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NOT JUST ESCAPISM—MEDICINE-RELATED FICTION FILMS AS THERAPEUTICAL AND EDUCATION TOOLS AMID PANDEMIC: A FILM AND LITERATURE RESEARCH

No solo escapismo: las películas de ficción relacionadas con la medicina como herramientas terapéuticas y educativas en medio de una pandemia: una investigación cinematográfica y literaria

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Abstract

Background: During epidemic disease outbreaks, people's daily lives are restricted by quarantine and social distancing measures that can affect not only their physical and mental health but also other aspects of their lives, including education. The quality of medical education has suffered amid the ongoing COVID-19 pandemic, with on-site classes and conferences canceled or postponed. To address the resultant gaps in learning and supplement the rigors of formal medical teaching, recent research has suggested the use of nonfictional films. However, research on the educational and therapeutic value of fictional films is currently lacking.

Methods: This study explored fiction films featuring medical practices, diseases, and treatments. The researcher conducted multiple searches using the largest internet movie databases (Internet Movie Database (IMDb), the American Film Institute Catalog, and the British Film Institute's Collections Search) and literature research focusing on studies related to the value of films as visual learning and educational tools and their therapeutic effects on viewers in times of pandemics.

Results: The researcher chose a representative selection of 20 films from over 100 years of cinematic history to educate and intellectually challenge practitioners under lockdown and use as

a therapeutic tool. This study identified many ways films could be a potent instrument for medical education and a wide range of educational and therapeutic possibilities for use during public health crises. Medical fiction offers a highly entertaining and effective way to expand and improve medical knowledge and practices while respecting pandemic restrictions. The findings expand our knowledge on the value of medical fiction as an educational and therapeutic tool.

Conclusions: Fictional films can be an advantageous, effective, and entertaining medium for educating physicians and improving their medical skills and practices. When public health crises or other concerns necessitate «work from home» and socially distanced conditions, movies can augment and enhance high-level medical learning and offer new perspectives that might be obscured in times of trauma, making them especially valuable for those struggling with the effects of the COVID-19 pandemic.

Keywords: disease outbreak; history; medicine in the arts; motion pictures; pandemics; 20th century; medical education; quarantine.

Resumen

Antecedentes: durante los brotes de enfermedades epidémicas, la vida cotidiana de las personas se ve restringida por medidas de cuarentena y distanciamiento social que pueden afectar no solo su salud física y mental, sino también otros aspectos de sus vidas, incluida la educación. La calidad de la educación médica ha sufrido en medio de la pandemia de COVID 19 en curso, con clases y conferencias en el lugar canceladas o pospuestas. Para abordar las brechas resultantes en el aprendizaje y complementar los rigores de la enseñanza médica formal, investigaciones recientes han sugerido el uso de películas de no ficción. Sin embargo, actualmente se carece de investigación sobre el valor educativo y terapéutico de las películas de ficción.

Métodos: Este estudio exploró películas de ficción que presentan prácticas médicas, enfermedades y tratamientos. El investigador realizó múltiples búsquedas utilizando las bases de datos de películas más grandes de Internet (Internet Movie Database (IMDb), el Catálogo del American Film Institute y la Búsqueda de Colecciones del British Film Institute) e investigación de literatura centrada en estudios relacionados con el valor de las películas como aprendizaje visual. herramientas de formación y educación y sus efectos terapéuticos en los espectadores en tiempos de pandemia.

Resultados: El investigador eligió una selección representativa de 20 películas de más de 100 años de historia cinematográfica para educar y desafiar intelectualmente a los practicantes encerrados y usarlos como herramienta terapéutica. Este estudio identificó muchas formas en que las películas podrían ser un potente instrumento para la educación médica y una amplia gama de posibilidades educativas y terapéuticas para su uso durante las crisis de salud pública. La ficción médica ofrece una forma muy entretenida y eficaz de ampliar y mejorar el conocimiento y las prácticas médicas respetando las restricciones pandémicas. Los hallazgos amplían nuestro conocimiento sobre el valor de la ficción médica como herramienta educativa y terapéutica.

Conclusiones: Las películas de ficción pueden ser un medio ventajoso, eficaz y entretenido para educar a los médicos y mejorar sus habilidades y prácticas médicas. Cuando las crisis de salud pública u otras preocupaciones requieren «trabajar desde casa» y condiciones de distanciamiento social, las películas pueden aumentar y mejorar el aprendizaje médico de alto nivel y ofrecer nuevas perspectivas que pueden quedar oscurecidas en momentos de trauma, lo que las hace especialmente valiosas para quienes luchan con el efectos de la pandemia de COVID 19.

