

New media as a tool for health education and modeling the behavior of contemporary society – threats

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Abstract

The development of new media has significantly transformed the way individuals acquire health information and shape pro-health attitudes and behaviors. The aim of this article is to analyze the role of new media in health education and to identify the risks associated with their use in the context of public health and social security. Due to their interactivity, accessibility, and broad reach, new media constitute an effective tool for disseminating health knowledge, promoting prevention, and modeling health-promoting behaviors. At the same time, they pose numerous risks, including the spread of health misinformation, the promotion of unverified treatment methods, the medicalization of everyday life, digital media dependency, and a reduced ability to critically evaluate information. These phenomena may negatively affect society's health security, weaken trust in healthcare institutions, and lead to unfavorable health decisions. The article also emphasizes the importance of media literacy as a key factor in protecting individuals from information-related threats and highlights the need to integrate health education with media literacy education. Modern health policy should treat new media both as a valuable tool supporting health promotion and as an area requiring monitoring, regulation, and preventive measures to minimize social and health-related risks.

Keywords: new media; health education; health security; health misinformation; health promotion; health behaviors; media literacy; health policy; information security; public health

1. Introduction

Health is a fundamental right of every human being, so all available media channels should be used to promote it. The media exert a strong educational influence, both planned and unplanned, on public health, which, as it were, determines the functioning of any society. Through the use of new media, the effectiveness of prevention and health promotion in influencing human health is increasing. The means of interpersonal communication are able to quickly influence the attitudes, behavior, actions and health-promoting knowledge of the individual. Therefore, under current conditions, it seems necessary to combine the forces of new media with health promotion activities, it is reasonable to disseminate knowledge about health and disease using them. The media, despite some of their imperfections, are an ally in the effort to improve society's health and a source of up-to-date information for a pro-health lifestyle.

The use of information and communication technology in gaining knowledge about health, treating and diagnosing diseases, and forming appropriate health-promoting behaviors is a subject of increasing interest in the literature (Turbiarz, 2010; Borowiec, Lignowska, Drygas, 2012; Cupiał, Mastalerz-Migas, 2013; Nowak, 2015; Korczyńska, Skonieczna, Kielan, Cieślak, Olejniczak, 2016). Nowadays, mass media occupy an important place in the search for health information. The author, pointing to the issue of the use of various communication channels and techniques in the health education of modern society, intends, without disregarding the virtues of such activities, however, to emphasize the existing risks associated with the growing scale of use in this area of the so-called new media. Intends to emphasize that the formation of an appropriate attitude towards health, disease and prevention today requires the use of attractive means of communication, however, social incompetence in the use

of new technologies can determine the impact of information and communication technology in the acquisition of knowledge about health. One of them is a critical attitude, which, involving the intellect, “excludes a naive attitude to the content published in the media, submission to other people's opinions and propaganda content, and assumes knowledge of the main mechanisms of the media, emotional distance from the messages received, and drawing information from multiple sources and comparing them.

The issues discussed in this article are also of significant research importance in the field of security sciences, particularly in health, information, and social security. In security studies, public health is seen as a key resource that shapes the stability of the state system and its resilience to internal and external threats.

New media are now an important element of the security environment, as they are a space for information exchange in which non-military threats can arise and escalate. Health misinformation, manipulation of medical messages, and the dissemination of pseudoscientific content can lead to decreased population health security, weakened trust in public institutions, and disruption of the healthcare system.

For this reason, the analysis of threats arising from the use of new media in health education falls within the scope of research on asymmetric and hybrid threats characteristic of the contemporary security environment.

1. Health Education and the Modeling of Pro-Health Behaviors

Within the field of health policy as a scientific discipline, health behaviors—those that directly influence human health—are among the key areas of research. These behaviors do not arise spontaneously; rather, they are shaped within the social environment. This environment exerts a significant influence on the formation and consolidation of various behaviors, habits, and individual choices. In this context, health policy analyzes and examines the principles necessary for achieving established health objectives. It also defines methods of restoring health through the treatment of diseases, the elimination of medical conditions, and the maintenance and strengthening of overall health.

Returning to health policy as an activity of the state, it should be noted that it signifies “the adoption of a concept of citizens’ health protection, expressed through a system of organized actions, facilities, institutions, and legal norms serving the health of society.” This definition outlines the scope of the state’s responsibilities and obligations. A much broader understanding of health policy is reflected in the view that it constitutes “[...] a process of institutionally generated events relating to health issues at a supra-individual level, in which authoritative decisions are present. Elements of this process may include decisions to undertake or not undertake actions, actions implemented and realized, and actions not undertaken or abandoned. Its elements may also include ideological assumptions and value judgments that guide and justify decisions, as well as an active or passive stance toward a given problem.” Although extensive in scope and characteristics, this definition primarily refers to numerous public actions. However, it lacks explicit feedback regarding actual social implications, and most importantly, reference to health needs. It may only be assumed that this category is implicitly present, as it is difficult to imagine numerous actions and decisions being undertaken without real, existing needs that the health system is intended to satisfy.

