

REVIEW ARTICLE

Humor and Laughter in Health Promotion Interventions and the COVID-19 Pandemic: A Cross-Disciplinary Narrative Review

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ABSTRACT

The evolution and purpose of humor have long been of interest to the scientific community. Humor and laughter play an important role in social, emotional, mental, and physical health and well-being. The purpose of this narrative review is to explore perspectives and research findings of studies on the role of humor and laughter in health promotion and direct care interventions throughout the COVID-19 pandemic. Also discussed is the cross-disciplinary context of studies during the global pandemic, which illustrates the complexity of humor in human

behavior and its manifestation in healthcare environments and public health outcomes. This review of studies on humor and laughter behaviors employed during the COVID-19 pandemic points to the need for further work on the potential of humor and laughter for use in direct care interventions, health messaging, health education, and in improving the social bonds and connections among health professionals, patients, and students. (*Altern Ther Health Med.* 2024;30(9):42-46).

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INTRODUCTION

The evolution and purpose of humor have long been of interest in the scientific community. The Greek philosopher, Aristotle, provided one of the earliest and systematic descriptions of the phenomenon of humor.¹ In his work, *Poetics*, Aristotle discussed the role of comedy in literature and characterized humor as a mechanism to provide emotional release and catharsis. He also characterized humor as a means of teaching people about the nature of society and human behavior.² Twenty-five hundred years later, the scientific community continues to investigate humor as a complex human trait with multiple origins and functions. In his book, *Anatomy of an Illness as Perceived by the Patient*, Norman Cousins recounted

the healing effects of humor as he struggled with ankylosing spondylitis. Cousins' account prompted a resurgence of interest in the role of humor in health and healing.³

The evolutionary purposes of humor remain debatable. For example, humor may have evolved as a way for early humans to bond with one another and build social connections, as a mechanism to signal intelligence, or to cope with stress.⁴ Regardless of the origin, humor plays a role in social, emotional, and even physical health. The purpose of this article is to discuss perspectives and research findings of studies on humor and laughter, and their utility in health promotion and direct care interventions throughout the COVID-19 pandemic. Also discussed in this article, is the cross-disciplinary context of studies during the global pandemic.

FUNCTIONS OF HUMOR AND LAUGHTER

Humor is a free, flexible, and accessible cognitive resource that is used naturally in social interactions to inform others of intent, and to moderate relationships and the perception of others.⁵ Laughter as the behavioral expression of humor can be used to communicate with individuals who are unable to speak or understand language.⁶ For example, Gareth Walker demonstrates in "Young Children's Use of Laughter After Transgressions" that children, even pre-linguistically, seem to use humor to diffuse tension and change social responses.⁷

Laughter is an intuitive human behavior that does not require resources to implement and may have therapeutic value. In the medical context, therapies such as yoga or

herbalism may require time and money beyond a patient's reach, making laughter an accessible alternative.⁸ In addition, humor and laughter rarely have side effects and do not react with other treatments that a patient might be receiving.⁹ However, it is difficult to measure humor and its health effects since it is a human behavior that dissipates under analysis. A universal method for quantifying the effects of laughter and humor is needed as research on humor and health continues.⁶

Humor is a social and emotional experience usually requiring both giver and receiver,⁵ and is an outward expression of internalized social and situational concepts. Individual approaches to humor are both qualitative and quantitative: some people are described as 'having a sense of humor' while others may lack this sense.¹⁰ An individual's style of humor appears to be related to potential health outcomes. For example, a study by Olah and Ford on the use of humor as a coping strategy during COVID-19 showed that people who engaged in positive humor felt less stressed and hopeless during the pandemic.¹¹ Conversely, individuals with a self-deprecating and defeatist sense of humor felt more stressed and hopeless during the pandemic and were less likely to engage in protective behavior.^{11,12} Whether humor style affected behavior, or was simply a reflection of it, is less clear. Interestingly, Walter et al.¹³ found humor to have a significant effect on knowledge and to some extent persuasion, but a much weaker impact on overall attitudes and behavioral intent. Laughter - the physiological response to humor - appears to create positive health impacts even when disconnected from the social context of humor. For example, "simulated laughter" is consciously created by the individual and is not a spontaneous situational response.¹⁴ Yet, health interventions using simulated - "forced" - laughter produced positive results, among patients in pain to stressed working professionals. Notably, no improvement in health was indicated in Alzheimer's patients who underwent simulated laughter treatment.⁹ Conversely, laughter does not need to be present to experience the positive health effects of humor. In a study of nurses during COVID-19, exhaustion and irritation decreased when individuals enjoyed experiences they found humorous even in stressful situations, however, the presence or absence of laughter itself had no effect.¹⁵

HUMOR AND CULTURAL CONTEXT

Raskin, a humor researcher, describes humor as a "universal human trait",¹⁰ that is taken for granted as common and natural regardless of ancestry or where one lives. What each individual finds humorous varies widely, making humor both a "natural" and a "learned" behavior.¹⁰ Humor is not only a reflection of an individual's perspective, values, and social experiences,⁵ but situating humor appropriately in the larger cultural context is important if the meaning of the humor, and any action it hopes to provoke, "lands" correctly. Humor responses vary widely in terms of region and culture. For example, the Dutch tend to prefer intellectual jokes, while Americans enjoy playful humor.

