

## REVIEW

**Hollywood and Healthcare: Navigating the Dual Impact of Movies on Public Health**

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Received: 8/22/2024

Accepted: 4/22/2025

Published: 6/30/2025

Am j Hosp Med June;9(2):2025. DOI: <https://doi.org/10.24150/ajhm/2025.015>

Key words: Health care, health education, Hollywood, mental disorders, substance-related Disorders

**ABSTRACT****Introduction**

Synonymous with the American film industry, Hollywood wields considerable influence on public health through its vast global reach and engaging media. This paper explores Hollywood's role and its impacts on public health, primarily driven by its portrayal of healthcare services, illnesses, and related beliefs and provides recommendations to improve “education entertainment” for the future.

**Methods**

PubMed was searched using keywords such as hollywood, healthcare, medical dramas, health education, smoking, suicide, and many more. Relevant literature up to June 2024 has been examined and summarized, which consisted of data from various clinical trials, meta-analyses, and review articles.

**Discussion**

Medical dramas like "Grey's Anatomy" and "E.R." have educated audiences on medical knowledge, healthcare structures, and inspired healthcare career aspirations. By depicting the realities of medical practice, these shows have enhanced public support for healthcare reforms. Similarly, films like "Contagion" have fostered awareness and empathy by positively portraying healthcare professionals during crises. However, Hollywood's glamorization of certain lifestyles has also contributed to body dissatisfaction and unhealthy behaviors, with increased cosmetic procedure rates and eating disorders linked to media portrayals. Furthermore, the depiction of smoking and vaping, as well as the sensationalized portrayal of suicides, has been shown to elevate risky behaviors and suicide rates among impressionable viewers.

**Conclusion** Hollywood's impact on healthcare is thus dual-faceted, necessitating responsible media practices and preventive measures to mitigate adverse outcomes while leveraging its potential for public health education.

## INTRODUCTION

"Hollywood" is synonymous with the American film or motion picture industry, encompassing various technological and commercial aspects of filmmaking, including production, studios, cinematography, animation, screenwriting, pre-production, post-production, film festivals, distribution, and actors. An industry analysis report reveals that the top five Hollywood movie companies generate over a third of global revenue.<sup>1</sup> In 2023, 504 Hollywood movies were released in the United States and Canada, up from 456 the previous year.<sup>2</sup> Market research predicts that the American cinema market will earn approximately \$20.98 billion in 2024 and grow annually at 6.6%, reaching nearly \$28.9 billion by 2029. User penetration is expected to rise from 58.8% in 2024 to 73.4% by 2029, excluding the substantial revenue from streaming services like Amazon Prime and Netflix.<sup>3</sup> Hollywood celebrities' popularity and global influence are also apparent on social media platforms like Instagram, TikTok, and Facebook, where top media and entertainment industry accounts have surpassed 220 million followers as of April 2024.<sup>4</sup> Therefore, with its global reach evidenced by revenue, number of movie releases, and social media following, movies significantly impact viewers' perspectives and behaviors, offering a powerful platform for public education and influencing social attitudes. This emphasizes the importance of responsible media practices and the need for preventive measures to ensure that Hollywood's influence on public health is

predominantly positive.<sup>5,6</sup> Television and films are highly engaging mediums that capture the attention of diverse audiences, with medical dramas like "Grey's Anatomy," "House MD," and "E.R." achieving immense popularity.<sup>7</sup> Medical dramas predominantly emphasize the medical representation of diseases, focusing on various health problems, such as breast cancer and heart disease. They may portray diseases as caused by genetic, cellular, or organ malfunctions within the individual's body, emphasizing biomedical issues and treatments like surgery and chemotherapy. Alternatively, the media can also highlight health-related lifestyle behaviors, such as smoking, alcohol consumption, and drug use, as preventable causes of disease.<sup>8,9</sup> Examining how Hollywood influences viewers' health-related lifestyle behaviors through cultivation theory would be meaningful. Cultivation theory describes that media representations shape users' perceptions of reality, assuming that repeated exposure to television has cumulative, long-term effects on viewers. Television content often includes consistent themes and storylines that emphasize specific perspectives. Repeated viewing of such programs over time makes specific images and thoughts more accessible and activated in viewers' minds when evaluating the real world.<sup>10</sup> This paper explores Hollywood's role and its impacts on public health, primarily driven by its portrayal of healthcare services, illnesses, and related beliefs.

