Crisis and Culture: How to Adapt Communication to Local Cultural Realities in Times of Crisis?

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ABSTRACT: This study examines Morocco's communication campaigns during the COVID-19 pandemic, highlighting their strengths and limitations. The findings reveal a centralized and uniform approach, primarily using Classical Arabic and French, which limited accessibility for rural, Amazigh-speaking, or less-educated populations. The lack of local cultural and religious references, along with insufficient engaging visuals, reduced the impact of the messages. Socioeconomic realities, such as limited access to water or overcrowded housing, were rarely addressed. To enhance effectiveness, the study recommends adopting an inclusive communication strategy by incorporating local languages (Darija, Amazigh), culturally relevant references, tailored visuals, and audience segmentation. These adjustments would improve message credibility and public adherence to health guidelines.

INTRODUCTION

In the era of global health crises, public communication plays a crucial role in managing risks and mobilizing populations. The COVID-19 pandemic upended global societies, imposing drastic measures such as border closures, containment and social distancing (Ennassiri et al., 2024). And it has particularly highlighted the complex challenges of disseminating clear, coherent messages adapted to local realities, especially in contexts marked by great cultural and linguistic diversity. In Morocco, where disparities between urban and rural areas, as well as linguistic and socio-economic differences, profoundly shape the way messages are received, this issue takes on a particular dimension. As Cairns (2020) and Spence, Lachlan and Burke (2018) point out, effective communication in times of crisis relies not only on the quality of the information transmitted, but also on its ability to anchor itself in the cultural and social frames of reference of target audiences.

Communication campaigns conducted in Morocco during the pandemic sought to raise awareness of barrier gestures, containment measures and preventive practices. However, these initiatives often adopted a uniform approach, neglecting the local specificities that characterize the Moroccan socio-cultural landscape. For example, the exclusive use of classical Arabic and, in some cases, French, limits the accessibility of messages for important segments of the population, notably those who primarily use Darija or Amazigh. In addition, the absence of cultural and religious references specific to the Moroccan context, as well as the lack of engaging visual elements, reduces the emotional impact and credibility of these campaigns. These shortcomings raise crucial questions, among which we propose the following problematic: To what extent did the communication campaigns implemented in Morocco during the COVID-19 pandemic succeed in adapting to the cultural, linguistic and socio-economic realities of the different target audiences?

Nous formulons l'hypothèse selon laquelle les campagnes de communication officielles adopteraient souvent une approche centralisée et uniforme, négligeant les spécificités locales, ce qui a limité leur efficacité et leur impact sur certaines populations. Cette hypothèse sera explorée à travers une analyse approfondie des affiches et supports de communication officiels diffusés pendant

la pandémie sur le Portail Officiel du Coronavirus au Maroc https://www.covidmaroc.ma/Pages/Accueilfr.aspx.

Cette recherche vise à analyser les campagnes de communication mises en œuvre au Maroc durant la pandémie afin d'évaluer leur efficacité et leur alignement avec les valeurs socioculturelles dominantes. À travers une méthodologie basée sur l'analyse de contenu et une approche comparative, il s'agit d'identifier les messages clés, les stratégies adoptées et les références culturelles mobilisées, tout en portant un regard critique sur leur pertinence dans un contexte de crise. Le cadre théorique s'appuiera sur des modèles tels que le modèle intégré de la communication de crise (CERC) développé par Reynolds et Seeger (2005), la théorie des codes culturels (Hall, 1976), et le modèle de la médiation culturelle (Kraidy, 2018).

The study will be carried out in several stages: an in-depth literature review will explore the challenges of communication in times of crisis, followed by the establishment of a sound theoretical framework to define key concepts. A qualitative methodology will then be presented, detailing the tools and techniques used for data analysis. The results obtained will be discussed in depth, highlighting their implications for the design of inclusive and effective communication campaigns. Finally, the conclusion will offer a general synthesis, summarizing the key points addressed throughout the study and opening up perspectives for future research.

