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Media Literacy and Resistance to Health Misinformation: Doctors' Perspectives in Casablanca

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Abstract: The fast development of digital platforms has transformed how individuals in Morocco access and interpret health-related information. This actually contributes to what the World Health Organization terms an *"infodemic"*. This study examines the perspectives of practicing medical doctors in Casablanca regarding patient exposure to health misinformation and its effects on clinical practice. Guided by an integrated theoretical framework combining the Information Disorder Framework, the Health Belief Model, and Media Literacy Theory, the research adopts a quantitative descriptive design using a structured questionnaire administered to 60 practicing physicians selected through purposive sampling. The instrument covers demographic profiles, exposure to misinformation, types and sources of misleading content, patient behavior, doctors' communication strategies, the role of media literacy, institutional trust, and recommended interventions. Findings show that health misinformation has become a routine feature of clinical encounters, with a majority of doctors reporting frequent exposure to patients influenced by false or misleading health content, most commonly involving self-medication, vaccine hesitancy, and chronic disease management. Social media and messaging applications emerge as the dominant channels of dissemination. Doctors report that misinformation contributes to patient resistance to medical advice, delayed care-seeking, and a perceived erosion of trust in medical authority, partly attributed to algorithm-driven content amplification. Physicians frequently engage in corrective communication, primarily through scientific explanation and trust-building dialogue. However, their efforts are constrained by limited consultation time. A strong majority of respondents view media literacy as a protective factor against misinformation and advocate for its integration into public health and educational initiatives, alongside stronger platform regulation and improved health communication campaigns. The study concludes that health misinformation in Casablanca constitutes a multidimensional challenge with informational, behavioral, and institutional dimensions, which show the need for coordinated interventions involving healthcare providers, educators, policymakers, and digital platforms to strengthen public resilience against misleading health content.

Keywords: *Health misinformation, Media literacy, Infodemic, Health Belief Model, Doctor–patient communication.*

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Introduction

In today's digital world, the ongoing circulation of health-related information through social media platforms has transformed the way individuals access, interpret, and act upon medical knowledge. While this democratization of information has improved access to health content, it has also contributed to the rise of misinformation, often referred to as an "infodemic" by the World Health Organization (World Health Organization, 2020). Health misinformation can lead to delayed treatment, vaccine hesitancy, self-medication, and mistrust in healthcare systems, particularly in urban environments where digital media consumption is high.

In Morocco, and particularly in Casablanca, social media platforms such as Facebook, Instagram, TikTok, and WhatsApp have become primary sources of informal health advice. This shift raises critical concerns regarding media literacy and the ability of individuals to critically evaluate the credibility of online health information.

Despite increasing awareness of fake news, limited empirical research has explored how healthcare professionals perceive patient exposure to misinformation and how they manage its consequences in clinical practice. This study addresses this gap by examining doctors' experiences in Casablanca when confronted with patients influenced by misleading health content online.

Problematic

The core problem addressed in this research is the growing influence of health misinformation on patient behavior in Casablanca and the limited capacity of media literacy to counteract its effects. Although digital platforms provide access to medical knowledge, they also facilitate the spread of non-scientific, misleading, or false health claims that may contradict medical expertise. This situation creates a tension between professional medical authority and digitally mediated knowledge, which raises the question of how healthcare professionals respond to patients who trust online information over clinical advice.

Research Questions

This study is guided by a set of research questions that structure the investigation and define its analytical focus. These questions are designed to explore the relationship between health misinformation, patient behavior, and clinical practice in Casablanca, with particular attention to the role of media literacy in shaping how individuals interpret and respond to health-related information:

1. How do doctors in Casablanca perceive the impact of online health misinformation on patient behavior?
2. What types of misinformation are most commonly encountered in clinical consultations?
3. How do patients respond when their beliefs conflict with medical advice?
4. What strategies do doctors use to correct or manage misinformation beliefs?
5. How can media literacy influence patients' resistance to fake health news?

Objectives of the Study

The objectives of this research are to provide a comprehensive examination of the prevalence and nature of health misinformation encountered in Casablanca, with particular attention to the forms it takes, the channels through which it circulates, and the ways in which it becomes integrated into everyday understandings of health. The study further aims to analyze doctors' perceptions of patients' exposure to fake or misleading health content, including how this exposure shapes patient attitudes, expectations, and behaviors within clinical settings. In addition, it seeks to explore the range of communication strategies used by physicians to address, correct, or manage misinformation during medical consultations, especially in situations where patients hold firmly established but inaccurate health beliefs.

Moreover, this research aims to evaluate the role of media literacy in shaping patients' health-related decision-making processes, particularly in terms of their ability to critically assess, question, and verify the health information they encounter across different media platforms. By doing so, it highlights the potential of media literacy as a protective factor against the influence of misinformation. Finally, the study intends to interpret and contextualize its empirical findings of how individuals perceive health risks, process information, and respond to misinformation within the specific sociocultural context of Casablanca.

Significance of the Study

This research holds significance at both academic and practical levels, as it addresses an increasingly urgent issue situated at the intersection of health communication, digital media, and public understanding of medical information. At the academic level, the study contributes to the expanding body of literature on digital health communication, media literacy, and misinformation studies by offering an empirically grounded perspective from the Moroccan context. In particular, it helps fill an important gap in existing research, as Morocco remains underrepresented in studies examining how health misinformation is produced, circulated, and interpreted within specific sociocultural and media environments.

At the practical level, the research offers valuable insights for healthcare professionals, policymakers, and educators by highlighting the challenges that misinformation poses within clinical practice and public health communication. It aims to inform the development of more effective communication strategies that doctors can use to address patient misconceptions in a constructive and empathetic manner. Furthermore, the findings can support policymakers in designing targeted public health interventions and media literacy programs that strengthen citizens' ability to critically evaluate health-related content. In the educational sphere, the study highlights the importance of integrating media literacy into health education initiatives to reduce the harmful effects of misinformation and promote more informed health-related decision-making among the general public.

Literature Review

Media Literacy and Digital Health Information

Media literacy refers to the ability to access, analyze, evaluate, and create media messages in a critical and informed manner (Potter, 2010; Hobbs, 2010). In the contemporary digital environment, where individuals are constantly exposed to large volumes of information from diverse and often unregulated sources, media literacy has become an essential competency for navigating health-related content. In the context of health communication, it plays a particularly important role by enabling individuals to differentiate between credible, evidence-based medical information and misleading, incomplete, or entirely false content circulating across digital platforms such as social media, online forums, and informal websites.

Within health-related decision-making, media literacy is not limited to the passive reception of information; it also involves an active process of questioning sources, assessing credibility, cross-checking information with trusted medical authorities, and recognizing persuasive or manipulative messaging strategies. As digital health information becomes increasingly accessible, patients are often required to make quick judgments about complex medical issues, which increases the risk of exposure to misinformation and its potential influence on health behaviors.

Research indicates that individuals with higher levels of media literacy are significantly more likely to critically evaluate and verify online content before accepting it as accurate, and they demonstrate a lower susceptibility to fake news and misleading health narratives (Bulger & Davison, 2018). Furthermore, studies suggest that media literacy can serve as a protective factor that enhances individuals' resilience against misinformation by strengthening critical thinking skills and encouraging more cautious engagement with digital health sources. In this sense, media literacy is increasingly recognized not only as an educational goal but also as a public health resource that can contribute to improving health outcomes and reducing the negative impact of digital misinformation in society.

Health Misinformation and Infodemic Theory

The World Health Organization (2020) introduces the concept of an "infodemic" to describe the overwhelming

abundance of both accurate and inaccurate health information that circulates fast during disease outbreaks and public health emergencies. This phenomenon is characterized not only by the volume of information available, but also by the speed at which it spreads across digital platforms, which often outpaces official communication and scientific verification. As a result, individuals are frequently exposed to contradictory messages, which can generate confusion, uncertainty, and mistrust toward health authorities and medical recommendations.

The infodemic became particularly evident during the COVID-19 pandemic, where social media platforms, online forums, and informal communication channels facilitated the fast distribution of misinformation related to vaccines, treatment methods, preventive measures, and even the origins of the virus. In many cases, such misinformation had tangible consequences on public health behavior, including vaccine hesitancy, resistance to medical guidelines, and the adoption of unverified or unsafe remedies. This highlights how health misinformation is not merely a communication issue but also a significant public health challenge that can influence individual and collective decision-making.

To better conceptualize the diversity of false and misleading health content, Wardle and Derakhshan's (2017) Information Disorder Framework provides a useful analytical structure. This framework distinguishes between three interconnected categories: misinformation, which refers to false or inaccurate information shared without the intention to cause harm; disinformation, which involves deliberately created and distributed false information intended to deceive or manipulate; and malinformation, which consists of genuine information that is shared out of context or used in a way that causes harm. By differentiating between these categories, the framework allows for a more nuanced understanding of how misleading health information operates within digital ecosystems. This framework is essential for analyzing the complexity of digital health communication, as it acknowledges that harmful information is not uniform in intent or impact. Instead, it exists along a spectrum of accuracy, intention, and contextual use, which makes addressing health misinformation a multidimensional challenge that requires coordinated responses from healthcare professionals, media platforms, and public institutions.

Health Belief Model (HBM)

The Health Belief Model (Rosenstock, 1974; Champion & Skinner, 2008) is a widely used psychological framework that explains health-related behaviors through individuals' subjective perceptions and beliefs. It proposes that people's actions regarding their health are largely shaped by how they evaluate their perceived susceptibility to a disease, the perceived severity of the condition, the perceived benefits of taking a recommended health action, and the perceived barriers that may prevent them from doing so. In addition, the model emphasizes the importance of cues to action, which refer to internal or external triggers that prompt health-related decisions, as well as self-efficacy, which reflects an individual's confidence in their ability to successfully perform a health behavior.

In the context of health misinformation, the Health Belief Model is particularly relevant because it helps explain how individuals' perceptions can be shaped or distorted by information encountered online. Exposure to misleading or unverified health content may alter patients' understanding of disease severity, perceived risks, or the effectiveness of certain treatments. As a result, individuals may develop inaccurate beliefs that influence their willingness to follow medical advice, adhere to prescribed treatments, or engage in preventive health behaviors. These dynamics highlights how misinformation can directly affect decision-making processes by reshaping the cognitive and perceptual factors outlined in the model.

Fake News and Trust in Medical Authority

Research has consistently shown that trust in medical professionals and health institutions plays a central role in shaping individuals' ability to resist health-related misinformation. When patients have a strong level of confidence in doctors, public health authorities, and scientific institutions, they are generally more likely to accept evidence-based recommendations and less likely to rely on unverified online sources. However, this trust can be weakened when individuals are repeatedly exposed to misleading or false claims circulating on digital platforms. As Lewandowsky et al. (2012) argue, continuous exposure to misinformation can gradually erode institutional trust, particularly when false narratives are presented in persuasive or emotionally appealing ways that compete with official medical discourse.

In addition, the structure of social media platforms contributes to the reinforcement of misinformation through algorithmic personalization. These algorithms tend to prioritize content that aligns with users' previous interactions, preferences, and engagement patterns, which can unintentionally strengthen confirmation bias. As a result, individuals are more likely to encounter and believe information that confirms their pre-existing views while being less exposed to corrective or contradictory information. This selective exposure creates informational "echo chambers" where false health claims can circulate and be reinforced without sufficient challenge. Over time, this combination of declining trust in medical authority and algorithm-driven reinforcement of biased content can significantly increase individuals' vulnerability to fake news. It also complicates the role of healthcare professionals, who must not only provide accurate medical advice but also actively rebuild trust and counteract the influence of misleading digital narratives within clinical encounters.