Palabras clave: brote; historia; medicina en las artes; películas; pandemias; siglo 20; educación médica; cuarentena.

Background

When a highly infectious disease catches society unprepared, the consequences can be paralyzing. Entire countries can be quarantined, with business curtailed, trade halted, markets and stores closed, and citizens ordered to stay home and socially distance even at home. When these restrictions converge, the result is a lockdown. Historically, lockdowns have been used to fight rapidly spreading infections, as with the 1918 influenza pandemic commonly known as the «Spanish flu»¹. However, we need not look any further than the challenges posed by the ongoing COVID-19 pandemic. The quarantines' impacts have extended beyond straining the economy, education, and infrastructure^{2,3} to harming people's physical and mental well-being⁴, with the need for social distancing making it even harder to prevent and treat these conditions. Under lockdown measures, people often experience an agonizing sense of ennui as the familiar patterns of their personal and professional lives shift or come to a standstill. This has affected even essential services, such as the medical profession—and, by extension, medical students; infection prevention efforts have led to on-site training courses and conferences being canceled or postponed, disrupting learning continuity. In medical fields that involve tactile interventions, such as surgery, previous research has suggested such alternate solutions as «home practice» to keep students up to date⁵. This study explored another alternative for maintaining medical learning and treatment during lockdowns: the visual arts.

Methods

The study identified films featuring medical practices, diseases, or treatments using multiple searches of the three largest online film databases: Internet Movie Database (IMDb)⁶, the American Film Institute Catalog⁷, and the British Film Institute's Collections Search⁸. The searches

focused on rare diseases, uncommon situations, and plots that could educate physicians and medical students under lockdown, introducing them to ethical and medical problems rarely encountered in day-to-day practice and showing the value of drama as a therapeutic tool. Documentaries and medical films produced solely for educational purposes were excluded. The study also included a literature review focusing on the overall value and therapeutic effects of educational, public health, and fictional films on patients and general audiences and examining the influence on viewership of the COVID-19 pandemic. The researcher chose 20 representative films on different medical topics from over 100 years of film history. A list of 10 suggested films and their availability on home video accompanies this study.

Results

As early as 1784, German physician, philosopher, and poet Friedrich Schiller propagated the educational value of staged arts⁹. However, few have explored how this might apply to cinema. The general influence of motion pictures on society has been more profound than is often assumed. For instance, *Paparazzo*, the fictional celebrity photographer in the film *La Dolce Vita*¹⁰ inspired a new term that was quickly adopted by dictionaries and is still used to describe photojournalists: *Paparazzi*^{11,12}. The positive public response to director Oliver Stone's epic political thriller *JFK* in 1991, a dramatic story centered on the 1963 presidential assassination, led to the creation of the Assassination Records Review Board, which unsealed 60,000 documents related to the Kennedy assassination^{13,14}. These are just some examples of films having a direct impact on language, jurisprudence, and public perceptions.

Films can have an equally impactful influence on medical practice, and physicians could use these pedagogical and culture-influencing tools to benefit themselves, their patients, and their

students. This finding required delving into historical research. Films often serve as historical witnesses to medical reality and profoundly influence the general audiences' image of the medical profession and its reputation^{15–17}. Historically, motion pictures have shown great therapeutic value in the form of cinemathe-
rapy¹⁸, most commonly in psychotherapy^{19–21}, general psychological interventions²², or treating schizophrenia^{23,24}. Research has shown that using films as a therapeutic adjunct can have beneficial effects even in somatic fields such as nephology²⁵ and urology²⁶. The most commonly known educational value in motion pictures comes from educational films (or public health films) and patient videos, whose history^{27–31} and therapeutic benefits^{32,33} have been well researched. A more surprising aspect is the finding that fictional and entertainment films also have educational potential for general science³⁴, medical education^{35–37}, and professional development^{38,39}. What makes fictional films viable alternatives to medical books? What benefits do films offer over reading textbooks during quarantine? Although we know that literature and other classical learning instruments remain vital, we can answer those questions by considering the different neurobiological processes associated with audiovisual learning⁴⁰, which shows surprisingly effective results^{41,42} compared to reading⁴³. This high effectiveness helps fuel the popularity of *edutainment*, the purposeful blending of education and entertainment⁴⁴.