I. Literature review

1. Communication in times of crisis: a global perspective

Communication in times of crisis is a well-documented field of study, particularly in the context of global health crises such as the COVID-19 pandemic. Research shows that the success of communication campaigns depends not only on the clarity of messages, but also on their ability to adapt to local cultural realities (Cairns, 2020). As Reynolds and Seeger (2005) explain, effective communication relies on a thorough understanding of the social, economic and cultural dynamics that shape the perceptions of target audiences. Within this framework, the Crisis and Emergency Risk Communication (CERC) model proposes a structured approach to crisis management, emphasizing the importance of transparency, credibility and speed in the dissemination of information.

However, adapting messages to diverse populations remains a challenge, particularly in countries like Morocco, where linguistic, cultural and socio-economic differences are pronounced. According to Servaes (2019), centralized communication systems often tend to adopt a one-size-fits-all approach, neglecting local specificities. This shortcoming can lead to low adherence to messages, or even active resistance on the part of marginalized communities.

2. Cultural adaptation of messages: an essential lever

The cultural adaptation of messages is essential to guarantee their reception and application by target populations. According to Spence, Lachlan and Burke (2018), effective communication relies on understanding local cultural codes, which help create an emotional connection with audiences. For example, the use of local dialect or shared cultural references can reinforce the credibility of messages and promote their acceptance. Complementary studies, such as those by Kim and Lee (2021), highlight the importance of cultural identification in crisis communication. They show that messages that reflect the collective values of a community, such as respect for religious or family traditions, are better perceived and more likely to be adopted.

3. The role of social media and misinformation: a double-edged sword

Social media played a central role during the COVID-19 pandemic, both in the rapid dissemination of information and in the spread of misinformation (Vosoughi et al., 2018). These platforms enabled unprecedented mobilization of citizens, but they also amplified the risks associated with misinformation. According to Pennycook and Rand (2021), individuals are more likely to believe misinformation when it confirms their cognitive biases or pre-existing beliefs. This phenomenon has exacerbated the challenges of crisis management, requiring proactive strategies to counter rumors and ensure the credibility of official messages.

In Morocco, the use of social networks has made it possible to mobilize certain segments of the population, notably urban youth, but has often ignored the needs of rural or illiterate populations. This digital divide underlines the importance of developing inclusive communication strategies capable of bridging the gaps between different segments of the population.

4. Morocco's specific challenges: Complex diversity

Morocco is unique in its cultural and linguistic diversity. The pandemic has highlighted the limits of standardized national communication, which has not always succeeded in reaching all segments of the population (Cairns, 2020). For example, the use of humor and social networks helped mobilize urban youth, but often ignored the needs of rural or illiterate populations.

In addition, socio-economic inequalities played a major role in message reception. According to the theory of social determinants of health (WHO, 2020), factors such as access to the media, level of education and living conditions directly influence people's ability to understand and apply public health recommendations.

5. The importance of cultural mediation: a bridge between authorities and communities

Cultural mediation is presented as a solution for strengthening social ties in times of crisis. It involves adapting messages to local practices, values and languages, while respecting the specificities of different social groups (Servaes, 2019). According to Kraidy (2018), community leaders and religious figures play a crucial role in translating official messages into a language that is accessible and credible to local populations. This approach not only builds trust in institutions, but also promotes behaviors aligned with public health goals.

## II.	Theoretical framework:

1. The integrated crisis communication model (CERC)

The Crisis and Emergency Risk Communication (CERC) model, developed by Reynolds and Seeger (2005), is used as a structural basis for analyzing the challenges of crisis communication. This model proposes a six-phase approach to crisis management, from preparation to post-crisis evaluation. Each phase focuses on specific aspects:

- Phase 1: Preparation - Identifying potential risks and anticipating people's needs.
- Phase 2: Initial response - Rapidly disseminate clear, credible information to reduce uncertainty.
- Phase 3: Message management - Maintain message consistency while adapting content to target audiences.
- Phase 4: Problem-solving - Providing practical advice and addressing people's concerns.
- Phase 5: Evaluation - Measure the impact of campaigns and identify gaps.
- Phase 6: Learning - Drawing lessons to improve future communication strategies.