Methodology

Research Design

This study adopts a quantitative descriptive research design aimed at systematically examining patterns, perceptions, and practices related to health misinformation among medical doctors practicing in Casablanca. A quantitative approach is considered appropriate for this research as it allows for the collection of standardized data that can be measured, compared, and analyzed statistically, thereby providing a clear overview of the phenomenon under investigation. The descriptive nature of the design further enables the study to capture and present an accurate representation of doctors' experiences, perceptions, and responses to misinformation within their professional context, without manipulating any variables.

Data is collected through a structured questionnaire administered to practicing physicians in Casablanca. The use of the structured questionnaire ensures consistency in responses and facilitates the analysis of trends and relationships across participants. This method also allows for efficient data collection from a relatively large number of respondents, which makes it suitable for identifying general patterns in how doctors encounter and respond to health misinformation in clinical settings.

Population and Sampling

The target population of this study consists of practicing medical doctors in Casablanca, which represents a range of healthcare settings, including both public and private sectors. This population is selected due to its direct and sustained involvement in patient care, particularly in contexts where patients may be influenced by online health information and misinformation. Focusing on this group allows the study to gain relevant insights into how misinformation is encountered and managed within real clinical environments.

A purposive sampling technique is used in order to select participants who meet specific criteria relevant to the objectives of the study. This non-probability sampling approach is appropriate because it enables to intentionally recruit doctors who regularly interact with patients affected by online health content and are therefore best positioned to provide informed perspectives on the phenomenon under investigation. The proposed sample size is n = 60 doctors, which is considered adequate for a descriptive quantitative study that aims to identify general trends and patterns in perceptions and practices.

To ensure the relevance and reliability of the data, inclusion criteria require participants to have a minimum of two years of clinical experience to ensure that respondents have sufficient professional exposure to patient interactions and decision-making processes. Ethical considerations are also taken into account, as confidentiality is strictly maintained throughout the research process. No personal identifiers such as names, medical specialties, or institutional affiliations are collected in order to guarantee anonymity and encourage honest and unbiased responses.

Data Collection Instrument

The primary data collection instrument used in this study is a structured questionnaire designed to systematically gather information from practicing doctors in Casablanca. The questionnaire is carefully developed to ensure clarity, relevance, and alignment with the research objectives, which allow for the collection of consistent and comparable data across all participants.

The questionnaire is divided into eight sections designed to address the different dimensions of health misinformation and its implications for clinical practice. The first section collects demographic information about the respondents, including age, gender, years of clinical experience, and type of practice, in order to provide contextual information for interpreting the findings. The second section examines doctors' exposure to health misinformation by investigating the frequency with which they encounter misinformation-related cases and the contexts in which such cases are most commonly observed. The third section focuses on the types and sources of misinformation encountered in clinical settings, as well as doctors' perceptions regarding the overall prevalence of misinformation in their practice.

The fourth section explores patient behavior and responses to online health information, particularly the extent to which patients trust online sources, resist medical recommendations, delay seeking medical care, or challenge professional advice. The fifth section investigates the communication strategies used by doctors to address misinformation, including the methods they use, their perceptions of the effectiveness of these approaches, and the constraints that may hinder their implementation. The sixth section examines the relationship between media literacy and patient behavior by assessing doctors' perceptions of the role of media literacy in reducing susceptibility to misinformation and the need for integrating media literacy education into public health initiatives.

The seventh section addresses issues related to institutional trust and information disorder by exploring perceptions regarding the impact of misinformation on trust in medical professionals, the role of social media algorithms in the dissemination of misleading content, and the forms of information disorder most frequently encountered in practice. Finally, the eighth section provides respondents with the opportunity to express their views on the most effective measures for reducing health misinformation in Morocco. These sections provide a comprehensive framework for examining the informational, behavioral, communicational, and institutional dimensions of health misinformation from the perspective of practicing doctors in Casablanca.

Theoretical Framework Integration

This study is grounded in an integrated theoretical framework that combines three complementary approaches in order to provide a comprehensive understanding of health misinformation, patient behavior, and media-related competencies. The first framework, the Information Disorder Framework proposed by Wardle and Derakhshan (2017), is used to categorize the different forms of misinformation encountered in clinical settings. By distinguishing between misinformation, disinformation, and malinformation, this framework allows for a more nuanced analysis of the types of false or misleading health content that patients are exposed to and bring into medical consultations. The second framework, the Health Belief Model (Rosenstock, 1974), is applied to interpret changes in patient behavior in relation to their perceptions of health risks and medical advice. It provides a psychological lens through which we understand individuals' beliefs about susceptibility, severity, benefits, and how barriers may be influenced through the exposure to online health information. This ultimately affect the compliance with or resistance to medical recommendations.

The third framework, Media Literacy Theory (Potter, 2010), is used to assess individuals' capacity to critically evaluate and interpret health-related information across media platforms. It emphasizes the role of cognitive skills in identifying credible sources, analyzing messages, and resisting persuasive misinformation content in the digital environment. Together, these three frameworks offer a multidimensional analytical structure that informs both the design of the questionnaire and the interpretation of the collected data. Their integration ensures that the study captures not only the types of misinformation present, but also the

cognitive, behavioral, and communicative dimensions through which misinformation is produced, interpreted, and managed in the context of healthcare in Casablanca.

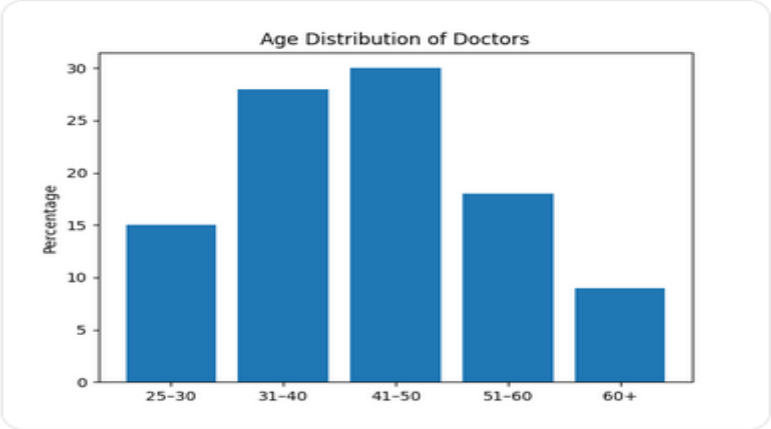
Analysis and Discussion

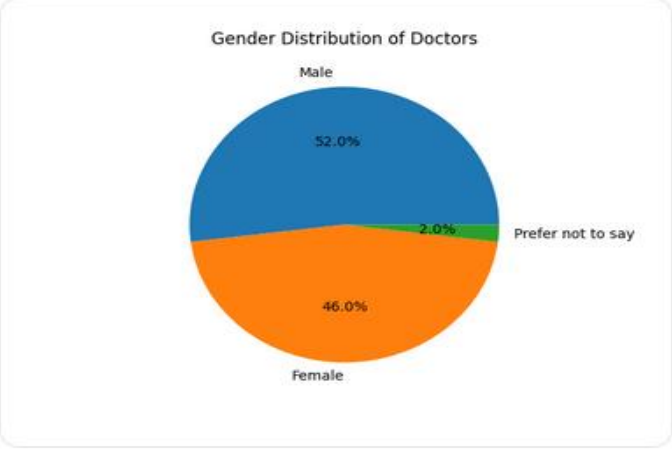
Section 1: Demographic Information

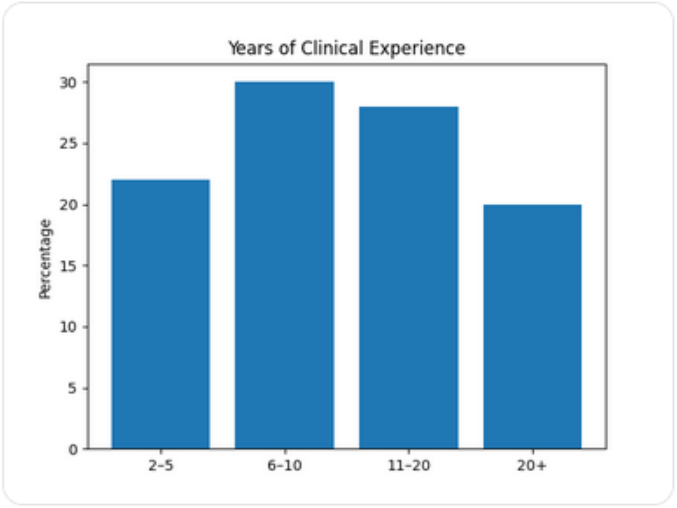
This section presents the results of the study's quantitative analysis. It begins with the demographic characteristics of the respondents. The demographic profile is essential for contextualizing the findings, as it provides an overview of the sample in terms of age, gender, clinical experience, and type of medical practice. Understanding these variables is important because they may influence doctors' exposure to health misinformation, as well as their perceptions and communication practices in clinical settings. The following subsection presents a detailed analysis of each demographic variable, supported by graphical representations and interpretation.

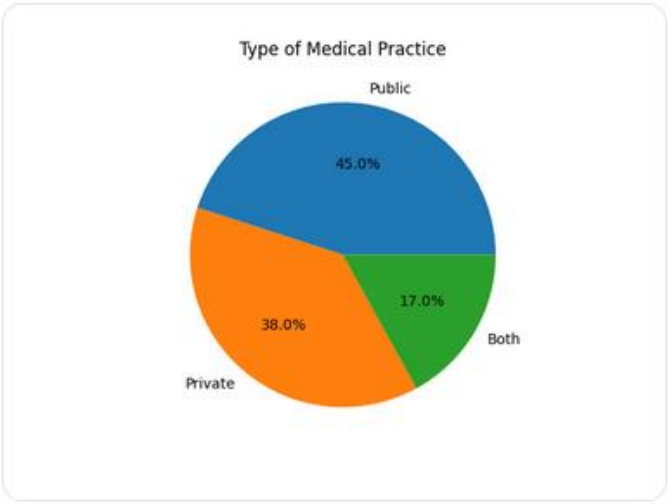
The first graph illustrates the age distribution of the participating doctors. The results indicate that 15% of respondents are aged between 25 and 30 years, while 28% fall within the 31–40 age group. The highest proportion, 30%, is represented by doctors aged between 41 and 50 years. Additionally, 18% of participants are between 51 and 60 years old, and 9% are above 60 years. This distribution shows a predominance of mid-career physicians, which suggests that the sample largely consists of professionals with substantial clinical experience and active involvement in patient care. As for the second graph, it actually presents the gender distribution of respondents. The findings show that 52% of participating doctors are male, while 46% are female, and 2% preferred not to disclose their gender. This indicates a relatively balanced gender composition within the sample, with only a slight predominance of male respondents. The near parity between male and female doctors enhances the representativeness of the study and ensures that perspectives from both genders are adequately reflected.

The third graph shows the distribution of respondents according to their years of clinical experience. The results reveal that 22% of doctors have between 2 and 5 years of experience, while 30% have between 6 and 10 years. A further 28% fall within the 11–20 years category, and 20% report more than 20 years of clinical practice. This distribution demonstrates a strong presence of mid-experience professionals, alongside meaningful representation from both early-career and highly experienced doctors. As for the fourth graph, it actually illustrates the type of medical practice of respondents. The findings indicate that 45% of doctors work in the public sector, while 38% practice in the private sector. Additionally, 17% report working in both sectors. This demonstrates a diverse representation of healthcare environments within the sample, which is important to understand different clinical contexts and variations in exposure to health misinformation.