## METHODS

PubMed was searched using keywords such as hollywood, healthcare, medical dramas, health education, smoking, suicide, and many more. Relevant literature up to June 2024 has been examined and summarized, which consisted of data from various clinical trials, meta-analyses, and review articles.

**Figure 1.**

## DISCUSSION

### *Positive Impact*

Medical dramas provide entertainment while subtly educating viewers on medical knowledge and practices, often basing their episodes on real medical cases and offering a mix of drama and factual information, which can lead viewers to perceive real-life doctors as heroic and infallible.<sup>7,11</sup> The entertainment industry significantly impacts how people perceive the medical field and influences patients' trust in healthcare professionals.<sup>12,13</sup> Television shows have been proven to significantly affect people's career plans and the industries they are interested in, as highlighted by the success of medical dramas such as *Grey's Anatomy*. A 2013 *Journal of Surgical Education* study revealed that medical students' exposure to surgical television programs directly affected their interest in surgical careers. These programs positively impacted the attraction of new talent to the medical field, especially in surgical specialties, thereby improving medical career aspirations and recruitment.<sup>14</sup> Medical dramas highlight the financial and operational challenges faced by healthcare facilities. By addressing issues such as the

treatment of uninsured patients, physician burnout, and ethical dilemmas, these shows offer audiences a deeper understanding of the complexities within the healthcare system.<sup>15</sup> Medical dramas and documentaries now strive to accurately depict healthcare workers' lives and the medical field's intricacies. For example, the television series "*Angel Heart*" has been praised for its realistic portrayal of the healthcare environment and the nuanced relationships between doctors and patients.<sup>16</sup> This awareness can lead to more significant public support for healthcare reforms and the need for systemic changes to support healthcare workers. The portrayal of infectious diseases in Hollywood has intrigued many healthcare professionals. Examples include "*Contagion*," which depicts a global epidemic of a SARS-inspired virus; "*28 Days Later*," focusing on the widespread occurrence of the rage virus in the U.K.; and "*Outbreak*," which centers on an Ebola-like illness confined to a single town.<sup>17</sup> During the uncertainties of the COVID-19 pandemic, these movies gained particular interest and were used to foster hope for the future. Dehority et al. evaluated various films on this topic, which highlighted several key themes: the selfless service and heroism of medical professionals, the exposure to concepts such as alien microbes, the impact of globalization on pandemics, the consequences of biowarfare, health disparities, the social class system, and vaccine rationing. These themes are crucial for health education, awareness, and empowerment. However, these movies' depictions of widespread havoc and mass deaths can also induce fear and panic.<sup>18</sup>

Films often explore the challenges and burdens faced by patients, such as those experiencing cancer pain. Mukhida et al. conducted a study that analyzed and reviewed multiple films referencing cancer pain, discovering that these films compassionately depict patients' pain

experiences, interactions with the healthcare system and professionals, and pain management that closely mirrors real-life experiences. Notably, some of the films reviewed in the study have won Academy Awards and Golden Globes, making them widely accessible to the public. The study suggests that these films have the potential to positively influence public perception of cancer pain and its management by helping audiences understand the medical humanities and fostering empathy towards patients. Furthermore, the study asserts that the accurate portrayals of cancer pain and related pain management topics in these films make them valuable educational tools for healthcare professionals and students.<sup>19</sup>

Given the increasing engagement with medical-themed media, Hollywood has the potential to be a powerful tool for health education. Animated movies like *Monsters, Inc.* and *WALL-E* are particularly effective for illustrating the connections between children's movements and society's significant resource, health, and environmental challenges. For instance, *WALL-E* vividly portrays the ecological consequences and the effects of human inactivity and obesity in a society overwhelmed by excessive consumerism and advanced technology. These films encourage contemplation of essential issues related to children's mobility and help raise public awareness.<sup>20</sup>