In the Moroccan context, this model makes it possible to assess the extent to which communication campaigns have been able to anticipate the needs of diverse populations and respond to the challenges of cultural and linguistic diversity. For example, the exclusive use of classical Arabic or French can be analyzed as a lack of preparedness to reach rural or illiterate populations.

2. Cultural code theory and symbolic communication

The theory of cultural codes (Hall, 1976) explains how messages are interpreted differently according to audiences' cultural frames of reference. According to this theory, messages must be formulated taking into account the symbols, languages and values shared by local communities. In the Moroccan context, this means:

- Integrating cultural symbols: Using religious references (such as the protection of life as a sacred value) or family references (such as the importance of community solidarity).
- Linguistic adaptation: Replace or supplement classical Arabic with Darija (Moroccan Arabic) and Amazigh to make messages more accessible.
- Contextualizing messages: Adapting advice to local realities, such as the lack of access to water in certain rural areas.

This theory highlights the importance of creating an emotional bond with target audiences, by incorporating cultural elements that reinforce the credibility and acceptance of messages.

3. Participatory communication model

The participatory communication model (Freire, 1970) emphasizes the importance of actively involving local communities in the design and implementation of messages. This model is based on three fundamental principles:

- Horizontal dialogue: Encouraging a two-way exchange between authorities and local populations, rather than top-down communication.
- Empowerment: Empower communities to take ownership of messages and convey them in their own language.
- Contextualization: ensuring that messages are adapted to local socio-economic and cultural realities.

In the Moroccan context, this model could be used to involve community leaders and religious figures in the dissemination of messages, to reinforce their acceptance by local populations. For example, imams could play a key role in popularizing public health messages by translating them into accessible and credible language.

4. Social determinants of health theory

The theory of social determinants of health (WHO, 2020) is mobilized to understand how socio-economic inequalities influence the reception of public health messages. This theory identifies several factors that affect individuals' ability to understand and apply public health recommendations:

- Media access: Rural or illiterate populations often have less access to digital or written media, which limits their exposure to official messages.
- Level of education: Individuals with a low level of education may have difficulty understanding technical or complex messages.
- Living conditions: Material constraints, such as lack of access to water or suitable housing, make it difficult to apply certain advice (e.g. frequent hand-washing).

In the Moroccan context, this theory highlights the disparities in message reception between urban and rural areas, as well as between different socio-economic classes.

5. Disinformation theory and information bubbles

Disinformation theory (Pennycook & Rand, 2021) is used to understand the mechanisms behind the spread of false information on social networks. This theory highlights several key concepts:

- Cognitive biases: Individuals are more likely to believe false information when it confirms their pre-existing beliefs.
- Information bubbles: Social networking algorithms create "bubbles" where users are only exposed to information aligned with their opinions.
- Proactivity: Combating misinformation requires a proactive approach, with clear messages to encourage verification of sources.

In the Moroccan context, this theory highlights the importance of including explicit messages to counter false information, notably

by raising awareness of the risks of misinformation.

6. Cultural mediation model

The cultural mediation model (Kraidy, 2018) is mobilized to understand how intermediary actors (community leaders, religious figures, NGOs) can act as a bridge between authorities and local populations. This model focuses on:

- Cultural translation: Translating official messages into a language that is accessible and credible to local communities.
- Trust-building: Using trusted figures (such as imams or community leaders) to disseminate messages.
- Contextual adaptation: Take account of local realities, such as family traditions or material constraints, when adapting advice.

In the Moroccan context, this model could be used to reinforce the impact of communication campaigns by involving local stakeholders in their design and dissemination.

7. Visual approach and non-verbal communication

The visual approach and non-verbal communication (Barthes, 1964; Kress & Van Leeuwen, 2006) emphasize the importance of visual elements in conveying messages. According to these theories:

- Emotional impact: Images and icons can reinforce the emotional impact of messages, creating a strong bond with target audiences.
- Accessibility: Visual elements make messages more accessible to illiterate or poorly educated populations.
- Memorability: Well-designed visuals (such as universal symbols or culturally relevant images) make messages more memorable.