The demographic characteristics of the sample provide important contextual insights for interpreting the study's findings on doctors' perceptions of health misinformation in Casablanca. In general, the age distribution indicates a predominance of mid-career physicians, particularly those aged between 31 and 50 years. This suggests that the sample largely reflects doctors who are actively engaged in clinical practice and who possess sufficient professional experience to encounter and manage misinformation-related cases in real medical settings. Their position within this career stage is particularly relevant, as they are likely to combine updated medical knowledge with sustained patient interaction, which makes their perspectives highly valuable for the objectives of this research. As for the gender distribution, it reveals a relatively balanced composition between male and female doctors, with only a slight predominance of male respondents. This balance strengthens the representativeness of the study and reduces the likelihood of gender-based bias in interpreting communication practices or attitudes toward misinformation. It also ensures that the findings reflect a diversity of clinical interaction styles, which may be influenced by gender-related differences in communication approaches within healthcare settings.

Regarding years of clinical experience, the results show a strong concentration of respondents within the mid-experience range, alongside meaningful representation from both early-career and highly experienced doctors. This diversity enhances the analytical depth of the study, as it allows for the consideration of how exposure to digital misinformation may vary depending on professional experience. More experienced doctors may rely on established clinical judgment and patient interaction patterns, while less experienced practitioners may be more exposed to emerging digital health communication challenges. Finally, the distribution of practice type highlights a mix of public, private, and dual-sector practitioners. This variation is particularly significant, as the institutional context can influence both the frequency and nature of exposure to misinformation. Public sector doctors often manage higher patient volumes and more diverse populations, while private practitioners may experience more individualized consultations. Those operating in both sectors provide particularly valuable insights, as they bridge different healthcare environments and patient behaviors. As a result, the demographic profile suggests that the sample is sufficiently diverse and well-balanced, which can actually provide a strong foundation for analyzing the impact of health misinformation in clinical practice. The combination of age,

experience, gender, and practice diversity enhances the credibility and transferability of the study's findings.

Section 2: Exposure to Health Misinformation

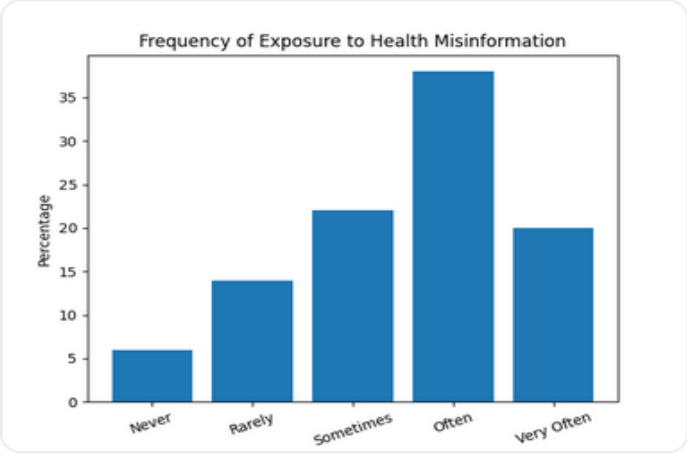
This section explores doctors' exposure to health misinformation in clinical practice in Casablanca and focuses on three main dimensions: the frequency of encountering patients influenced by online health information, the perceived evolution of misinformation-related cases over recent years, and the clinical contexts in which such misinformation most frequently appears. This analysis is crucial for understanding how digital information ecosystems reshape patient behavior and increase the complexity of medical consultations, particularly in environments where patients rely heavily on non-professional health sources such as social media, websites, and informal networks.

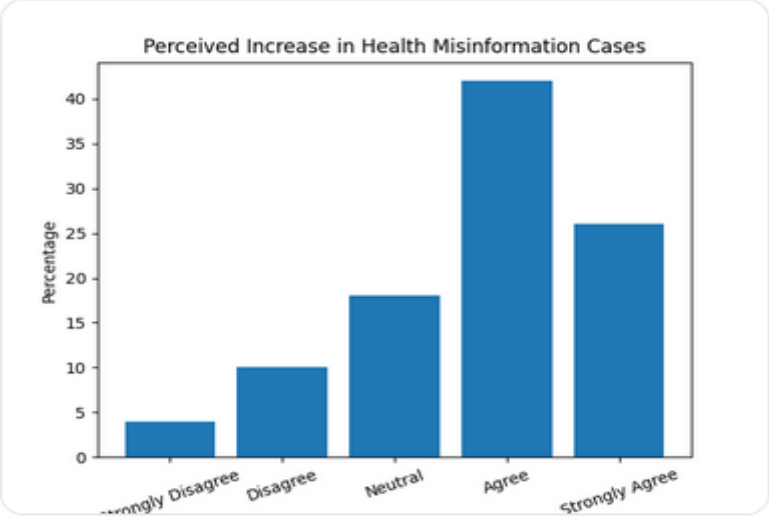
The findings regarding frequency of exposure reveal that only 6% of doctors report never encountering patients influenced by online health misinformation, while 14% indicate that such cases occur rarely. A further 22% state that they encounter misinformation sometimes, whereas 38% report frequent exposure, and 20% indicate that they face such cases very often in their daily clinical practice. These results demonstrate that more than half of the respondents (58%) experience high levels of exposure to misinformation-related cases. This suggests that this phenomenon has become a routine element of clinical interactions rather than an occasional challenge. This high frequency highlights the normalization of misinformation within patient consultations, where doctors increasingly need to address and correct pre-existing beliefs shaped outside the medical system.

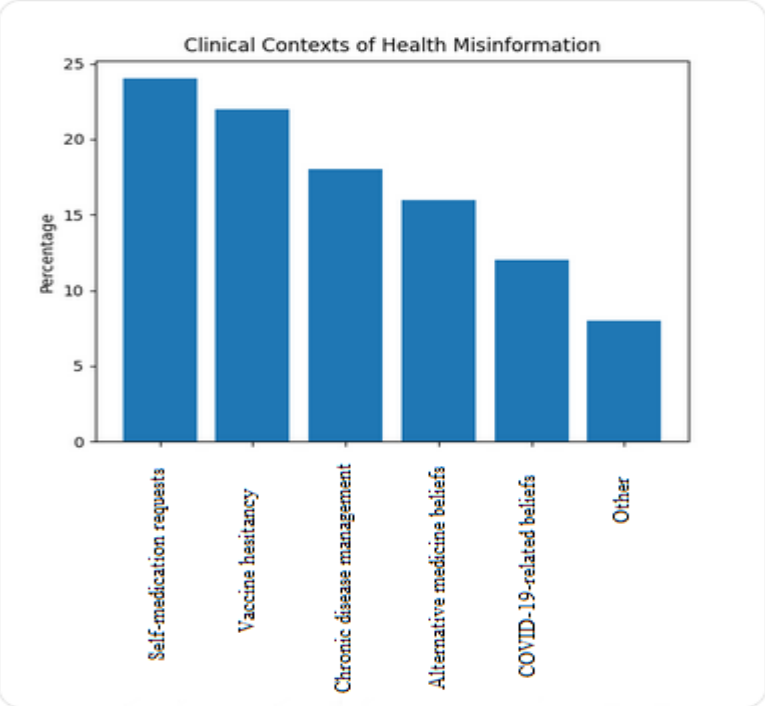
In relation to temporal trends, the results show that 4% of respondents strongly disagree with the statement that misinformation-related cases have increased in recent years, while 10% disagree. A total of 18% of doctors remain neutral which can suggest uncertainty or mixed experiences regarding changes over time. However, a substantial proportion of respondents report a clear upward trend, with 42% agreeing and 26% strongly agreeing that cases influenced by health misinformation have increased. This means that 68% of doctors perceive a growing presence of misinformation in clinical settings. This perception may reflect not only an actual increase in misinformation dissemination through digital platforms but also greater awareness among physicians of its impact on patient behavior in recent years, particularly following the COVID-19 pandemic, which significantly amplified the spread of health-related false information.

Regarding the clinical contexts in which misinformation is most frequently encountered, the results indicate that self-medication requests represent the most common category at 24%. This is followed closely by vaccine hesitancy at 22%, which continues to reflect ongoing skepticism toward immunization despite public health efforts. Chronic disease management accounts for 18%, which highlights the influence of misinformation on long-term health conditions such as diabetes and hypertension, where patients may adopt alternative or non-prescribed treatments. Beliefs in alternative medicine represent 16% of cases, which indicate the continued reliance on traditional or non-scientific remedies among certain patients. COVID-19-related misinformation constitutes 12% of responses. This actually suggests that while the pandemic remains a reference point, its dominance has slightly decreased compared to earlier phases. Finally, 8% of responses fall under other forms of misinformation that indicate additional but less frequent categories of misleading health content. Therefore, these findings suggest that misinformation is particularly concentrated in areas where patients exercise personal decision-making or where medical guidance is often delayed or bypassed.

The results of this section clearly demonstrate that health misinformation is a pervasive and structurally embedded issue within clinical practice in Casablanca. Its presence across multiple medical domains highlights its complexity and reinforces the need for healthcare professionals to continuously engage in corrective communication strategies. These findings also show the importance of understanding misinformation not as an isolated phenomenon but as an evolving process shaped by digital media exposure, patient beliefs, and broader socio-cultural influences.







The findings of this section demonstrate that health misinformation is not an occasional phenomenon in clinical practice but a recurrent and structurally embedded challenge in doctors' daily interactions with patients in Casablanca. The high frequency of exposure, where a majority of doctors report encountering misinformation-related cases often or very often, suggests that digital health content has become an integral part of the patient's pre-consultation knowledge system. Patients increasingly arrive with pre-formed beliefs shaped by online sources, which directly influences the structure and dynamics of the medical consultation. This shift reflects a broader transformation in health communication, where professional medical authority is continuously negotiated against accessible but unregulated digital information.

From the perspective of the Information Disorder Framework (Wardle & Derakhshan, 2017), these findings highlight the coexistence of multiple forms of misleading content within clinical encounters, particularly misinformation and disinformation circulating through social media platforms. The prevalence of self-medication requests, vaccine hesitancy, and alternative medicine beliefs indicates that patients are not only exposed to false information but are also actively integrating it into their health decision-making processes. This reinforces the idea that misinformation is not passive content consumption but an active driver of behavioral change, particularly in contexts where medical knowledge is partially replaced by informal or non-expert sources. The perceived increase in misinformation-related cases further suggests that doctors are experiencing a growing cognitive and communicative burden in clinical settings. The majority perception of an upward trend that goes hand in hand with post-pandemic dynamics, where COVID-19 significantly accelerated the spread of health-related false narratives and normalized skepticism toward medical institutions. This has likely contributed to a more complex

consultation environment, where doctors must simultaneously diagnose, treat, and correct misinformation within limited time constraints.

In relation to the Health Belief Model, the findings indicate that patient behavior may be influenced by altered perceptions of susceptibility, severity, and treatment effectiveness shaped by online content. When patients adopt misinformation-based beliefs, they may underestimate the seriousness of certain conditions or overestimate the benefits of alternative treatments, which can lead to resistance or delay in following medical advice. This demonstrates how cognitive perceptions formed outside the clinical setting can directly interfere with adherence to professional recommendations.