Other studies have also shown that medical dramas can positively impact the development of patient-centered care and empathy among healthcare professionals. For instance, a 2018 study in *Academic Medicine* explored the use of television medical dramas in medical education, finding that incorporating these shows into the medical curriculum can help students develop a better understanding of the patient's perspective, empathy, and communication skills,

ultimately leading to more compassionate and patient-centered care in real-world medical practice.<sup>21</sup> Programs like Hollywood Health & Society (HH&S) collaborate with writers and producers to ensure accurate health information is included in television shows, enhancing public understanding of health issues.<sup>22</sup> Additionally, Hollywood celebrities and public service announcements following television shows/movies can further reinforce health messages, promote healthy behaviors, and educate viewers on various aspects of healthcare.<sup>23,24</sup> Leonard Nimoy, a famous actor who suffered from chronic obstructive pulmonary disease (COPD) due to chronic smoking, became an advocate for education about his condition before his passing. He used platforms like Twitter and interviews to discuss the burden of his disease, motivate people to quit smoking, and share his struggles with the condition. Even after his death, Nimoy's daughter and her husband continued his mission by releasing a documentary featuring personal stories from Nimoy, aiming to educate viewers about COPD and its available treatments. The efforts of Nimoy, his family, and numerous other Hollywood celebrities who leverage their influence to promote healthcare messages have undoubtedly positively impacted healthcare.<sup>24</sup>

### *Negative Impact*

Film portrayals of healthcare can sometimes lead to adverse outcomes, such as the glamorization of certain body types and lifestyles, which contribute to body dissatisfaction and unhealthy behaviors among adolescents.<sup>25</sup> Studies have shown that exposure to media can result in increased spending on appearance and a higher susceptibility to eating disorders.<sup>26</sup> The American Society of Plastic Surgeons reports that from 2022 to 2023, there has been a 7% increase in the use of minimally invasive

cosmetic procedures like skin tightening, Botox, laser treatments, and acid fillers, totaling nearly 25.4 million procedures in 2023. Overall, cosmetic procedures have seen a 5% year-over-year increase, with facelifts up by 8%, rhinoplasty by 6%, blepharoplasty by 5%, liposuction by 7%, abdominoplasty by 5%, breast lifts by 7%, upper arm lifts by 8%, and buttocks lifts by 6%.<sup>27</sup> The cost of Botox injections averages around \$435 per session, while physician/surgeon fees range from \$3,359 for eyelid surgery to \$11,397 for lower body lifts and facelifts, depending on the procedure. Research indicates the average cost per patient is \$26,657.19, with single outpatient visits averaging \$392 and prolonged admissions and surgeries costing up to \$154,700.79.<sup>28</sup> One specific study sought to evaluate the factors that influence the desire for dental veneers, a cosmetic dental treatment often referred to as the "Hollywood smile" because of its association with the aesthetic appeal of Hollywood celebrities. The study found that 5% of subjects, primarily younger females with higher education levels and socioeconomic status, had already undergone treatment, while 23.83% were willing to. This willingness was possibly due to dental dissatisfaction and a desire to achieve the attractive appearance of Hollywood celebrities.<sup>29</sup> Additionally, the association of smoking and vaping imagery in films with smoking uptake in young people exemplifies how films can unintentionally promote negative behaviors. A meta-analysis by Hassanein et al. reviewed 26 studies. It revealed an increased likelihood of having ever smoked and increased smoking uptake in 9 and 11 studies, respectively, as well as an increased risk of ever vaping and increased vaping uptake in 2 and 5 studies, respectively. The study ultimately concluded that high exposure to such imagery increased the risk of smoking and vaping among

adolescents (10-19 years old) by approximately 40% and 30%, respectively.<sup>30</sup> Moreover, the frequent depiction of risk-free drinking in teen movies can mislead young audiences about the dangers of alcohol use, contributing to harmful behaviors.<sup>31</sup>

Media coverage of suicides can significantly elevate the risk of suicide among viewers, often triggering "copycat suicides." This phenomenon is especially pronounced following the suicides of celebrities, particularly those in the film entertainment industry. For instance, research found that the suicide rate among females aged 20-30 surged following actress C.J.'s suicide in 2008, contributing to a 29.7% to 95.4% increase in suicide risk during the affected periods.<sup>32</sup> Similarly, a study on viewers of the television series *13 Reasons Why*, a show that revolved around suicide in teenagers, revealed that over half of the adolescent viewers (51%) felt their suicide risk increased after watching the series. Adolescents with depressive symptoms and suicidal ideation were more likely to identify with the lead characters and experience negative emotions while viewing, indicating a particular vulnerability among at-risk youth.<sup>33</sup> These findings highlight the profound impact of media portrayals of suicide, emphasizing the necessity for responsible media reporting and targeted preventive measures to mitigate risks among vulnerable populations.