In the Moroccan context, this approach could be used to enrich prevention posters with attractive, culturally relevant visual elements, such as images of Moroccan families or local landscapes.

8. Local adaptation theory and audience segmentation

The theory of local adaptation and audience segmentation (Kotler & Armstrong, 2017) highlights the importance of segmenting messages according to the characteristics of different target groups. This theory is based on several principles:

- Demographic segmentation: Tailor messages according to age, gender, level of education or geographic location.
- Personalization: Create different versions of posters for young people, the elderly, urban and rural areas.
- Responsiveness: Take into account the specific needs of each group to maximize message effectiveness.

In the Moroccan context, this theory could be used to design more inclusive communication campaigns, taking into account the specificities of different segments of the population.

III. Methodological approach and study corpus

1. Approach

The analysis of Moroccan communication posters during the COVID-19 pandemic is based on a qualitative and interpretative approach. This approach aims to assess the effectiveness of the campaigns in terms of their adaptation to local cultural, linguistic and socio-economic realities, by carrying out:

- A content analysis to identify themes, languages used, cultural references and slogans.

2. Objective

The main objective of this analysis is to evaluate the effectiveness of official Moroccan communication campaigns during the COVID-19 pandemic, taking into account their adaptation to local cultural realities.

Specific objectives:
- Identify the key messages and strategies used in the campaigns.
- Analyze communication methods in times of crisis.
- Formulate recommendations to improve future public health communication campaigns.

3. Study corpus

The study corpus consists of:

8 prevention posters published during the pandemic on the Official Coronavirus Portal in Morocco https://www.covidmaroc.ma/Pages/Accueilfr.aspx (Arabic and French versions), analyzed according to several criteria: languages used, cultural references, visuals, and messages conveyed.

4. General information on the corpus

- Period covered: The campaigns analyzed focus on the key phases of the pandemic: containment, decontainment and vaccination.
- Types of media: Official awareness-raising posters.
- Main languages: Classical Arabic and French, with a marked absence of Darija (Moroccan Arabic) and Amazigh.
- Target audiences: The posters appear to be designed for a general audience, but lack specific segmentation for young people, the elderly or rural populations.

5. Data collection method

Data collection is based on the following steps:

5.1 Type of data

Official campaigns: Prevention posters published by Moroccan authorities during the pandemic.

5.2 Data source

The Official Coronavirus Portal in Morocco: Used as a reference to understand the overall messages and communication strategies adopted.

5.3 Analysis techniques

Content analysis:

- Identification of the main themes addressed in the posters (e.g. hand washing, containment, use of disinfectants).
- Analysis of languages used (classical Arabic, French, etc.).
- Study of the cultural references (religious, social, family) and visuals used in the posters.
- Examination of slogans and calls to action to assess their clarity and relevance.

Comparative analysis:

Compare messages with local cultural realities.

5.4 Evaluation criteria

Posters are analyzed according to the following criteria:

- Linguistic accessibility: Language used and potential comprehension by different segments of the population.
- Cultural references: Presence of cultural or religious elements likely to reinforce message acceptance.
- Design and visuals: Quality and relevance of images, icons and other visual elements.
- Adaptation to local realities: Relevance of practical advice to people's socio-economic constraints.

IV.   Analysis of results:

1.   Content analysis:

Poster 1: "الاستعمال السليم للمطهرات" (Correct use of disinfectants)

Linguistic analysis:

- Language: Classical Arabic.
- Target audience: This language is accessible to an educated audience, but perhaps less understood by rural or less educated populations who primarily use Darija (Moroccan Arabic)[1].

Cultural analysis:

- Cultural references: The poster warns against the use of products containing methanol, which is relevant in a context where self-medication and the use of chemicals are common.
- Audience suitability: The message is technical and detailed, which may not be accessible to everyone. Simplifying the language and using Darija would improve cultural adaptation.