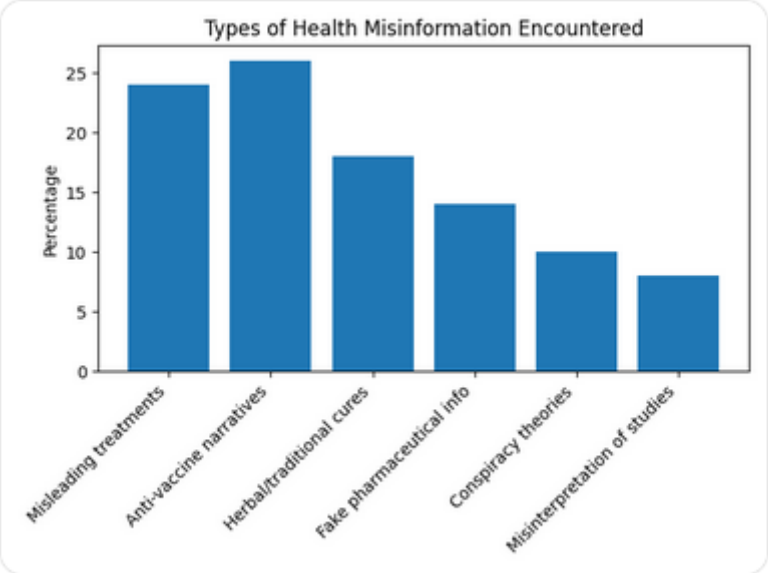
Section 3: Types of Misinformation Observed

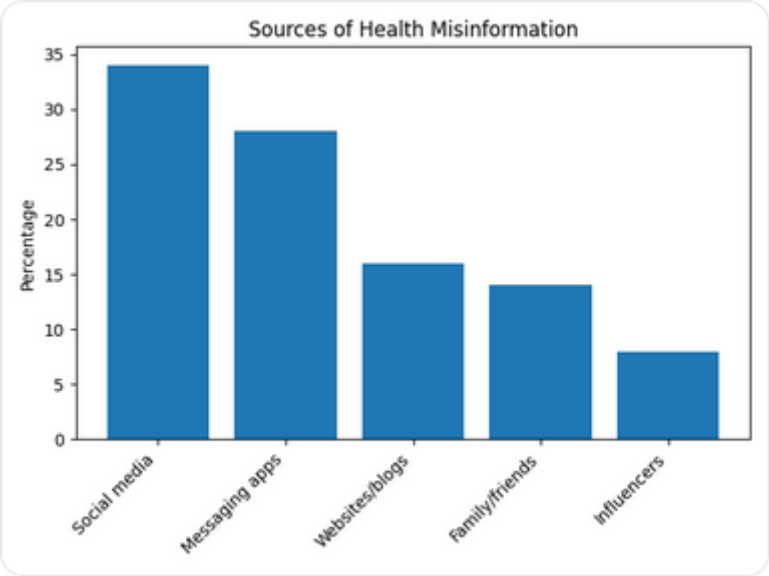
This section examines the types and sources of health misinformation most frequently encountered by doctors in clinical practice in Casablanca, as well as their perceptions of its general prevalence. It aims to identify the dominant forms of misleading health content that patients are exposed to, the main channels through which this information is obtained, and the extent to which misinformation is present in everyday medical consultations. This analysis is essential for understanding the structure of the misinformation ecosystem and how it influences patient beliefs and healthcare interactions.

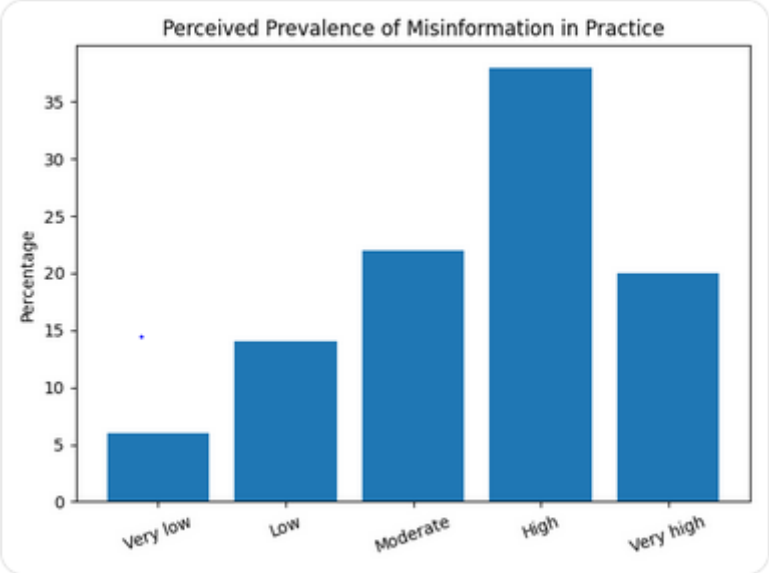
The results regarding the types of misinformation encountered show that anti-vaccine narratives represent the most frequently reported category at 26%, followed by misleading treatment claims at 24%. Herbal and traditional cure exaggerations account for 18%, while fake pharmaceutical information represents 14% of responses. Conspiracy theories related to disease origins constitute 10%, and misinterpretation of scientific studies accounts for 8%. Generally speaking, the findings indicate that misinformation is primarily concentrated in vaccine-related discourse and treatment alternatives, which reflect both global trends and local variations in health belief systems.

In terms of the sources from which patients mainly obtain misinformation, the data reveals that social media platforms such as Facebook, Instagram, and TikTok are the leading source at 34%. Messaging applications, particularly WhatsApp and Telegram, follow closely at 28%. Websites and blogs account for 16%, while family and friends represent 14%, which indicate the continued influence of interpersonal communication. Influencers and content creators account for 8%, which highlight the growing role of digital personalities in shaping health-related perceptions. These results demonstrate that both formal digital platforms and informal social networks contribute significantly to the spread of misinformation.

Regarding the perceived prevalence of misinformation in clinical practice, 6% of doctors consider it very low, while 14% rate it as low. A total of 22% describe it as moderate, whereas 38% consider it high, and 20% perceive it as very high. These findings suggest that a clear majority of doctors experience a high level of exposure to misinformation, which reinforces the idea that it has become a routine feature of patient consultations rather than an occasional occurrence.







The findings of this section highlight the structured and multidimensional nature of health misinformation encountered in clinical practice in Casablanca. The predominance of anti-vaccine narratives and misleading treatment claims suggests that misinformation is strongly concentrated in areas directly related to biomedical trust and treatment decision-making. This goes hand in hand with global patterns observed in post-COVID-19 contexts, where vaccines and pharmaceutical interventions became central targets of online misinformation campaigns. The continued presence of herbal and traditional cure exaggerations also reflects the coexistence of biomedical and traditional health belief systems. This indicates that patients often navigate between scientific medicine and culturally embedded health practices.

From the perspective of the Information Disorder Framework (Wardle & Derakhshan, 2017), these results illustrate the simultaneous presence of misinformation and disinformation within patient beliefs. Anti-vaccine narratives and conspiracy theories may often reflect disinformation due to their structured and intentional circulation in digital ecosystems, while misinterpretations of scientific studies and exaggerated traditional remedies may fall more into misinformation, which arises from misunderstanding or partial knowledge. This distinction is important, as it shows that doctors are not dealing with a single homogeneous type of false information, but rather with multiple layers of informational distortion that require different communication strategies.

The analysis of information sources reveals that social media platforms constitute the primary channel through which patients have access to health-related misinformation. This highlights the central role of algorithm-driven content distribution in shaping health beliefs, where engagement-based platforms amplify emotionally appealing or simplified narratives. Messaging applications, particularly WhatsApp and Telegram, also play a significant role, which suggests that misinformation spreads not only publicly but also through private and semi-private communication networks, where content is more difficult to

monitor or correct. The continued influence of family and friends further indicates that interpersonal trust remains a powerful vector for the transmission of health beliefs, that reinforces misinformation within close social circles. The relatively lower but still notable influence of influencers and content creators reflects the growing authority of non-medical figures in shaping public perceptions of health. The high level of perceived prevalence of misinformation confirms that doctors experience this phenomenon as a consistent and significant challenge in clinical practice. The fact that a majority of respondents classify misinformation exposure as high or very high suggests that it has become embedded in routine medical encounters. This reinforces the idea that misinformation is not an external or occasional disruption but an internalized component of contemporary patient behavior, particularly in digitally connected societies.

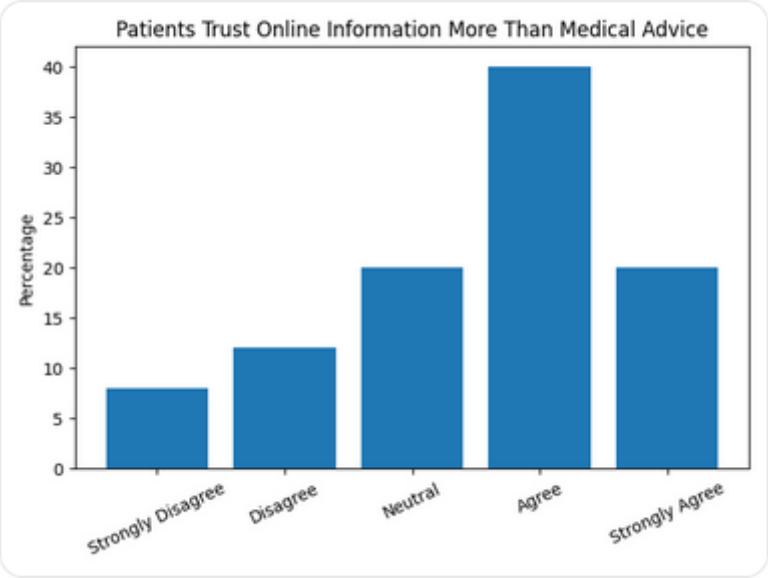
In relation to the Health Belief Model, these findings suggest that exposure to repeated misinformation across multiple channels may significantly influence patients' perceptions of treatment effectiveness and disease seriousness. As patients integrate information from non-medical sources into their belief systems, their health-related decisions may increasingly diverge from evidence-based medical recommendations. This creates additional challenges for doctors, who must navigate not only clinical diagnosis and treatment but also the correction of deeply embedded informational beliefs.

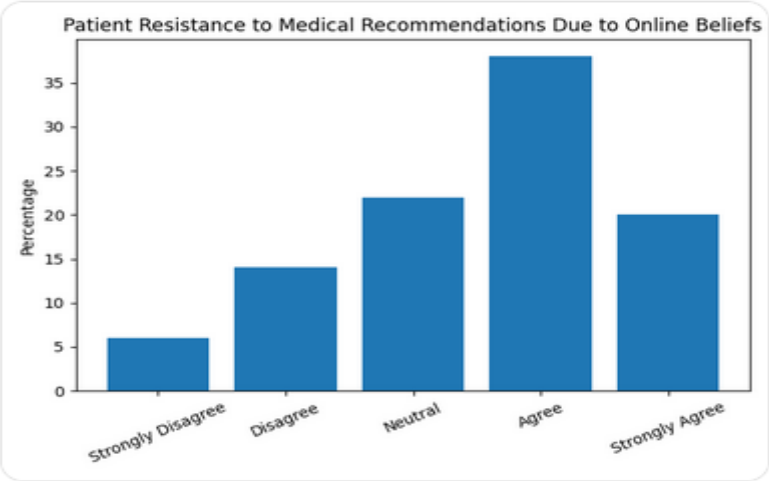
Section 4: Patient Behavior and Response

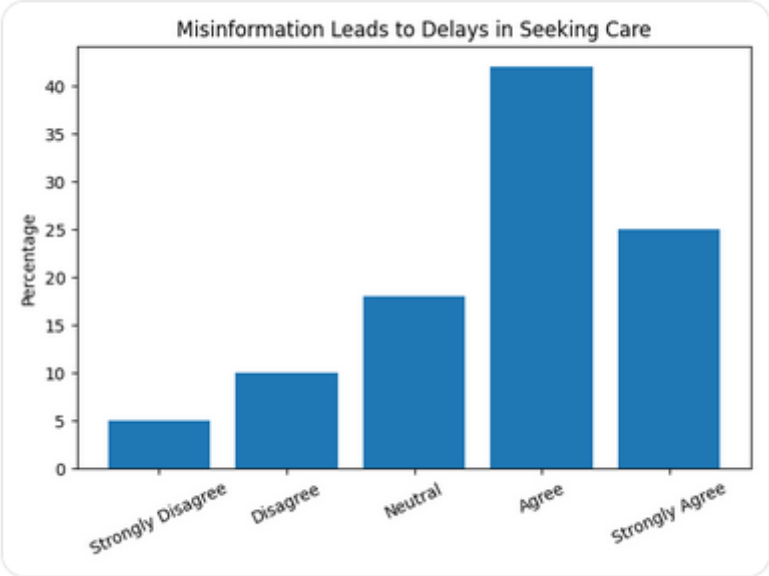
This section examines how patients' exposure to online health misinformation influences their behavior and interaction with medical professionals in Casablanca. It focuses on doctors' perceptions of patient trust in online information compared to medical advice, resistance to clinical recommendations, delays in seeking appropriate care, and the extent to which patients challenge medical authority based on digital sources. This section is essential for understanding the behavioral consequences of misinformation and how it reshapes the doctor–patient relationship in contemporary clinical practice.