Much of the humor circulating during the COVID-19 pandemic was deeply situated in the cultural context in which it was produced in several respective countries.¹⁶⁻²⁰ During the pandemic, popular humor in Israel reflected common frustration at public health advice and highlighted larger social issues such as family and political tensions.²¹ However, numerous studies attribute resilience and positivity to a collective sense of humor when facing difficult circumstances.^{5,22,23}

HUMOR IN HEALTHCARE SETTINGS

The use of humor in healthcare settings, such as hospitals and long-term care institutions, has a variety of benefits. Patients often have better outcomes when humor and laughter are part of the holistic treatment plan. A recent review of 45 studies on laughter-inducing interventions found that such interventions significantly improved both the mental and physical health of patients.²⁴ Pain and stress in children decreased significantly when they had access to hospital clowns.²⁵ Adolescent anxiety around medical procedures also decreased when clowns were present.²⁵ Patients with depression and anxiety receiving laughter therapy reported positive effects including reduced feelings of depression and better-quality sleep. Interestingly, a meta-analysis of laughter and humor therapies found that while laughter therapy improved outcomes for patients with depression and anxiety, humor therapy did not improve outcomes in most cases.²⁶ An exception to this was in the case of elderly cancer patients, who benefited from humor therapy. The use of humor for end-of-life care was supported in the literature, reporting that well-being, peace, and a sense of closure can help terminal patients cope better since they can review their lives in a humorous context.^{27,28}

The use of humor affects patient-doctor relationships and also the training of future medical practitioners. For example, physicians without malpractice claims were found to be more likely to humorously interact with patients.²⁹ According to a study, the use of humor by both medical practitioner and patient was a useful tool in navigating clinician-client power relationships, helping both negotiate treatment plans.³⁰ Healthcare educators who used humor were also more likely to witness student success: the use of humor improved student attention, decreased student anxiety, and increased participation and motivation.³¹ This correlation between learning and humor occurs outside the context of healthcare as well. A recent study found that virtual students were more likely to engage with learning when course-related humor was used by teachers.³²

Humor can also help inform public health strategy. Messaging about taboo subjects such as safe sex and binge drinking may be better received when humor is used.³³ A study by Blanc in 2013 found that print health ads using humor held attention for a longer duration and were better received than serious messaging.³⁴ Humorous public health messages were also more likely to be discussed and shared by the public.³⁵ Injecting humor into health messaging is more

likely to have a significant response from the target audience. For example, Hendrick's study in 2018 found that men were more likely to respond to high-threat humorous messages, while women responded better to low-threat humorous messages.³⁶

Individuals and groups can also use humor as an accessible and affordable tool to improve quality of life and decrease stress. For example, healthy men and women participating in laughter yoga were found to release less cortisol than those participating in alternative relaxation methods.³⁷ Additionally, laughter therapy successfully reduced loneliness among participants isolated during COVID-19.³⁸ A 2010 study of college students found that individuals could use humor to actively maintain a positive outlook, thereby mitigating the effects of stress.³⁹

Since Raskin's groundbreaking research on humor, an enormous body of work has been produced on the effects of humor on health. Despite attempts by Raskin and others to create a global set of terms and quantifiers for studying humor, a standardized language for its study does not exist.⁴⁰ Possibly creating a common language for the study of humor remains challenging since humor is deeply seated in both cultural and personal contexts. Lynch (2002) notes that "jokes and humor play an important role in determining who we are and how we think about ourselves, and how we interact with others" (p. 425).⁴¹ The global nature of the COVID-19 pandemic offered a unique opportunity to study the use and effects of humor during a worldwide common experience.

HUMOR IN THE CONTEXT OF COVID-19

A cross-disciplinary review of the literature on humor and COVID-19 reveals the dichotomy of humor's potential effects. The type, use, and context of humor changes dramatically whether its effects are positive or negative. What follows is a discussion of four topics from the scope of humor literature during the pandemic: humor's effects on anxiety, social bonds, cultural norms, and finding meaning or blame.