Visual analysis:

- Design: The poster is textual with few visual elements. Adding images or icons (such as a bottle of disinfectant with a prohibition symbol) would make the message clearer and more memorable.

Evaluation:

- Strengths: The message is important and relevant.
- Possible improvements: Use Darija, simplify the language and add visuals to reach a wider audience.

Poster 2: "تطهير الأسطح بمحلول ماء جافيل" (Disinfection of surfaces with bleach)

Linguistic analysis:

- Language: Classical Arabic.
- Target audience: As with the first poster, classical Arabic may limit comprehension for certain audiences.

Cultural analysis

- Cultural references: The poster explains how to dilute bleach, which is useful in a context where this product is commonly used for cleaning.
- Audience suitability: The message is practical, but could be reinforced with concrete examples (e.g., "use this solution to clean kitchen surfaces").

Visual analysis:

- Design: The poster is simple and textual. Adding an illustration showing a person cleaning a surface with the solution would improve its impact.

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[1] Darija is the Arabic dialect spoken in Morocco. It is a mixture of classical Arabic, Amazigh, French and Spanish. The term "Darija" literally means "dialect" in classical Arabic.

Evaluation:

- Strengths: The message is clear and useful.
- Possible improvements: Use Darija and add visuals for better comprehension.

Poster 3 : "Les femmes touchées par la maladie Covid-19 peuvent-elles allaiter leurs nouveau-nés ?" (Can women affected by Covid-19 breastfeed their newborns?)

Linguistic analysis:

- Language: French.
- Target audience: French is understood by part of the Moroccan population, especially in urban areas, but excludes rural or less educated populations.

Cultural analysis:

- Cultural references: The poster addresses an important topic (breastfeeding during COVID-19) and provides practical advice (wearing masks, washing hands). However, it does not take into account Moroccan cultural realities, such as the importance of family traditions in caring for newborns.
- Adapted to the audience: The message is useful, but could be reinforced by cultural references (e.g., "protecting your baby means protecting your family's future").

Visual analysis:

- Design: The poster is textual, with few visual elements. Adding an image of a mother breastfeeding her baby with a mask would make the message more engaging.

Evaluation;

- Strengths: The message is relevant and well structured.
- Possible improvements: Translate into Darija and Amazigh[2], add visuals and integrate cultural references.

Poster 4: "الوقاية من فيروس كورونا المستجد" (Prevention of the new coronavirus)

Linguistic analysis:

- Language: Classical Arabic.
- Target audience: As with other posters, classical Arabic may limit comprehension for some audiences.

Cultural analysis:

- Cultural references: The poster promotes handwashing, a universal message, but does not take into account local realities (e.g. lack of access to water in some rural areas).
- Audience suitability: The message is simple and straightforward, but could be reinforced with advice tailored to local realities (e.g., "use soap and water whenever possible").

Visual analysis:

- Design: The poster is textual with few visual elements. Adding an image showing a person washing their hands would improve its impact.

Evaluation:

- Strengths: The message is clear and simple.
- Possible improvements: Use Darija, add visuals and adapt advice to local realities.

Poster 5: "المرأة الحامل ومرض كوفيد 19" (The pregnant woman and COVID-19)

Linguistic analysis:

- Language: Classical Arabic.
- Target audience: As with other posters, classical Arabic may limit comprehension for some audiences.

Cultural analysis:

- Cultural references: The poster addresses an important topic (caring for pregnant women during COVID-19) and provides practical advice. However, it does not take into account Moroccan cultural realities, such as the importance of family traditions in caring for pregnant women.
- Audience suitability: The message is useful, but could be strengthened with cultural references.

Visual analysis:

- Design: The poster is textual with few visual elements. Adding an image of a pregnant woman with a mask would make the message more engaging.

Evaluation:

- Strengths: The message is relevant and well structured.
- Possible improvements: Translate into Darija and Amazigh, add visuals and integrate cultural references.