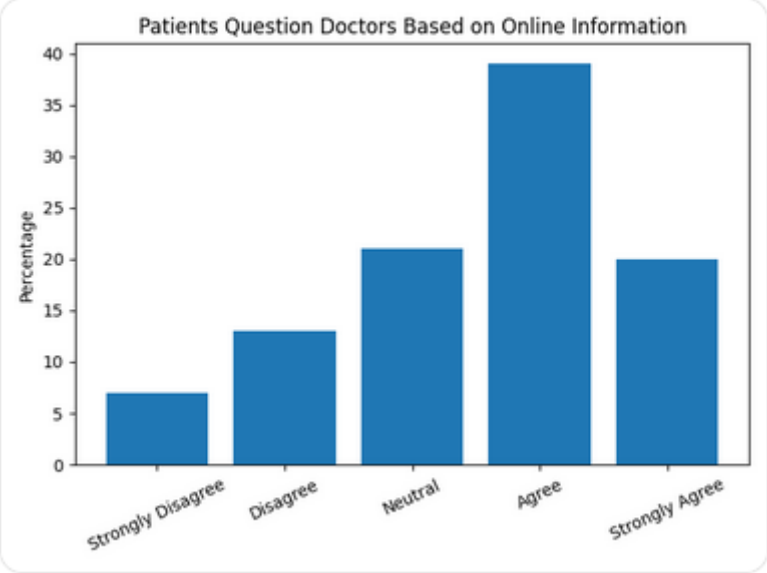
The findings regarding trust in online health information indicate that 8% of doctors strongly disagree that patients trust online information more than medical advice, while 12% disagree. A total of 20% remain neutral, whereas 40% agree and 20% strongly agree. This suggests that a majority of doctors (60%) perceive that patients tend to place significant trust in online health content, sometimes even prioritizing it over professional medical recommendations. In relation to resistance to medical recommendations, 6% of respondents strongly disagree that patients resist treatment due to online beliefs, while 14% disagree. A further 22% remain neutral, whereas 38% agree and 20% strongly agree. These results indicate that 58% of doctors observe a noticeable level of resistance among patients influenced by misinformation, which highlight its direct impact on treatment adherence.

Regarding delays in seeking proper medical care, the results show that 5% of doctors strongly disagree that misinformation contributes to delays, while 10% disagree. A total of 18% remain neutral, whereas 42% agree and 25% strongly agree. This demonstrates that a significant majority (67%) perceive misinformation as a contributing factor to delayed medical consultation and treatment, which may increase health risks and complications. Finally, concerning patients questioning doctors based on online information, 7% strongly disagree, while 13% disagree. A further 21% remain neutral, whereas 39% agree and 20% strongly agree. This indicates that 59% of doctors experience situations where patients challenge medical advice using information obtained from the internet, which reflects a shift in authority dynamics within clinical interactions.




Patient Resistance to Medical Recommendations Due to Online Beliefs
Percentage
0
5
10
15
20
25
30
35
Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree


Misinformation Leads to Delays in Seeking Care
Percentage
0
5
10
15
20
25
30
35
40
Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree


Patients Question Doctors Based on Online Information
Percentage
0
5
10
15
20
25
30
35
40
Strongly Disagree
Disagree
Neutral
Agree
Strongly Agree

The findings of this section highlight a clear transformation in the dynamics of the doctor–patient relationship in the context of widespread health misinformation in Casablanca. The results indicate that a majority of doctors perceive patients as increasingly influenced by online health content, often to the point of prioritizing it over professional medical advice. This shift reflects a general change in informational authority, where digital platforms have become competing sources of legitimacy alongside medical expertise.

From a behavioral perspective, the observed levels of resistance to medical recommendations suggest that misinformation does not remain at the level of belief but translates into concrete actions within clinical settings. Patients influenced by online narratives may question prescribed treatments, delay adherence, or refuse medical interventions altogether. This behavior introduces additional complexity into clinical consultations, as doctors are required not only to diagnose and treat conditions but also to engage in corrective communication aimed at addressing pre-existing misconceptions. The perceived delay in seeking appropriate medical care is particularly significant, as it highlights the potential health risks associated with misinformation exposure. When patients rely on unverified online sources before consulting medical professionals, there is often a delay in diagnosis and treatment, which can lead to the worsening of medical conditions. This finding shows the practical consequences of misinformation beyond communication challenges and extends into public health concerns and patient safety issues.

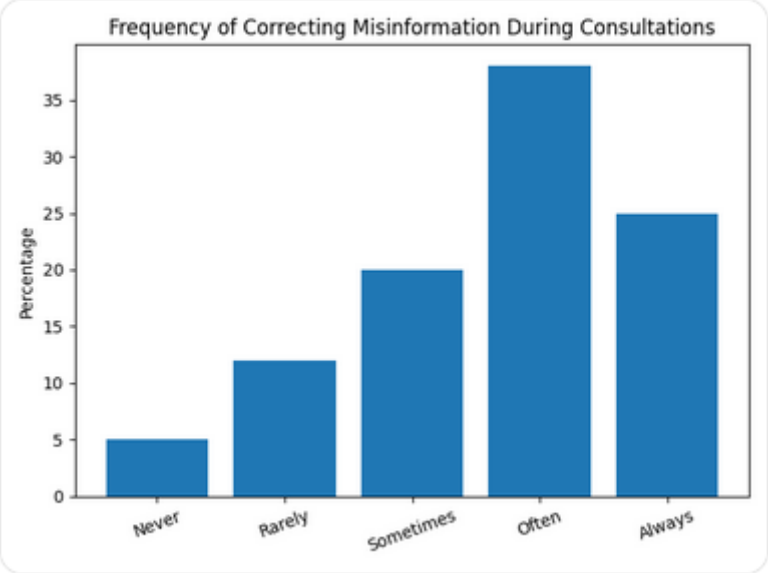
The tendency of patients to question doctors based on online information further illustrates a shift in the traditional authority structure of healthcare. While patient engagement and questioning can be positive when informed by credible sources, the data suggests that such questioning is frequently grounded in unverified or misleading content. This creates tension in the clinical encounter and requires physicians to balance patient-centered communication with the need to correct inaccurate information without undermining trust. Within the framework of the Health Belief Model, these findings suggest that patients' perceptions of susceptibility, severity, and treatment effectiveness are increasingly shaped by external digital influences rather than clinical guidance alone. This altered cognitive framework affects not only decision-making but also adherence to treatment plans and trust in healthcare providers. As a result, misinformation becomes a key determinant of health behavior, which influences both attitudes and actions.

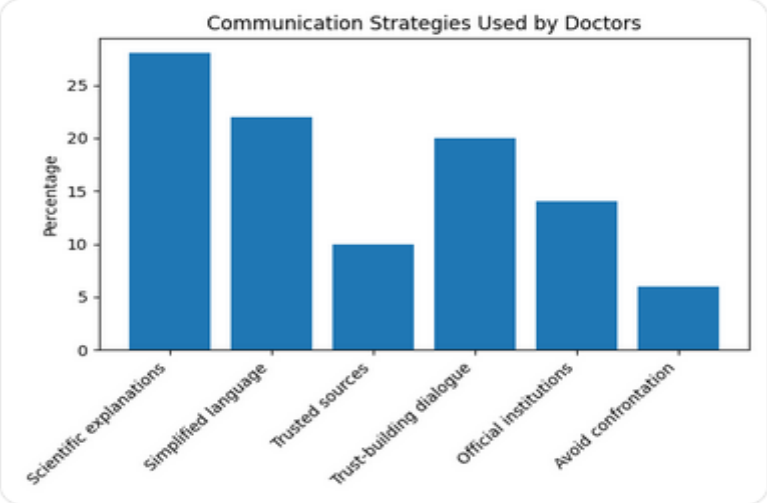
Section 5: Doctors' Communication Strategies

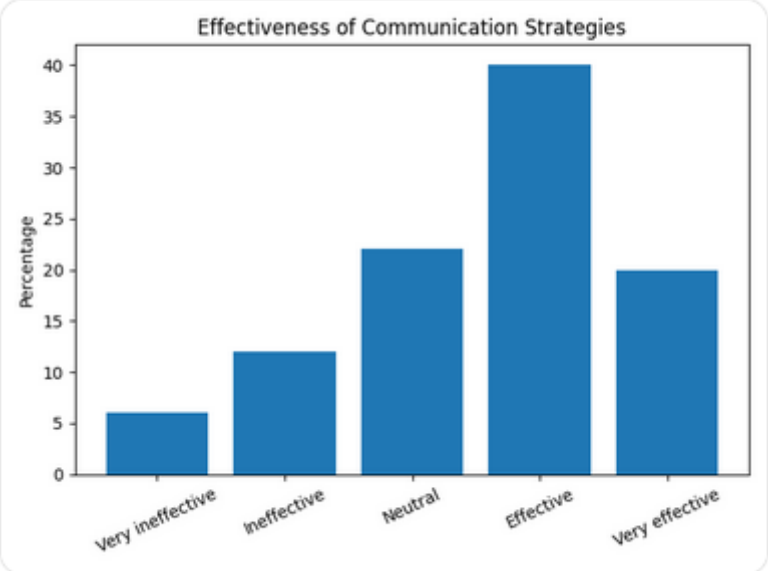
This section examines the communication strategies adopted by doctors in Casablanca when dealing with patients influenced by health misinformation. It focuses on how frequently physicians actively correct misinformation during consultations, the specific techniques they use to manage or counter misleading beliefs, their perceptions of the effectiveness of these strategies, and the extent to which time constraints limit their ability to address misinformation. This section is essential for understanding the professional response to misinformation and how doctors attempt to maintain clinical authority while ensuring effective patient communication.

