education levels showed greater accuracy in understanding the term.

Geographical Disparities: Participants from urban areas demonstrated higher levels of comprehension compared to those from rural areas, reflecting disparities in access to public health education and resources.

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4.2 Factors Contributing to Misunderstanding

The high rate of misunderstanding of "零报告" can be attributed to both linguistic and cultural factors, as well as gaps in public health communication.

4.2.1 Linguistic ambiguities

Yang (2014, p. 27) divides term mistranslation into morphological and semantic ones. The latter refers to translations that appear smooth in language form but have unclear semantic expression or contradict the original text, leading to misunderstandings by the audience. The primary linguistic factor contributing to the misinterpretation of "零报告" is the dual meaning of the character "零" in Chinese. While "零" serves as a numerical placeholder equivalent to "zero", it is also associated with notions of absence, nothingness, or void. In common usage, the prefix "零" often negates or diminishes the meaning of the word it precedes. For instance:

- 零容忍 (zero tolerance): Indicates the complete absence of tolerance.
- 零距离 (zero distance): Indicates no gap or separation.

This semantic association creates a predisposition to interpret "零报告" as "no report" or "absence of report," rather than its intended meaning of "reporting zero cases". Actually, "zero report" and "零报告" are a pair of pseudo-synonyme as Pavel and Nolet put it (2001, p. 51).

Additionally, the term "报告" (report) in Chinese can refer to both the act of reporting and the report itself. This ambiguity compounds the confusion, as "零报告" could be misread as "a lack of reports" rather than "a report indicating zero cases".

4.2.2 Cultural context and public health literacy

"Translation fails—or untranslatability occurs—when it is impossible to build functionally relevant features of the situation into the contextual meaning of the TL text.... where the difficulty is linguistic, and those where it is cultural" (Catford, 1965, p. 94). Cultural differences between Chinese and Western approaches to public health communication also contribute to the misinterpretation of "零报告". In Western contexts, the term "zero report" is embedded in a broader culture of accountability and transparency, emphasizing the proactive reporting of data, even if no cases are detected. In contrast, the Chinese cultural understanding of "零" may emphasize its connotation of absence or nonexistence, leading to misalignment between the intended and perceived meanings of the term.

Furthermore, the relatively low level of public health literacy in certain demographic groups exacerbates the problem. Older adults, individuals in rural areas, and those with lower levels of education are less likely to have been exposed to the technical concept of zero reporting. As a result, these groups are more prone to misinterpret the term based on their existing linguistic and cultural frames of reference.

4.3 Broader Implications for Public Health Communication

The findings of this study have significant implications for public health communication, particularly in the context of translating technical terminology. Misinterpretations of terms like "零报告" can undermine public trust, hinder compliance with health directives, and create barriers to effective disease surveillance.

The misunderstanding of "零报告" as "no report" may lead the public to perceive gaps or failures in reporting, eroding trust in public health authorities. Transparency is a cornerstone of effective public health communication, and ambiguous terminology can compromise the credibility of health systems.

Misinterpretations of public health terminology highlight broader barriers to the dissemination of health knowledge. These barriers are particularly pronounced in populations with lower health literacy, such as older adults and rural residents. Overcoming these barriers requires targeted efforts to simplify and contextualize public health messages, ensuring that they are accessible to diverse audiences.

5. Toward Effective Terminology Translation and Communication

The mistranslation and misinterpretation of "zero report" as "零报告" underscore the need for a multi-faceted approach to improving the translation and communication of public health terminology. Accurate translations not only facilitate clear communication but also build trust between public health authorities and the public. The following recommendations address translation practices, terminology standardization, public awareness efforts, and the use of technology to enhance public health communication.

5.1 Improving Translation Practices

Effective translation practices lie at the heart of resolving semantic discrepancies between source and target languages. To address the issues observed with "zero report", translators should adopt a hybrid approach that balances linguistic equivalence with cultural adaptation.

The direct translation of "zero report" into "零报告" has created semantic ambiguities because it fails to convey the full intent of the original term. A hybrid translation approach can resolve this issue by combining literal translation with supplementary explanations. For instance, adding clarifying parenthetical notes (e.g., "零 报告" [zero cases reported]) or providing in-text definitions can help contextualize the term for the target audience.

Where a term cannot be effectively conveyed through direct translation, paraphrasing or rephrasing may offer a better solution. For example, "zero report" could be rephrased in Chinese as "报告期内病例为零" (reporting zero cases during the reporting period) to explicitly state the action being undertaken. While longer, such translations prioritize clarity over brevity, ensuring the message is understood.

Cultural adaptation is critical when translating technical terminology. The term "zero report," for example, must account for the Chinese cultural context, where "零" often implies absence or nonexistence. Translators should consider alternative expressions that align with Chinese cultural norms while preserving the technical accuracy of the term. This might involve replacing "零" with terms like "病例为零" (zero cases) or "无新增病例" (no new cases), which are less likely to be misinterpreted.

5.2 Standardizing Public Health Terminology

The case of "zero report" highlights the broader issue of inconsistent translations in public health communication. Terminology standardization is essential for ensuring that technical terms are uniformly understood across linguistic and cultural contexts. This involves coordinated efforts among public health organizations, translation experts, and policymakers.

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A collaborative framework should be established to oversee the translation and standardization of public health terminology. This could involve the creation of committees comprising linguists, translators, public health experts, and policymakers. These committees would be responsible for developing standardized translations of key terms, ensuring that they are both linguistically accurate and culturally appropriate.

Public health authorities should invest in developing centralized, multilingual terminology databases that include standardized translations of key terms like "zero report". These databases would serve as reference tools for translators, journalists, and public health professionals, ensuring consistency in the use of technical terms across languages. The European Union's InterActive Terminology for Europe (IATE) database provides a model for how such resources can be implemented effectively.

6. Conclusion

The mistranslation of "zero report" as "零报告" highlights the challenges of translating specialized terminology in public health. By addressing the semantic and cultural discrepancies between English and Chinese, this study provides insights into the broader issue of terminology standardization and its role in effective public health communication. Future research should explore how translation errors impact public health outcomes and investigate strategies for improving multilingual communication in global health contexts.

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