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[2] In Morocco, Amazigh, also known as Berber, is an indigenous language spoken by a significant portion of the population, with the three main dialects being Tashelhit, Tamazight, and Tarifit. Amazigh is officially recognized as a language alongside Arabic, and it's being taught in schools across the country. The ancient writing system, Tifinagh, is also being revived as a national script, with efforts to standardize the language through The Royal Institute of Amazigh Culture (IRCAM).

Poster 6: "الوقاية من فيروس كورونا المستجد: التزم بالحجر في المنزل" (**Prevention of the new coronavirus: Respect home confinement**)

Linguistic analysis:
- Language: Classical Arabic.
- Target audience: Classical Arabic is used, which may limit comprehension for rural or less-educated populations who mainly use Darija.

Cultural analysis:
- Cultural references: The message encourages home confinement, which is relevant in a pandemic context. However, it does not take into account Moroccan socio-economic realities, such as the difficulties of remaining confined in overcrowded housing or without sufficient resources.
- Audience suitability: The message is straightforward, but could be reinforced with practical advice (e.g., "organize family activities to pass the time").

Visual analysis:
- Design: The poster is textual with few visual elements. The addition of an image showing a family respecting confinement (for example, playing or cooking together) would make the message more engaging.

Evaluation:
- Strengths: The message is clear and relevant.
- Possible improvements: Use Darija, add visuals and adapt advice to local realities.

Poster 7: "الاستعمال السليم للمطويات" (**Correct use of leaflets**)

Linguistic analysis:
- Language: Classical Arabic.
- Target audience: As with other posters, Classical Arabic may limit comprehension for some audiences.

Cultural analysis:
- Cultural references: The poster warns against the accidental ingestion of disinfectants by children, which is relevant in a context where chemicals are often poorly stored.
- Suitability for audience: The message is useful, but could be reinforced with practical advice (e.g., "store chemicals high up, out of children's reach").

Visual analysis:
- Design: The poster is textual with few visual elements. Adding an image showing a child holding a chemical with a prohibition symbol would make the message clearer.

Evaluation:
- Strengths: The message is important and relevant.
- Possible improvements: Use Darija, add visuals and provide practical advice.

Poster 8: "هل يمكن أن ينتقل فيروس كورونا من الأم إلى جنينها؟" (**Can the COVID-19 virus be transmitted from mother to fetus?**)

Linguistic analysis:
- Language: Classical Arabic.
- Target audience: Classical Arabic is used, which may limit comprehension for rural or less educated populations.

Cultural analysis:
- Cultural references: The poster tackles an important subject (transmission of the virus from mother to fetus) and provides reassuring information. However, it does not take Moroccan cultural realities into account.
- Audience suitability: The message is useful, but could be reinforced with cultural references.

Visual analysis:
- Design: The poster is textual with few visual elements.

Evaluation:
- Strengths: The message is relevant and well structured.
- Possible improvements: Translate into Darija and Amazigh, add visuals and integrate cultural references.
  Summary and general recommendations:
- Languages: Systematically use Darija and include Amazigh to reach a wider audience.
- Cultural references: Integrate cultural and religious elements to reinforce message acceptance.
- Visuals: Add images and icons to make messages clearer and more memorable.
- Adaptation to local realities: Take into account local constraints (e.g. lack of access to water) and adapt messages accordingly.
- Target audiences: Create different versions of the posters for young people, the elderly, urban and rural areas.

2.   Comparative analysis:

Linguistic adaptation: a major challenge

The posters analyzed use mainly classical Arabic and French. This poses a problem of accessibility for a large part of the Moroccan population, particularly people living in rural areas, less educated populations and Amazigh communities. The absence of Darija

(Moroccan Arabic) and Amazigh limits the reach and comprehension of messages.

Interpretation: This trend reflects "top-down" communication, where messages are designed for an educated, urban audience, neglecting the linguistic and cultural realities of a large part of the population.

Implication: To be effective, communication campaigns need to adopt an inclusive approach, using local languages (Darija and Amazigh) to reach the entire population.