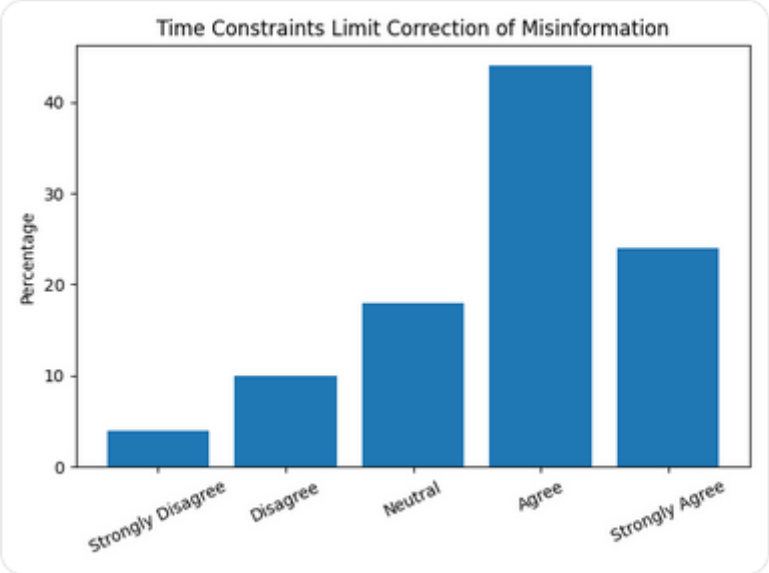
The findings regarding the frequency of correcting misinformation show that 5% of doctors report never actively correcting misinformation during consultations, while 12% indicate that they do so rarely. A total of 20% report correcting misinformation sometimes, whereas 38% do so often, and 25% always engage in corrective communication. This indicates that a majority of doctors (63%) frequently or consistently intervene to address misinformation, which reflects a strong tendency toward active engagement rather than passive acceptance during consultations. In terms of communication strategies used, the most common approach is providing scientific explanations, reported by 28% of doctors. This is followed by using simplified language at 22% and building trust through dialogue at 20%. Referring to official health institutions accounts for 14% of responses, while showing trusted medical sources represents 10%. Avoiding direct confrontation is the least used strategy at 6%, which suggests that most doctors prefer direct but constructive engagement rather than avoiding the issue. These results highlight a preference for educational and trust-based communication approaches when addressing misinformation.

Regarding perceived effectiveness of current strategies, 6% of respondents consider them very ineffective, 12% ineffective, 22% neutral, 40% effective, and 20% very effective. This suggests that a majority of doctors (60%) perceive their communication strategies as effective or very effective in managing misinformation-related discussions, although a significant minority remain uncertain or unconvinced of their effectiveness. Finally, concerning time constraints, the results indicate that 4% strongly disagree that limited consultation time affects their ability to correct misinformation, while 10% disagree. A total of 18% remain neutral, whereas 44% agree and 24% strongly agree. This shows that a clear majority of doctors (68%) perceive time limitations as a significant barrier to effectively addressing misinformation during clinical encounters, which highlights structural constraints within healthcare settings.


Frequency of Correcting Misinformation During Consultations
Percentage
0
5
10
15
20
25
30
35
Never
Rarely
Sometimes
Often
Always


Communication Strategies Used by Doctors
Percentage
0
5
10
15
20
25
Scientific explanations
Simplified language
Trusted sources
Trust-building dialogue
Official institutions
Avoid confrontation


Effectiveness of Communication Strategies
Percentage
0
5
10
15
20
25
30
35
40
Very ineffective
Ineffective
Neutral
Effective
Very effective



The findings of this section highlight that doctors in Casablanca are generally engaged in active communication strategies when addressing health misinformation, which reflects an adaptive professional response to an increasingly complex informational environment. The high proportion of physicians who report frequently correcting misinformation suggests that clinicians do not ignore patients' pre-existing beliefs but instead attempt to integrate corrective communication into routine consultations. This indicates an emerging clinical reality where medical practice involves not only diagnosis and treatment but also continuous negotiation of information validity. The predominance of scientific explanations and simplified language as primary strategies reflects a dual communicative approach: one aimed at maintaining epistemic authority through evidence-based information, and another focused on ensuring patient comprehension. This combination suggests that doctors are aware that simply providing correct information is insufficient unless it is delivered in an accessible and patient-centered manner. The emphasis on trust-building through dialogue further reinforces the importance of relational communication in overcoming resistance to medical advice, particularly in contexts where patients may already hold strong beliefs shaped by online content.

The relatively lower reliance on avoidance or indirect confrontation indicates that most physicians prefer to address misinformation directly rather than ignore it. This approach is significant, as it reflects an understanding that unchallenged misinformation may reinforce patient misconceptions and negatively affect treatment adherence. However, the variation in strategies also suggests that doctors adapt their communication style depending on patient responsiveness, consultation context, and the perceived severity of misinformation. Despite the generally positive perception of effectiveness, a notable proportion of doctors remain uncertain about the success of their current communication strategies. This ambivalence may reflect the inherent difficulty of correcting deeply rooted beliefs, particularly when such beliefs are reinforced by repeated exposure to online content. It also suggests that while communication efforts are ongoing, their outcomes are not always immediately visible or measurable within the clinical encounter.

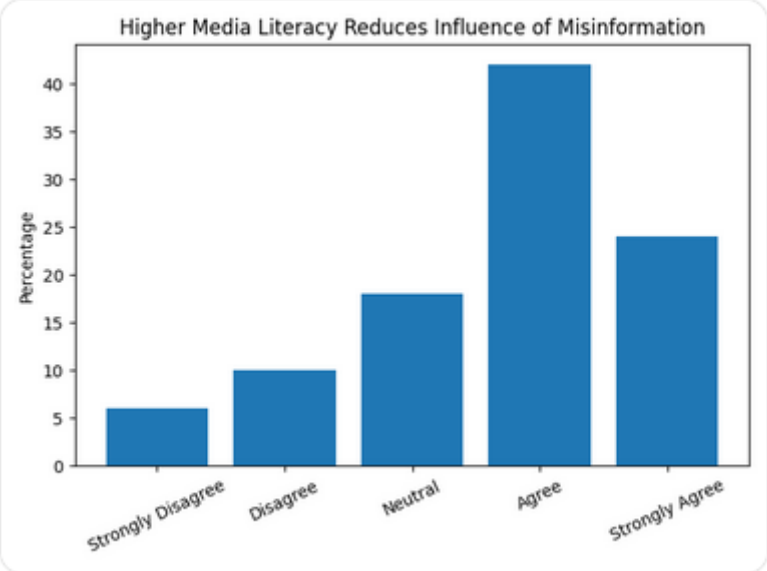
The finding that time constraints significantly limit the ability to address misinformation is particularly important. It highlights a structural challenge within healthcare systems, where limited consultation time restricts the depth of communication that can be achieved. This constraint may reduce the effectiveness of even well-designed communication strategies, as doctors are often required to balance multiple clinical priorities within a short timeframe. As a result, misinformation correction becomes an additional cognitive and temporal burden rather than an integrated component of patient care. From the perspective of Media Literacy Theory, these findings suggest that while doctors are actively attempting to compensate for low patient media literacy, the responsibility for addressing misinformation is largely shifted onto healthcare professionals rather than being shared with general educational or public health systems. This creates an imbalance where clinicians must continuously respond to externally generated misinformation without sufficient systemic support.

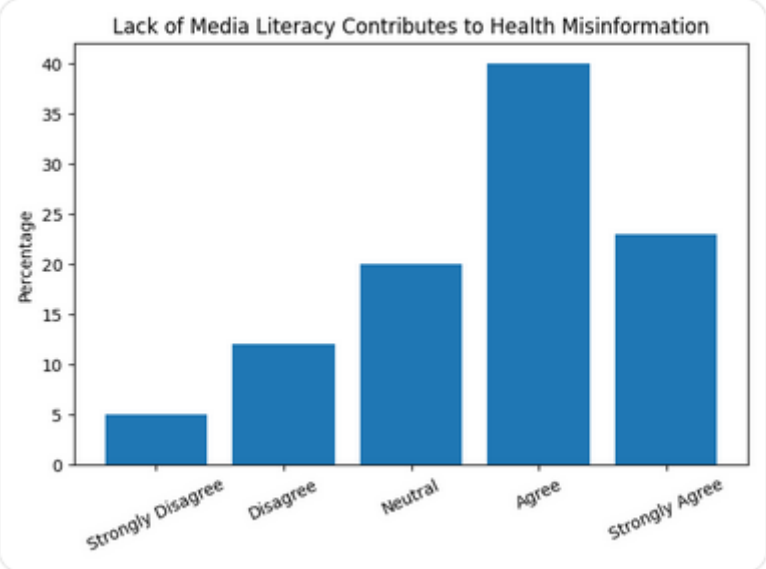
Section 6: Media Literacy and Patient Behavior

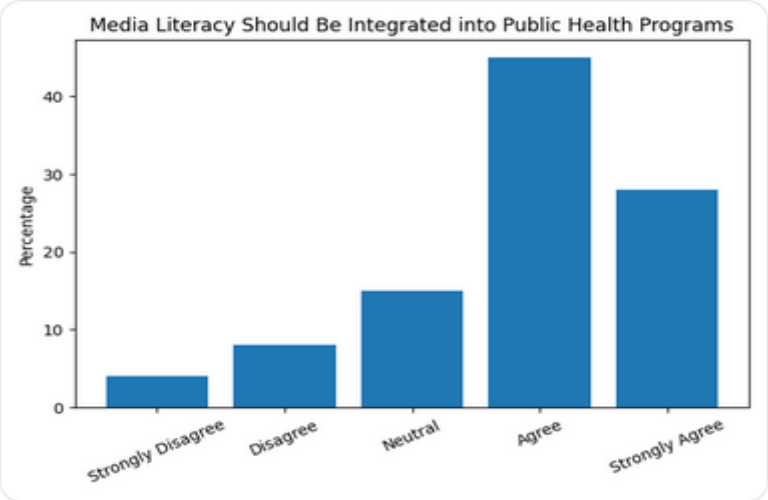
This section explores the relationship between media literacy and patient behavior as perceived by doctors in Casablanca. It focuses on whether higher levels of media literacy reduce patients' susceptibility to health misinformation, the extent to which limited media literacy contributes to the spread of false health information, and the perceived need to integrate media literacy education into public health strategies. This section is essential for understanding the preventive role of media literacy in reducing the impact of misinformation and improving the quality of health decision-making among patients. The findings regarding the influence of media literacy on patient susceptibility indicate that 6% of doctors strongly disagree that patients with higher media literacy are less influenced by misinformation, while 10% disagree. A total of 18% remain neutral, whereas 42% agree and 24% strongly agree. This suggests that a clear majority of respondents (66%) believe that higher media literacy significantly reduces the likelihood of patients being influenced by misleading health information.

In relation to the role of media literacy in the spread of misinformation, the results show that 5% of doctors strongly

disagree that lack of media literacy is a major contributing factor, while 12% disagree. A further 20% remain neutral, whereas 40% agree and 23% strongly agree. This indicates that 63% of respondents recognize insufficient media literacy as a key driver in the dissemination and acceptance of health misinformation. Regarding the integration of media literacy into public health programs, 4% of doctors strongly disagree with this proposal, while 8% disagree. A total of 15% remain neutral, whereas 45% agree and 28% strongly agree. This demonstrates strong support among doctors, with 73% favoring the inclusion of media literacy education within public health initiatives as a strategy to mitigate misinformation and improve patient awareness.







The findings of this section emphasize the central role of media literacy as a protective factor against health misinformation in the context of patient behavior in Casablanca. Doctors strongly perceive that higher levels of media literacy reduce patients' susceptibility to misleading health content, that reinforces the idea that critical engagement with digital information is essential for informed health decision-making. This perception goes hand in hand with Media Literacy Theory (Potter, 2010), which highlights the importance of individuals' ability to access, analyze, and evaluate media messages in shaping their understanding of reality, particularly in health-related contexts.

The strong agreement that low media literacy contributes significantly to the spread of misinformation suggests that doctors view misinformation not only as a content problem but also as a skills deficit issue. In other words, the persistence of false health beliefs is not solely due to the availability of misleading information but also due to patients' limited ability to critically assess the credibility of digital sources. This interpretation is consistent with general research indicating that individuals with lower media literacy are more likely to accept online information without verification, especially when it is emotionally appealing or presented in an authoritative tone.