The primary objective of health policy as a form of action is to prevent the deterioration of the population’s health status and to maintain such a health structure of society that prevents a decline in population size. In the face of a growing demographic crisis in our country, this may prove extremely challenging. Another fundamental objective of health policy, in its practical dimension, is to create living conditions that improve the population’s health status. A more specific objective is to enable every citizen to actively participate in shaping health resources through activities such as reducing alcohol consumption, limiting tobacco use, and increasing physical activity.

Health education constitutes an integral component of health policy as a practical activity. It represents a system for shaping knowledge, awareness, attitudes, and human behaviors across various domains, including economic, social, and cultural spheres. Health education is also a part of general education. Therefore, it employs the conceptual framework of general education as well as the experience of other disciplines, such as biology, medicine, statistics, psychology, pedagogy, and sociology.

Health education is a pedagogical process aimed at encouraging actions directed toward the continuous improvement of health status. Consequently, it is closely associated with enhancing quality of life and promoting physical, social, and mental well-being. It encompasses not only knowledge about what is beneficial or harmful to health, but also the development of skills and attitudes that enable individuals to effectively apply this knowledge. Against the background of the above considerations, a key issue in contemporary health policy becomes clear, the use of new media as a tool for health education and the modeling of social behaviors. Digital media currently constitute a primary source of information, shaping habits and health-related decisions, and reaching diverse age and social groups more rapidly than traditional forms of education. At the same time, this development creates numerous risks:

- the spread of health-related misinformation,
- the promotion of risky and anti-health behaviors,
- media dependency negatively affecting psychological and social well-being,
- the simplification of educational content in favor of attractive but unreliable information,

- the polarization and manipulation of public opinion on health-related issues.

Therefore, modern health policy must consider digital media not only as an opportunity for more effective delivery of health education, but also as an area requiring oversight, regulation, and preventive measures in order to minimize potential social harm.

2. The Role of New Media in Health Education

The Popular Encyclopedia of Mass Media defines new media as all communication techniques and technologies that have been widely used since the mid-1980s. The beginnings of the new media era are associated with the widespread adoption of personal computers, satellite television, and video technologies. Although new media primarily include visual and audiovisual communication techniques, they also encompass non-screen technologies, such as fax and mobile phones. However, the Internet is most frequently cited as the flagship example of new media due to its distinctive communication features. It is worth noting that media theory does not provide a single, universally accepted definition of new media. On the one hand, television is considered the reference point for the emergence of new media, which are understood as techniques for acquiring, processing, and transmitting data introduced after traditional television. On the other hand, it is argued that classification should be based on criteria of medium and interactivity, emphasizing that new media enable fuller, non-traditional use of electronic devices and require active user participation. From this perspective, only the Internet and computers would be considered entirely new technologies, excluding television from this classification.

A similar conceptualization of new media is presented by Lev Manovich. According to him, new media are analog media converted into digital form. Their fundamental characteristic is that they allow unrestricted access to data, and their copying does not result in any loss of quality. Digital media can be copied repeatedly without degradation, and they are interactive, allowing users to actively engage with media objects. New media are also defined as communication tools based on digital technologies, characterized by interactivity, multimedia integration, non-linearity of content, and the possibility of personalization. Examples of new media include:

- websites,
- mobile applications,
- blogs and vlogs,
- social media platforms (Facebook, Instagram, TikTok, X),
- educational and health platforms,
- podcasts,
- instant messaging applications.

Their distinctiveness compared to traditional media lies in the multidirectional nature of communication and in users' active participation in content creation.

Due to their immediate access to information and extensive reach, new media have become one of the most effective tools for health promotion. Health institutions, non-governmental organizations, and individual professionals use them to:

- disseminate educational content,
- promote healthy lifestyles,
- increase public awareness of non-communicable diseases,
- conduct preventive health campaigns,
- engage audiences in pro-health activities.

Research indicates that the use of information and communication technologies (ICT) increases the effectiveness of health promotion activities, particularly among younger generations.

The dynamic development of communication technologies and widespread access to the Internet have made new media one of the most important environments for socialization and the shaping of health behaviors. Social media platforms, mobile applications, health blogs, streaming platforms, and online information portals not only accelerate the flow of information but also influence perceptions of health, illness, quality of life, and the need for prevention. This is consistent with the principles of health policy, which, as a function of the state, should engage society in actively co-creating health resources, and new media constitute a potential tool for achieving this objective.