Cultural references: A missed opportunity

The posters analyzed lack cultural and religious references specific to the Moroccan context. For example, few of the posters incorporate elements linked to Islam (such as the protection of life as a sacred value) or to family and community traditions, which are central to Moroccan society.

Interpretation: This lack of cultural contextualization reduces the emotional impact and credibility of messages. Communication campaigns fail to create a strong link with the values and beliefs of the target audience.

Implication: Incorporating cultural and religious references would reinforce message acceptance and encourage adoption of recommended behaviors.

Design and visuals: untapped potential

Most posters are text-based, with few or no visual elements. This limits their appeal and memorability, especially for illiterate or poorly educated populations.

Interpretation: The lack of appropriate visuals (images, icons, bright colors) reflects a traditional approach to communication, which does not take into account the aesthetic preferences and information consumption habits of the Moroccan public.

Implication: Adding culturally relevant visual elements (e.g. images of Moroccan families, local landscapes) would make the posters more engaging.

Adapting to target audiences: A uniform approach

The posters analyzed adopt a uniform approach, with no distinction between different target audiences (young, old, rural, urban). This limits their effectiveness, as the needs and realities of these groups differ considerably.

Interpretation: This uniformity reflects a centralized vision of communication, which does not take into account Morocco's socio-economic and cultural diversity.

Implication: Communication campaigns need to be segmented and adapted to the specificities of each target group. For example, messages aimed at young people can use a dynamic tone and modern visuals, while those aimed at the elderly need to be simpler and more direct.

Local realities: insufficient consideration

Posters do not take sufficient account of local realities, such as the lack of access to water in certain rural areas, or the difficulties of complying with confinement in overcrowded housing.

Interpretation: This gap shows that communication is disconnected from the day-to-day realities of the population, which can lead to low adherence to messages.

Implication: Communication campaigns should include practical advice adapted to local realities (e.g. "use soap and water whenever possible" or "organize family activities to respect containment").

Combating misinformation: an underestimated challenge

The posters analyzed do not explicitly mention the fight against misinformation, a major issue during the COVID-19 pandemic. The spread of false information on social networks was a major challenge in Morocco, but official campaigns do not seem to have responded proactively.

Interpretation: This absence reflects reactive rather than proactive communication, which fails to anticipate the challenges of misinformation.

Implication: Communication campaigns should include messages to counter misinformation and encourage verification of sources. The comparative analysis reveals that the posters analyzed, while relevant in content, have significant limitations in terms of cultural, linguistic and visual adaptation. These limitations reduce their effectiveness and reach, particularly with rural, less educated and Amazigh populations.

To improve the impact of communication campaigns, it is essential to:
- Use local languages (Darija and Amazigh) to reach a wider audience.
- Incorporate cultural and religious references to reinforce message acceptance.
- Add attractive, culturally relevant visual elements.
- Adapt messages to local realities and the specificities of different target audiences.
- Fight misinformation by including proactive messages to counter false information.

By adopting a more inclusive and contextualized approach, communication campaigns could not only reach a wider audience, but also reinforce trust and adherence to public health messages.

V.   Discussion

Analysis of the results highlights several limitations of Moroccan communication campaigns during the COVID-19 pandemic, which can be discussed in relation to the concepts and models presented in the literature review. The posters analyzed use mainly classical Arabic and, in some cases, French, which limits their accessibility for a large part of the population, especially rural, less educated or Amazigh-speaking populations, contradicting social justice as noted by Ennassiri et al, (2024) in the framework of social justice, it is crucial to ensure equitable access to information for all segments of the population, including marginalized or rural communities. And as Cairns (2020) also points out, effective communication in times of crisis relies on a thorough understanding of the social and cultural dynamics that shape the perceptions of target audiences. The absence of Darija and Amazigh reflects a centralized, top-down approach, neglecting the linguistic specificities of a large part of the population. This shortcoming is amplified by the findings of Spence, Lachlan and Burke (2018), who highlight the importance of using local languages to enhance the credibility and acceptance of messages.