This study also considered the importance of motion pictures and their role during the COVID-19 pandemic. Recent studies have shown that despite the unaltered presence of textbooks, medical students' education^{45,46} and professionals' continuing education^{47,48} have been hindered by the pandemic. Many people's psychological health has declined due to isolation, fear, grief, and loss of occupational and social stability⁴⁹. This study sought to determine how

motion pictures could help physicians to expand their knowledge, educate students, and use the proven therapeutic effects (cf. 50–52) of watching fictional films to treat patients dealing with the negative effects of quarantines and the pandemic. The 20 representative films selected covered different medical topics but shared two major features: [1] they had great dramatic value, as evidenced by their revenues and critical success, therefore qualify for treating patients; and [2] they incorporated well-researched medical-themed plot points or themes that make them useful for educating physicians and students. The results highlighted various ways that films can spotlight shortcomings and fallacies in medical practice, improve practitioners' and students' knowledge and communication skills, present effective (and ineffective) ways to deal with complex and extraordinary situations, stress the importance of treating others with empathy and respect, and help patients with psychological struggles experience catharsis.

Discussion

The study's most significant finding was that watching fictional medical dramas reduced fear, anxiety, and the sense of isolation among patients related to the effects of the pandemic. As studies have indicated, watching tragedies⁵⁰, horror films⁵¹, or television serials⁵² can reduce fear and improve resilience and coping abilities for patients suffering from the effects of the pandemic. Therefore, fiction films should be considered a valuable tool⁵³ for physicians dealing with patients who have trouble coping with the pandemic, including patients in quarantine or hesitant to leave their homes. Combining consultations or prescriptions with appropriately curated telemedicine could be a way to reach these patients⁵⁴. This promising therapeutic tool needs to be taught in medical education as a complementary tool for reducing the debilitating

psychological effects of quarantines and other pandemic-related restrictions and changes. However, further research is needed to show whether the benefits last, what kinds of films are more (un)suitable, and how these findings can be applied in practitioners' daily practices. Recent research suggests that a single viewing of some films won't lead to lasting effects⁵⁵, so repetition through regular film consumption (prescription) might be the most promising method.

Beyond therapy, there are also educational benefits. The most obvious is transmitting medical information, but the extent varies according to the viewers' existing knowledge and educational receptivity and the films' accuracy in their depictions of medical conditions, practices, processes, legal considerations, and feasibilities. This study's focus in its selections was identifying films suitable for teaching that might affect practitioners' practices indirectly but benefit them overall irrespective of their medical specialties or operational scope. A crucial aspect in this inspiring reflection, medical dramas often show practitioners having to break their personal and professional routines to respond to unforeseen circumstances. This forces a change in perspective. Routine can lead to tunnel vision, distorting a practitioners' perceptions and even their diagnoses of patients' perspectives and conditions, leading to errors, mishaps, and even medical malpractice⁵⁶. Changes in routine, such as those imposed by the COVID-19 pandemic, can exacerbate underlying mental health issues⁵⁷. Films can create a much-needed diversion. They can also remind practitioners that patients are people, not their diagnoses. Films often show patients' lives and private moments before and after their treatments or hospitalizations, including the domestic aftermath of illnesses. A good example of changes in perspective is *Amour* (2012) by Michael Haneke⁵⁸. This Austrian work hauntingly depicted the rigors of caring for a loved one who has suffered a severe ischemic stroke, with all its devastating consequences.

Practitioners' perspectives can also be broadened by watching movies. Since the beginning of cinematic history, filmmakers have shown the potentially far-reaching consequences of insufficiently considered decision-making. In 1909, D.W. Griffith directed *The Country Doctor*⁵⁹, a short silent drama about the ethical dilemma of a physician who leaves his sick daughter behind (Fig. 1) to visit a feverish young patient. Although he saves the patient's life, his daughter dies. The film raises delicate questions and is a cinematic invitation to physicians to philosophize about ethics. Films like this can also warn us about pervasive problems, such as the shortage of rural physicians^{60,61} in many countries. Likewise, *The Penalty* (1920)⁶² warned us clearly of the unpredictable consequences of unethical and ill-informed decision-making. The plot deals with a surgical malpractice that turns a patient into a ruthless criminal mastermind seeking deadly revenge on the careless surgeon. Although the cause-and-effect motivation is oversimplified, the film reminds practitioners of the importance of the staying true to their Hippocratic oath⁶³ by showing how an entire city district was indirectly affected by a single incident of malpractice. Despite being hyperbolic, it shows how even routine operations can have wide-ranging impacts.