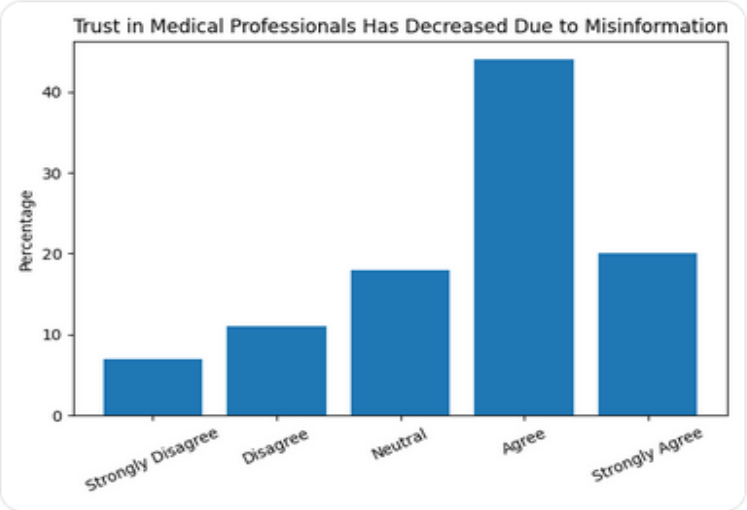
The high level of support for integrating media literacy education into public health programs reflects a clear recognition among doctors of the need for systemic intervention beyond the clinical setting. Rather than placing the responsibility solely on healthcare professionals to correct misinformation during consultations, respondents appear to advocate for a more preventive approach that equips the public with critical evaluation skills before misinformation influences health behavior. This suggests an understanding that effective management of misinformation requires upstream interventions at the level of education and public health policy.

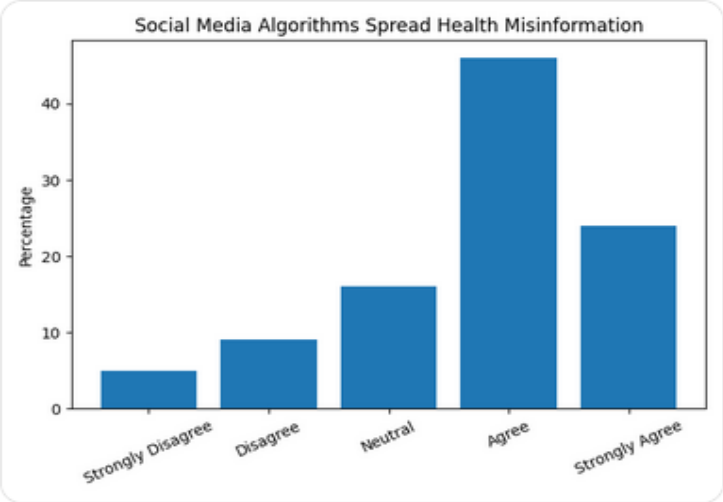
From a behavioral perspective, these findings complement the Health Belief Model by suggesting that patients' health decisions are shaped not only by perceptions of susceptibility and severity but also by their ability to critically process health information. Media literacy, therefore, functions as an enabling factor that influences how individuals interpret health risks and treatment options, ultimately affecting adherence to medical advice.

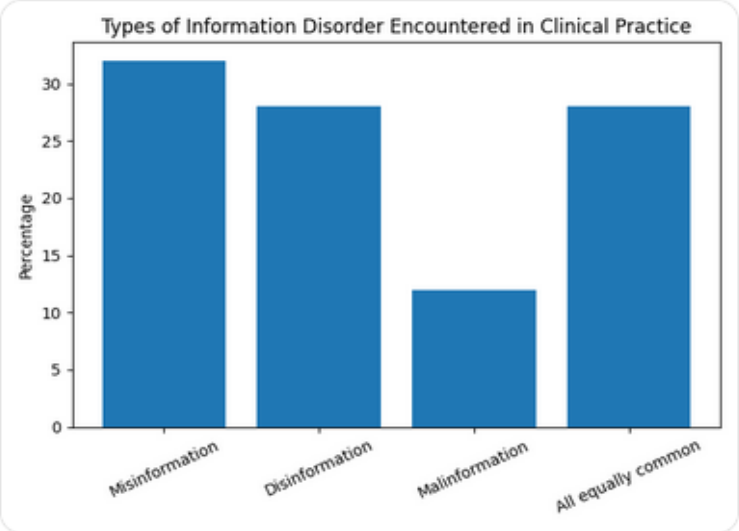
Section 7: Institutional Trust and Information Disorder

This section examines the relationship between institutional trust and the dynamics of information disorder as perceived by doctors in Casablanca. It focuses on whether online misinformation has contributed to a decline in trust in medical professionals, the perceived role of social media algorithms in amplifying misleading health content, and the most commonly encountered types of information disorder in clinical practice. This section is essential for understanding how digital platforms influence trust in healthcare institutions and shape the informational environment in which medical consultations take place. The findings regarding trust in medical professionals indicate that 7% of doctors strongly disagree that trust has decreased due to online misinformation, while 11% disagree. A total of 18% remain neutral, whereas 44% agree and 20% strongly agree. This suggests that a majority of respondents (64%) perceive a decline in institutional trust, which they attribute at least in part to the influence of online misinformation and competing health narratives circulating on digital platforms.

In relation to the role of social media algorithms, the results show that 5% of doctors strongly disagree that algorithms contribute to the spread of misleading health information, while 9% disagree. A further 16% remain neutral, whereas 46% agree and 24% strongly agree. This indicates that 70% of respondents recognize algorithmic systems as significant drivers in the amplification and dissemination of health misinformation, which reinforce concerns about the structural nature of the information disorder ecosystem. Regarding the most commonly encountered type of information disorder, 32% of doctors identify misinformation as the most frequent form, while 28% report disinformation. A total of 12% point to malinformation, and 28% consider all types to be equally common in clinical practice. These findings suggest that doctors are exposed to a complex mix of information disorder types, with no single category dominating entirely, although misinformation and disinformation remain the most prominent forms in patient interactions.







The findings of this section highlight a growing concern among doctors regarding the erosion of institutional trust in healthcare, alongside the increasing complexity of the digital information environment. The majority perception that trust in medical professionals has declined due to online misinformation suggests that clinical authority is no longer taken for granted and is increasingly subject to external influence. This shift reflects a transformation in the epistemic element of healthcare, where patients are exposed to multiple, often contradictory, sources of information that compete with medical expertise. From the perspective of the Information Disorder Framework (Wardle &

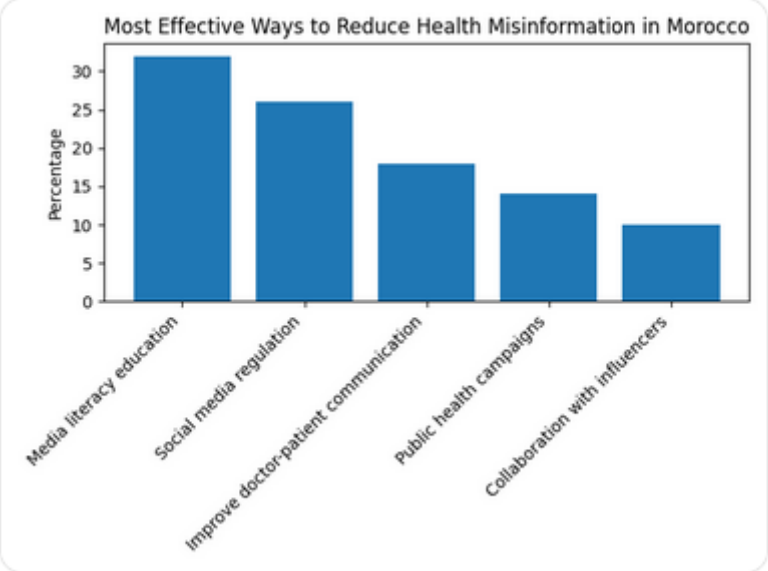
Derakhshan, 2017), the results illustrate the simultaneous presence of misinformation, disinformation, and malinformation within clinical contexts. The fact that doctors report encountering all forms relatively frequently indicates that the informational environment is not only saturated but also heterogeneous in its nature and intent. This complexity makes it more difficult for healthcare professionals to address false or misleading information using a single standardized communication approach, as each category requires different corrective strategies.

The strong recognition of social media algorithms as contributors to misinformation diffusion sheds light on the structural dimension of the problem. Rather than being solely driven by individual behavior, the spread of misleading health content is also shaped by platform design, engagement-driven recommendation systems, and content amplification mechanisms. This suggests that doctors perceive misinformation not only as a communication challenge but also as a systemic issue embedded within digital infrastructures that prioritize visibility and engagement over accuracy. The perceived decline in institutional trust has important implications for doctor–patient relationships. Reduced trust may lead to increased questioning of medical advice, delayed acceptance of treatment, or greater reliance on non-medical sources of information. This can complicate clinical decision-making and place additional pressure on physicians to continuously justify and validate their recommendations. In this context, trust becomes a central mediating factor between information exposure and health behavior.

Section 8: Final Opinion

This section explores doctors' final opinions regarding the most effective strategies to reduce health misinformation in Morocco. Responses are coded thematically into key categories based on recurring suggestions provided by participants. The aim is to identify priority intervention areas from a clinical perspective, particularly in relation to policy, education, digital regulation, and healthcare communication strategies.

The analysis shows that the most frequently suggested solution is the implementation of structured media literacy and public education programs, representing 32% of responses. This is followed by stronger regulation of social media platforms and online health content at 26%, reflecting concerns about algorithm-driven misinformation dissemination. A total of 18% of doctors emphasize the importance of improving doctor–patient communication and consultation quality as a key intervention strategy. Additionally, 14% highlight the need for official public health campaigns led by trusted institutions, while 10% suggest increasing collaboration with digital influencers and online content creators to disseminate accurate health information.



The findings of this section highlight a clear convergence of perspectives among doctors regarding the most effective strategies to reduce health misinformation in Morocco, with a strong emphasis on structural and preventive interventions. Rather than focusing exclusively on correcting misinformation at the point of clinical contact, respondents prioritize upstream solutions that target the root causes of misinformation exposure, particularly through education, regulation, and public communication systems. The most prominent recommendation, media literacy education, reflects a consistent theme across the study: misinformation is not only a content problem but also a skills-based issue related to the public's ability to critically evaluate health information. This reinforces the findings in Section 6, where doctors emphasize the protective role of media literacy in reducing susceptibility to misleading health content. The strong support for this approach indicates a perceived need for long-term educational strategies that equip individuals with critical thinking skills before misinformation influences health decisions.

The second most common recommendation, stronger regulation of social media platforms, highlights growing concern about the structural role of digital environments in amplifying misinformation. This goes hand in hand with the findings in Section 7, where doctors identified social media algorithms as significant drivers of information disorder. The emphasis on regulation suggests that physicians perceive misinformation not only as an individual-level issue but also as a systemic problem embedded within platform architectures that prioritize engagement over accuracy. The importance placed on improving doctor–patient communication further reflects recognition of the clinical setting as a critical point of intervention. Although doctors already report

actively engaging in corrective communication strategies (as shown in Section 5), this result suggests that such efforts alone are not sufficient. Instead, there is a perceived need for strengthening communication frameworks, consultation time, and relational trust to enhance the effectiveness of misinformation correction within clinical encounters.