At the same time, the contemporary Internet user is increasingly becoming an "e-patient", an individual who independently seeks health information online, often prior to consulting a physician. This phenomenon may promote greater responsibility for one's own health, but it also carries the risk of exposure to misinformation. New media influence health behaviors through mechanisms such as social modeling (imitation of influencers and experts), visual persuasion (graphics, short videos, infographics), micro-messaging (short, memorable communications), personalization algorithms (content tailored to the user), and interactivity (comments, quizzes, and health applications). This influence is typically faster and more emotionally engaging than traditional health campaigns. Consequently, health influencers, fitness trainers, online dietitians, and science communicators play

an important educational role. However, their activities are not always based on scientific evidence, which constitutes one of the most significant contemporary risks.

3. Risks Associated with the Use of New Media in Health Education

The subject literature emphasizes that the dynamic development of new media in education—particularly evident during the COVID-19 pandemic, when the use of information and communication technologies intensified—has brought not only numerous benefits but also a range of risks that require a conscious and critical approach from both students and educators. Plebańska, Szyller, and Sieńczewska point to risks such as cyberbullying, contact with undesirable individuals, addiction to the digital environment, and a decline in manual skills and the gradual disappearance of traditional forms of learning, such as reading printed books and handwriting. In a similar vein, Tomaszewska (2012) and Manovich (2003) note that excessive immersion in the virtual world may lead to disruptions in peer communication, detachment from reality, and the fragmentation of knowledge. Meanwhile, Lister et al. (2009) emphasize the importance of developing media literacy as a tool for protection against misinformation.

Data security also emerges as a significant concern. As Goban-Klas (2020) observes, the increase in online activity is associated with a heightened risk of personal data breaches and exposure to undesirable content. This indicates that although new media are an indispensable element of contemporary education, their effective and safe use requires a high level of user awareness, critical thinking skills, and the ability to balance technological and traditional forms of education.

The Research Committee of the Ministry of Communications has also identified the fundamental risks associated with the use and application of new media. The report clearly highlighted threats related to “cyber law and teleinformatics crime.” Its main conclusion emphasized the need for the continuous adaptation of legal regulations to the demands of rapid technological advancement and the realities of the media society. The expansion of digital information carriers and computer networks (LAN, MAN, WAN) has undoubtedly contributed to the emergence of new threats to user security and new forms of crime associated with new media.

Figure 1 presents the risks associated with the use of new media in health education.