Film studies can provide insights into the reputations of medical disciplines and practitioners and how they have been portrayed over the decades. While watching films, viewers should consider some key questions. Can they identify prejudices or stereotypes? Have they entered the audience's collective memory? Have these prejudices or stereotypes ultimately become cliché? Clichés with positive or negative connotations magnified by mass media often persist in people's minds. For example, people who watch films with idealized or omnipotent doctors (e.g., *Patch Adams* (1998)) might have unrealistic expectations of their own doctors⁶⁴?



Figure 1. A physician cares for a dying child in a scene from *The Country Doctor*, 1909]
Copyright: Public domain

Do patients respond to treatment suggestions with an unusually pronounced distrust or require detailed explanations of their prescribed medication because they have seen in movies like *Side Effects* (2013) how medications can both save and destroy patients' lives⁶⁵?

Film history can help us understand these developments and raise awareness of how trends in mass media can influence patients' ideas about medical professionals and healthcare. Nearly every medical discipline has endured ambivalent representations or reputation-damaging depictions throughout cinematic history. A case in point is psychiatry, which has modest recovery rates, especially in addiction treatment. *Girl, Interrupted* (1999)⁶⁶ skillfully addressed this and other historical and contemporary problems associated with psychiatry and psychiatric institutions. Other films have dramatized the behaviors and patterns of violent patients, such as the artistically outstanding film *A Clockwork Orange* (1971)⁶⁷. A topically relevant medical discipline, epidemiology, has also had its place in the spotlight with films such as *Contagion* (2011)⁶⁸,

Patient Zero (2018)⁶⁹, *Infección* (2019)⁷⁰, *COVID-21: Lethal Virus* (2021)⁷¹, and *Lockdown* (2021)⁷². These films show medical staff and society responding to pandemics and reveal how delusional conspiracy theorists thrive in times of crisis and chaos. More importantly, such films can portray patients' agony and doubts during a pandemic and their distrust of vaccines, providing knowledge and strategies for effectively countering conspiracy theories.

Movies can also raise awareness about rare diseases more vividly, captivatingly, and dramatically than printed textbooks. Low awareness of rare diseases is a lingering problem for physicians⁷³ that might worsen in the future⁷⁴. However, a popular screen trope humanizes the hapless victims of some previously obscure condition or disease who are saved (or not) by heroic efforts. One example is *Extraordinary Measures* (2010), which spotlighted the rare Pompe's disease⁷⁵. Similarly, many people first heard of what Americans started calling «Lou Gehrig's disease» (amyotrophic lateral sclerosis or ALS) after watching *The Pride of the Yankees* (1942)⁷⁶. Decades

later, others learned about it in the biographical drama *The Theory of Everything* (2014)⁷⁷, based on astrophysicist Stephen Hawking's life. However, after two hours of watching *The Diving Bell and the Butterfly* (2007)⁷⁸, they might look at ALS-like symptoms in a completely new light.

Conditions like ALS can initiate ethical discussions on such topics as involuntary treatments, quality of life, and assisted suicide, themes explored with all their consequences in *You Don't Know Jack* (2010)⁷⁹. Films can also show how medical practices have advanced to reevaluate such barbaric procedures as bloodletting, trepanning, and lobotomy. The classic film *One Flew Over the Cuckoo's Nest* (1975)⁸⁰ shows the days when lobotomy was considered a routine and acceptable treatment despite the resulting complications and impairments. It serves to remind medical professionals that seemingly secure knowledge can prove incorrect and even dangerous once new data are available. Such insights can remind viewers to question practices based on supposition and tradition rather than empirical knowledge and explore different approaches through research.

Films can also highlight and depict narcissism and the ensuing lack of empathy in the medical profession. Narcissism is often overlooked among ambitious professionals⁸¹, especially physicians⁸²⁻⁸⁵, even though empathy is crucial in the medical profession. Lighter films like *Doc Hollywood* (1991)⁸⁶ or *The Good Doctor* (2011)⁸⁷ could help medical professionals recognize such tendencies in themselves or their colleagues and help them correct their self-assessments and work to become less selfish and egocentric and more compassionate.

In their best form, films provide factual knowledge that could be found in textbooks, public health bulletins, or peer-reviewed journals but dressed up in a dramatic, humanized form, so they provide the cathartic and therapeutic effects of fiction—including the diversions so beneficial during a pandemic. Future research needs to

explore how this fusion of benefits can be applied in daily practice and teaching routines. Other studies should focus on how lasting its effects might be when implemented systematically.