Hollywood's portrayal of healthcare often exaggerates and dramatizes certain aspects to advance the film's narrative, frequently sacrificing accuracy for thrilling storytelling. This results in numerous inaccuracies, such as unrealistically rapid clinical care, miraculous operations or treatments always succeeding in patients with poor prognosis, and more.<sup>34</sup> Filmgoers without personal or professional experience often cannot distinguish between these fictional narratives and reality, leading to patient demoralization and

misinformation.<sup>35,36</sup> A prime example is the depiction of electroconvulsive therapy (ECT) in Hollywood, which has appeared in various films for over 60 years. Initially, ECT was portrayed as a dramatic but effective psychiatric intervention. Over time, however, it has come to represent society's brutal and futile attempts to control and suppress patients. Despite ECT being proven safe and effective, Hollywood continues to depict the treatment as inhumane, painful, and punitive, with little representation of modern ECT practices.<sup>36</sup> This negative portrayal has caused significant image problems, as the general public expresses skepticism and fear about the treatment, and vocal campaigns have emerged lobbying against its use.<sup>37</sup>

**Table 1.** Summarizing the pros and cons of current representation of healthcare in Hollywood and media.

Table 1: Impact of Hollywood & Medical Dramas on Viewers	
Positive Impact	Negative Impact
<ul style="list-style-type: none"> <li>Healthcare heroism &amp; trust building</li> <li>"Education Entertainment" &amp; health promotion</li> <li>Health awareness and behavior changes</li> <li>Healthcare as a career choice</li> <li>Healthcare challenges: financial, operational</li> <li>Social change, e.g., children's mobility structures in infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Body dissatisfaction and unhealthy behaviors</li> <li>Smoking and vaping promotion</li> <li>Alcohol and drinking habits</li> <li>Unreal healthcare staff, treatment, and care environments cause distorted perceptions.</li> <li>Misinformation regarding medical diagnosis</li> <li>Financial and health impact of cosmetic procedures and cosmetic tourism</li> </ul>

## CONCLUSION

The influence of Hollywood on public health is vast and complex, encompassing both beneficial and detrimental effects, evident in its global reach, substantial social media presence, significant revenue, and frequent release of movies. This collective

influence holds considerable sway in shaping viewers' attitudes and behaviors toward healthcare. On the positive side, films and medical dramas play a crucial role in influencing career choices within the medical field, raising awareness about health issues, and fostering empathy towards patients. Animated movies like WALL-E effectively convey environmental and health concerns, while medical dramas illuminate the complexities of healthcare systems, enhancing public comprehension. Collaborations between health organizations and the entertainment industry have further refined the accuracy of health information depicted in films and television series. However, Hollywood's influence also presents significant drawbacks. The portrayal of certain lifestyles and body ideals often contributes to body dissatisfaction and promotes unhealthy habits, particularly among adolescents. Moreover, the depiction of smoking and vaping in movies correlates with increased adoption of these behaviors among young audiences. Additionally, the dramatization and sensationalization of medical procedures can create unrealistic expectations and misinformation among viewers. Hollywood's substantial impact on public health highlights the need for responsible and accurate portrayals in the entertainment industry to enhance its beneficial effects and minimize potential harms.

## FUTURE DIRECTION

Hollywood's impact on public health is profound and multifaceted and bound to grow both nationally and globally amidst the digital and Artificial Intelligence revolution. Therefore, collaboration between healthcare professionals and the entertainment industry is essential to decrease these negative effects and maximize positive impacts. Such partnerships ensure that health-related issues



are portrayed accurately and responsibly, promoting healthier behaviors among viewers. Hollywood should utilize its influential platform to address contemporary healthcare challenges, such as inspiring action by depicting ideal future healthcare systems and advocating for cost-effective models based on successful international practices. Furthermore, Hollywood can contribute to combating healthcare worker burnout by showcasing strategies for maintaining passion and balance in demanding roles. From a mental health and body image perspective, celebrities can play a crucial role in promoting self-acceptance, healthy lifestyles, and physical fitness, countering the unrealistic beauty standards that often lead young people towards risky cosmetic procedures and questionable treatments abroad. While it has the potential to educate and inspire positive health behaviors, it must also responsibly navigate its influence to avoid perpetuating harmful stereotypes and misinformation. Through continued collaboration with healthcare professionals and a commitment to accurate health narratives, Hollywood can empower viewers to make informed decisions and contribute to a healthier world.

## Notes

**Conflicts of Interest:** None declared

**Funding:** None declared

**Acknowledgements:** None

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