The posters also lack cultural and religious references specific to the Moroccan context. For example, few posters incorporate elements linked to Islam, such as the protection of life as a sacred value, or to family and community traditions, which play a central role in Moroccan society. This absence diminishes the emotional impact and credibility of messages, preventing them from creating a strong link with the values and beliefs of target audiences. Incorporating these references would reinforce message acceptance and encourage the adoption of recommended behaviors, as Kim and Lee (2021) point out.

The visual design of posters is another weak point. The majority of materials are text-based, with little or no engaging visual elements. This limits their appeal and memorability, especially for illiterate or poorly educated populations. The addition of culturally relevant images, icons or symbols would make messages more accessible and memorable, in line with the theories of Barthes (1964) and Kress & Van Leeuwen (2006). For example, illustrations showing Moroccan families or local landscapes could reinforce the emotional impact and understanding of messages.

What's more, the posters adopt a uniform approach, making no distinction between different target audiences, whether young, old, urban or rural. This uniformity reflects a centralized vision that fails to take into account Morocco's socio-economic and cultural diversity. Campaigns need to be segmented and tailored to the specific needs of each group, as proposed by the theory of local adaptation and audience segmentation (Kotler & Armstrong, 2017). For example, messages aimed at young people could use a dynamic tone and modern visuals, while those aimed at the elderly should be simpler and more direct.

Local realities, such as the lack of access to water in certain rural areas or the constraints associated with confinement in overcrowded housing, are also insufficiently taken into account. This is a sign of communication that is disconnected from the day-to-day realities of the local population, which can lead to poor adherence to messages. Practical advice adapted to local realities, such as the use of alternatives to hand-washing or the organization of family activities to respect confinement, would be necessary to maximize the effectiveness of campaigns, in line with the theory of the social determinants of health (WHO, 2020).

Finally, the fight against misinformation is an underestimated issue in these campaigns. The spread of false information on social networks has been a major challenge in Morocco, but the posters analyzed do not explicitly mention this aspect. A proactive approach, including clear messages to encourage verification of sources, would be essential to counter rumors and reinforce the credibility of official messages, as Pennycook and Rand (2021) point out.

In conclusion, although the posters analyzed address relevant topics and provide useful advice, their limitations in terms of linguistic, cultural and visual adaptation reduce their reach and impact, particularly among rural, illiterate or Amazigh populations. To improve future communication campaigns, it is crucial to adopt an inclusive and contextualized approach, using local languages, integrating cultural and religious references, enriching visual aids, and taking into account the socio-economic realities of different segments of the population.

CONCLUSION

A study of the communication campaigns carried out in Morocco during the COVID-19 pandemic reveals both commendable efforts and significant shortcomings in their design and implementation. Although the messages disseminated addressed essential themes such as hygiene, containment and prevention, their effectiveness was hampered by a centralized, one-size-fits-all approach that neglected the country's cultural, linguistic and socio-economic specificities.

The results show that the exclusive use of classical Arabic and, in some cases, French limits the accessibility of the messages for a large part of the population, particularly rural, less educated or Amazigh-speaking populations. In addition, the absence of cultural and religious references specific to the Moroccan context, as well as the lack of engaging visual elements, reduces the emotional impact and credibility of these campaigns. Local realities, such as the lack of access to water in certain rural areas or the constraints associated with confinement in overcrowded housing, are also insufficiently taken into account, which reduces adherence to the recommendations.

An inclusive and contextualized approach is crucial to improving the effectiveness of future public health communication campaigns. This involves systematically using Darija and Amazigh, integrating cultural and religious references, and enriching visual media to reach a wider audience. In addition, messages should be tailored to local realities and segmented according to the

specific needs of different target groups, including young people, older people and rural populations. Finally, the fight against misinformation must be proactively integrated to strengthen the credibility of official messages.

By adopting such an approach, communication campaigns could not only reach a wider audience but also build trust and buy-in for public health messages. These lessons learned from the COVID-19 pandemic provide valuable insights for designing more effective and inclusive communication strategies that can address the complex challenges of future health crises.

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