This study had some limitations. The information in motion pictures is only as good as contemporaneous knowledge. Additionally, screenwriters and filmmakers have been known to choose dramatic effect over factual correctness. Therefore, the movies used in medical education and therapy must be carefully vetted for accuracy or have their inaccuracies clearly highlighted with a viewers' guide or even on-screen commentaries such as Prime Video's X-Ray feature. Medical historians might need to contextualize and evaluate the medical accuracy of films proposed for medical education and therapy. Similarly, it might be necessary to explore filmmakers' reputation for accuracy before accepting their films' characterizations as fact⁸⁸.

Conclusions

We have all experienced hardships to varying degrees during the ongoing COVID-19 pandemic. Watching films on medical themes can be an effective way to broaden medical professionals' minds and enhance their competency. While theaters in some areas have opened to the public, internet streaming and recorded films provide a safe way to view medical-themed films during pandemic-related restrictions and lockdowns. Fictional films appear to be a largely untapped resource with therapeutic potential for people coping with the psychological pressures of a pandemic and could also be valuable educational tools for medical education for students and practitioners. To study's main points are summarized as follows:

1. The staged and visual arts historically have great value as educational tools. Recent studies suggest that the benefits of educational films might also apply to fictional films.

2. The visual arts stimulate different biological learning processes than reading (e.g., medical textbooks). Therefore, they represent a suitable complement to classical educational tools and are easy to access from home.
3. Traditional medical education and mental health treatment have been hindered by the restrictions imposed to prevent the spread of COVID-19. Furthermore, restrictions such as lockdowns and social distancing have worsened people's existing mental health issues and caused those previously unaffected to experience anxiety and fear.
4. Fictional films have shown positive results in treating the psychological effects of pandemic restrictions and should be included in medical education as a complementary therapeutic tool.
5. Studies indicate that the one-time consumption of cathartic films has only a short effect. Further studies are required to evaluate the frequency and length of repeated therapeutic film viewings to determine the benchmark for a lasting effect.
6. Fictional films can convey medical facts, so they must be vetted for accuracy and shown with caution. Nevertheless, fiction films can help improve students' and practitioners' «soft skills,» such as communication, problem-solving, critical thinking, teamwork, ethics, intercultural fluency, and the ability to deal with complex and extraordinary situations. They can also help medical professionals identify rare but critical medical conditions and issues and inspire them to reflect on their personal strengths (e.g., empathy, dedication, strong work routines) and weaknesses (e.g., egotism, impulsiveness, «tunnel vision»).

Readers might wish to begin their own journey by using the ten-film compilation used by this study assembled as a starting point. These films were selected for their suitability for either medical education themselves or therapeutic benefit.

Table 1. Ten medicine-related films to watch during the lockdown

Title	Original title	Year	Country	Director	Home Video
<i>The Country Doctor</i>	<i>The Country Doctor</i>	1909	USA	D. W. Griffith	DVD from Image Entertainment
<i>One Flew Over the Cuckoo's Nest</i>	<i>One Flew Over the Cuckoo's Nest</i>	1975	USA	Milos Forman	DVD from Warner Home Video
<i>Doc Hollywood</i>	<i>Doc Hollywood</i>	1991	USA	Michael Caton-Jones	DVD from Warner Home Video
<i>Girl, Interrupted</i>	<i>Girl, Interrupted</i>	1999	USA	James Mangold	DVD from Sony
<i>The Diving Bell and the Butterfly</i>	<i>Le scaphandre et le papillon</i>	2007	France, USA	Julian Schnabel	DVD from Miramax
<i>You Don't Know Jack</i>	<i>You Don't Know Jack</i>	2010	USA	Adam Mazer	DVD from HBO Studios
<i>Extraordinary Measures</i>	<i>Extraordinary Measures</i>	2010	USA	Tom Vaughan	DVD from Sony
<i>Contagion</i>	<i>Contagion</i>	2011	USA	Steven Soderbergh	DVD from Warner Home Video
<i>Amour</i>	<i>Amour</i>	2012	Austria	Michael Haneke	DVD from Sony
<i>Side Effects</i>	<i>Side Effects</i>	2013	USA	Steven Soderbergh	DVD from Open Road Films

List of abbreviations

Amyotrophic lateral sclerosis (ALS).

Competing interests

The authors declare that they have no competing interests.

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