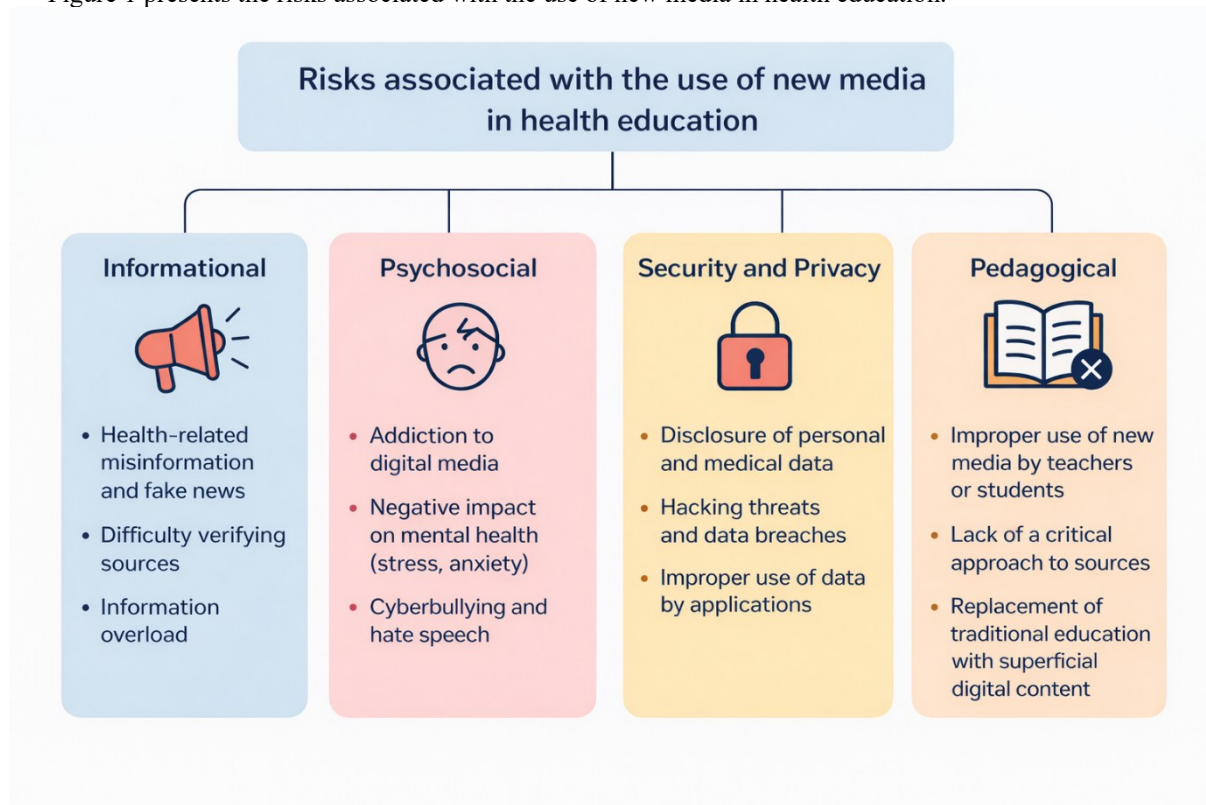


Figure 1. Risks associated with the use of new media in health education

Source: Author's own elaboration using ChatGPT.

In addition to the risks outlined above, it should be emphasized, in the author's view, that one of the most serious threats is the overabundance of unverified and even false health-related content. This phenomenon includes, among others, fake news related to medical treatments, dietary myths, pseudomedical therapies, health-related conspiracy theories, and commercial manipulation. Unfortunately, such content is widespread and may have significant consequences. Moreover, the accessibility and attractive presentation of such content often lead

audiences to perceive it as credible. Social media algorithms tailor content to users' preferences, reinforcing existing beliefs and maintaining users within so-called "information bubbles." This frequently results in isolation from reliable knowledge, the reinforcement of misconceptions, and the radicalization of anti-health attitudes, such as anti-vaccination beliefs.

It is also important to highlight the phenomenon of excessive medicalization of everyday life. Medicalization refers to the expansion of medical authority into areas that do not naturally require medical intervention. This involves treating ordinary experiences, emotions, or biological processes as medical conditions requiring diagnosis and treatment, often in the absence of genuine health needs. New media play a crucial role in intensifying medicalization by regularly publicizing new medical conditions, promoting specific therapies or pharmaceutical products, and shaping the perception of health as a state that must be constantly monitored and improved. Media messages frequently emphasize health risks, highlight symptoms of various conditions, and often evoke anxiety, encouraging individuals to seek medical assistance even for minor or normal symptoms.

Pharmaceutical advertising further reinforces this phenomenon by suggesting that nearly every form of discomfort can and should be treated pharmacologically. This contributes to the perception of health as an ideal state from which any deviation requires correction. Social media platforms, where access to information is rapid and not always reliable, may also contribute to excessive self-diagnosis and the emergence of so-called "Internet patients."

As a result, there is a growing tendency to perceive normal life processes as medical problems, and concern for health may evolve into obsessive monitoring of the body and the constant search for expert intervention. This may lead to digital hypochondria, overinterpretation of symptoms, self-diagnosis, and the excessive use of dietary supplements.

Modern media also contribute to appearance-related pressure and mental health disturbances by promoting unrealistic standards of physical appearance, the idealized "healthy lifestyle," and body image norms. This often results in negative consequences, including eating disorders, anxiety, low self-esteem, and behavioral dependence on online activity. The literature indicates that social media and intensive exposure to diet- and lifestyle-related content may be associated with disordered eating behaviors, including tendencies toward orthorexia nervosa—defined as a pathological obsession with healthy or "clean" eating, as well as weight- and body-related stigmatization.

Another critical threat is the low level of media literacy among users. This includes the inability to verify information, lack of awareness of media mechanisms, insufficient emotional distance from content, and susceptibility to manipulation. As a result, even educational content may be misinterpreted or may lead to undesirable behaviors. For example, the study *Social Media Fact Checking: The Effects of News Literacy and News Trust on the Intent to Verify Health-Related Information* (2023) demonstrated that the level of news literacy—the ability to critically evaluate and verify information—significantly influences whether users choose to verify health-related information and, consequently, whether they are more likely to believe misinformation or pseudoscientific claims.

The risks outlined above can be minimized primarily by adopting a critical approach to health-related information. This includes the ability to assess the credibility of sources, compare information across multiple sources, interpret media messages accurately, understand the intentions of content creators, and recognize persuasive mechanisms. The author emphasizes that a critical attitude constitutes one of the fundamental pillars of user safety in the context of new media and health education.

Contemporary society requires integrating health education with media literacy education, particularly among children and adolescents. Educational curricula should include the analysis of fake news, evaluation of source credibility, interpretation of statistical data, and understanding of digital algorithms. Public health institutions should develop reliable health-related content, ensure its accessibility and attractiveness, actively respond to misinformation, conduct online educational campaigns, and collaborate with influencers in order to minimize the uncontrolled and potentially harmful impact of new media as tools of health education and behavioral modeling in modern society.

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