The mention of public health campaigns indicates continued reliance on institutional actors to provide authoritative and accessible health information. This goes with concerns about declining institutional trust discussed in Section 7, which suggests that strengthening the visibility and credibility of official health messaging remains an important strategy in counteracting misinformation. Finally, the suggestion to collaborate with digital influencers reflects an adaptive recognition of the changing information ecosystem. It acknowledges that health communication is no longer confined to traditional institutions but increasingly shaped by online personalities who can significantly influence public perceptions. This indicates an emerging strategy of engaging with the same digital spaces where misinformation circulates, rather than relying solely on conventional communication channels.

Final Conclusions

General Results and Findings

The findings of this study reveal that health misinformation is a pervasive and structurally embedded phenomenon within clinical practice in Casablanca. Based on responses from practicing medical doctors, the results indicate that misinformation is no longer an occasional disruption in consultations but has become an integral part of patient interactions in the digital age. Patients frequently arrive in clinical settings with pre-formed beliefs shaped by online sources, social networks, and algorithmically curated content, which directly influences their interpretation of medical advice and treatment options.

A key finding of the study is that misinformation operates across multiple informational layers which range from misunderstandings of medical content to deliberately constructed false narratives and hybrid forms of misleading information. Doctors report encountering a wide spectrum of distorted health claims, particularly in relation to vaccines, alternative treatments, and chronic disease management. These findings reflect the complexity described in the Information Disorder Framework (Wardle & Derakhshan, 2017), where misinformation, disinformation, and malinformation coexist within the same informational environment and often intersect in clinical encounters. The results also indicate that digital platforms play a central role in shaping patient beliefs prior to medical consultation. Social media networks and messaging applications are consistently identified as primary channels through which health-related content is consumed and shared. The algorithmic nature of these platforms contributes to the amplification of emotionally engaging or simplified health narratives, which may not go hand in hand with scientific evidence. This structural dimension suggests that misinformation is not solely the result of individual misinterpretation but is also shaped by the architecture of digital information systems.

From a behavioral perspective, the findings demonstrate that exposure to online health information significantly influences patient attitudes and actions in clinical settings. Doctors report that patients often question medical recommendations, delay treatment decisions, or express resistance to prescribed therapies based on information obtained online. These behaviors indicate that health decision-making is increasingly shaped by competing knowledge systems, where digital information sources interact with traditional medical authority. When interpreted through the Health Belief Model (Rosenstock, 1974), these findings suggest that patients' perceptions of illness severity, susceptibility, and treatment effectiveness are increasingly mediated by external digital inputs rather than solely by clinical guidance. As a result, health-related behaviors such as adherence to treatment and willingness to seek timely care are influenced by a combination of medical advice and online narratives, which may reinforce or contradict each other.

The study also highlights the central role of media literacy in shaping patients' ability to critically evaluate health information. Doctors consistently associate higher levels of media literacy with greater resistance to misinformation, while limited media literacy is viewed as a key vulnerability factor. In this sense, media literacy functions as a cognitive filter that determines how individuals interpret and validate health-related content in digital environments, as emphasized by Potter's Media Literacy Theory (2010). In terms of clinical practice, doctors report actively engaging in corrective communication strategies when encountering misinformation. These strategies include simplifying medical explanations, providing scientific justification, and attempting to rebuild trust through dialogue. However, their effectiveness is often constrained by structural limitations, particularly time pressure during consultations and the persistence of deeply held patient beliefs reinforced by online content.

Another important finding relates to institutional trust. The results suggest that medical authority is increasingly challenged by alternative digital sources of information. While doctors remain central figures in healthcare decision-making, their authority is no longer automatically accepted and must often be negotiated during consultations. This shift reflects a general transformation in the relationship between institutional knowledge and networked digital information systems. Finally, the findings indicate a strong consensus among doctors regarding the need for systemic responses to health misinformation. Rather than relying solely on clinical correction, respondents emphasize the importance of media literacy education, regulatory oversight of digital platforms, and improved public health communication strategies. Some also highlight the potential role of digital influencers in disseminating accurate health information, which suggest a shift toward more hybrid communication ecosystems.

Recommendations

The following recommendations are drawn from the findings of this study and are informed by the integrated theoretical framework combining the Information Disorder Framework, the Health Belief Model, and Media Literacy Theory. They aim to address the diversified nature of health misinformation by proposing interventions at the educational, institutional, digital, and community levels. The objective is to strengthen preventive capacities, improve clinical communication, and enhance public access to reliable health information in the Moroccan context:

Public Health Education

The findings of this study highlight the need for strengthening public health education as a foundational strategy to reduce vulnerability to health misinformation. Media literacy should be systematically integrated into school curricula to equip individuals from an early age with the ability to critically evaluate digital health information. In addition, national awareness campaigns should be developed to address the risks associated with online health misinformation, with a particular focus on promoting accurate understanding of common health issues and improving public awareness of reliable information sources.

Healthcare System Strategies

Within the healthcare system, there is a clear need to support medical professionals in managing misinformation more effectively during clinical encounters. Targeted training programs should be introduced to enhance doctors' communication skills, particularly in relation to correcting misinformation in a clear, empathetic, and effective manner. Emphasis should be placed on non-confrontational correction techniques that preserve patient trust while addressing inaccurate beliefs, which can allow for more constructive doctor–patient interactions.

Digital Platform Regulation

Given the central role of social media in the spread of health misinformation, stronger collaboration between public health authorities and digital platforms is necessary. Platforms such as Facebook and TikTok should be engaged in efforts to identify and flag false or misleading health content more effectively. At the same time, the promotion of verified medical pages and official health communication channels should be strengthened to ensure that users have easier access to reliable and evidence-based health information.

Community Engagement

Community-level interventions are also essential in addressing gaps in digital and health literacy. Community health workers can play an important role in bridging these gaps by providing accessible, localized health education and guidance. Furthermore, the development of health communication content in local languages, particularly Darija, should be encouraged to improve accessibility and comprehension to ensure that accurate health information reaches wider segments of the population.

Study Limitations

This study presents several limitations that should be acknowledged when interpreting its findings. First, the research relies on self-reported perceptions from medical doctors, which may introduce subjective bias. As responses are based on individual experiences and professional interpretations, they may not fully capture the complete scope or frequency of health misinformation encountered in clinical practice. Second, the sample size is limited to 60 doctors practicing in Casablanca, which restricts the generalizability of the findings. While the sample provides valuable insights into the local clinical context, it does not allow for national-level conclusions across all regions of Morocco or across different healthcare systems.

Third, the quantitative descriptive design used in this study does not allow for an in-depth exploration of patient perspectives or the nuanced interactions that occur during clinical consultations. As a result, the findings primarily reflect doctors' viewpoints rather than a comprehensive view that includes patient experiences and interpretations. Finally, it should be noted that the types of misinformation reported in this study are based on doctors' observations rather than clinically verified or systematically validated classifications. This means that the categorization of misinformation is interpretive and may vary depending on individual clinical judgment and experience.

Final Conclusion

This study investigates the impact of health misinformation and media literacy on patient behavior in Casablanca from the perspective of medical doctors. The findings indicate that health misinformation has become a frequent phenomenon within clinical practice, which reflect its growing presence in patients' everyday information environments. Social media platforms and messaging applications emerge as the main channels through which patients are exposed to health-related content that reinforces the central role of digital ecosystems in shaping health perceptions prior to medical consultation. The results further show that patients often attribute significant credibility to online information, at times placing it equal to or above professional medical advice. This tendency is closely linked to insufficient levels of media literacy, which limits patients' ability to critically evaluate the reliability of health information encountered online. As a result, exposure to misinformation influences health beliefs, decision-making processes, and adherence to medical recommendations.

From a clinical perspective, doctors report increasing difficulties in addressing and correcting false beliefs during consultations. These challenges are compounded by time constraints and the persistence of pre-existing patient convictions reinforced through repeated digital exposure. Consequently, misinformation becomes not only a matter of incorrect information but also a practical barrier within the doctor–patient relationship. Therefore, this study confirms that health misinformation in Casablanca should be understood as a multidimensional issue that extends beyond information accuracy. It represents a combined informational, behavioral, and communicational challenge that affects trust in medical authority, patient decision-making, and the effectiveness of healthcare delivery.

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Appendix:

Questionnaire:

This questionnaire is part of an academic research study. Your responses are confidential and will be used for scientific purposes only. Please answer all questions honestly by selecting the option that best reflects your opinion or experience.

Section 1: Demographic Information

1. Age:
   ☐ 25–30 ☐ 31–40 ☐ 41–50 ☐ 51–60 ☐ 60+
2. Gender:
   ☐ Male ☐ Female ☐ Prefer not to say
3. Years of clinical experience:
   ☐ 2–5 years ☐ 6–10 years ☐ 11–20 years ☐ More than 20 years
4. Type of practice:
   ☐ Public sector ☐ Private sector ☐ Both

Section 2: Exposure to Health Misinformation

5. How often do you encounter patients influenced by online health misinformation?
   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Very often
6. In your opinion, has the frequency of misinformation-related cases increased in recent years?
   ☐ Strongly disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree
7. In which contexts do you most frequently encounter misinformation?
   ☐ Self-medication requests
   ☐ Vaccine hesitancy
   ☐ Chronic disease management
   ☐ Alternative medicine beliefs
   ☐ COVID-19-related beliefs
   ☐ Other: _____

Section 3: Types of Misinformation Observed

8. What types of misinformation do you most frequently encounter? (Multiple answers possible)
   ☐ Misleading treatment claims
   ☐ Anti-vaccine narratives

☐ Herbal/traditional cure exaggerations

☐ Fake pharmaceutical information

☐ Conspiracy theories (e.g., disease origins)

☐ Misinterpretation of scientific studies

9. Patients mainly obtain misinformation from: (Multiple answers possible)

☐ Social media (Facebook, Instagram, TikTok)

☐ Messaging apps (WhatsApp, Telegram)

☐ Websites/blogs

☐ Family/friends

☐ Influencers/content creators

10. Rate the prevalence of misinformation in your clinical practice:

☐ Very low ☐ Low ☐ Moderate ☐ High ☐ Very high

Section 4: Patient Behavior and Response

(5-point Likert Scale: 1 = Strongly Disagree, 5 = Strongly Agree)

11. Patients often trust online health information more than medical advice.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

12. Patients resist medical recommendations due to beliefs formed online.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

13. Misinformation leads to delays in seeking proper medical care.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

14. Patients frequently question doctors based on information found online.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section 5: Doctors' Communication Strategies

15. How often do you actively correct misinformation during consultations?

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

16. Which strategies do you use? (Multiple answers possible)

☐ Providing scientific explanations

☐ Using simplified language

☐ Showing trusted medical sources

☐ Building trust through dialogue

☐ Referring to official health institutions

☐ Avoiding direct confrontation

17. Rate the effectiveness of your current communication strategies:

☐ Very ineffective ☐ Ineffective ☐ Neutral ☐ Effective ☐ Very effective

18. Time constraints limit your ability to correct misinformation effectively.

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section 6: Media Literacy and Patient Behavior

(5-point Likert Scale)

19. Patients with higher media literacy are less influenced by misinformation.
    1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
20. Lack of media literacy is a major factor in the spread of health misinformation.
    1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
21. Media literacy education should be integrated into public health programs.
    1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Section 7: Institutional Trust and Information Disorder

22. Trust in medical professionals has decreased due to online misinformation.
    1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
23. Social media algorithms contribute to the spread of misleading health information.
    1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
24. Please indicate the most common type of misinformation you encounter:
    ☐ Misinformation ☐ Disinformation ☐ Malinformation ☐ All equally common

Section 8: Final Opinion

In your opinion, what is the most effective way to reduce health misinformation in Morocco?