A humorous approach to life during the pandemic often had a protective effect. Teens who approached the stressors of COVID-19 with a sense of humor appeared to be more resilient to stress.²² A 2022 study found that those who found COVID-19 memes funny were happier and felt less threatened by the pandemic.⁴² The same study found that self-enhancing humor was the greatest predictor of well-being during the pandemic. Olah and Ford¹¹ also found that a sense of humor about the pandemic alleviated stress and correlated with an individual's likelihood to follow public health messaging. Healthcare workers in Italy who used humor to cope with stress during the pandemic viewed their situation as less stressful than those who did not use humor.¹⁸ Nurses experienced a similar effect, with those enjoying humor being more likely to have a positive view of their work during their pandemic, and less likely to be exhausted and stressed.¹⁵ The buffering effects of humor, however, are not universal. The type of humor practiced influences its effect. Sarcastic

humor has been found to correlate with the presence of anxiety, depression, and aggression.⁴³ While positive humor was associated with reduced distress among pandemic caregivers, self-defeating humor correlated with decreased satisfaction and increased stress.⁴⁴

The use of humor as a tool during the pandemic to create and maintain social bonds had positive effects in many instances. Virtual students were more likely to engage with class material when humor was used during the pandemic.⁴⁵ Social media users in Jordan reported that sharing humorous online content helped restore the social bonds and communal joy that were stifled by pandemic restrictions.⁴⁶ Aggressive humor was found to increase feelings of isolation during lockdown whereas social humor buffered against depressive feelings.⁴⁷ Creating a common bond through humor occasionally was at the cost of others: teens used memes during the pandemic for social connection, but the humor was expressed in the form of animosity toward older generations.⁴⁸ A 2022 study found that many memes shared during the pandemic that were meant to be humorous used harmful stereotypes assigning blame to Asians for COVID-19.⁴⁹ In such cases, the use of humor creates a bond of commonality by building up perceptions of "us versus them," a dangerous approach that cares less about building social bonds and rather focuses more on excluding others. When used appropriately, pandemic humor created a feeling of worldwide commonality rather than factionalism.⁵⁰

The disruption of the pandemic offered an opportunity to reflect on social norms. Humor during the pandemic also addressed social norms and was used as a tool to reinforce ideas. Some governments used humorous messages to assign blame for the spread of the virus and promote fear, to maintain and extend social controls.¹⁷ In China, humor served to solidify social norms by presenting a humorous performance of identity as a working mother struggling to cope with the added demands of the pandemic to achieve a child-centered quarantine life.⁵¹ In Nigeria, humor perpetuated the common idea in society that COVID-19 was a hoax or overblown fact.⁵²

In other instances, pandemic humor was a tool to subvert social norms. In Spain, memes circulated expressing people's frustration and discontent with the government's poor management of the crisis.¹⁷ In Ghana, religion was the target of humorous subversion.⁵³ In Nigeria, humor was used not only as a coping strategy to get through the pandemic but also as an outlet to express frustration at the government.⁵⁴ Zimbabweans also saw the upheaval of the pandemic as an opportunity to challenge repression through humor.¹⁹ Throughout the world, social media such as WhatsApp made sharing subversive humor easy despite the pandemic's social restrictions. While in some countries social expectations such as women being caretakers were further entrenched in the culture during the pandemic, humor was also used by women to challenge and de-romanticize traditional expectations of women in roles such as mothers.⁵⁵ The pandemic also exposed social inequities, and humor was one

tool used by comedians and artists to highlight those inequities. For example, some comedians found the opportunity to create digital global platforms for their message during COVID-19, shining a light on oppression and inequity through humor.⁵⁶

Online platforms became a common performance space for comedians who previously performed on stage. Many used this as an opportunity to connect with new audiences across time and space, and bond with listeners as they found humor in previously unfamiliar concepts like 'lockdown' and 'contact tracing'.⁵⁷ Defining various aspects of the pandemic through humor was also a part of the Nigerian approach to finding meaning during the crisis, and new Nigerian Pidgin expressions were even created to humorously capture the shared meaning of the pandemic experience.⁵⁸ Using humor to make sense of the pandemic and acknowledge the shared trauma of the experience, helped people around the world to cope with their situation.⁵⁹

While some humor focused on finding meaning and camaraderie during the pandemic,⁶⁰ others took advantage of the less-threatening medium of humor to divide and dehumanize. Hate towards individuals of Chinese origin, or those perceived as Chinese, drastically increased during the pandemic. Framing attacks on Chinese populations in humorous language attempted to make blame and dehumanization more acceptable.⁶¹ Sexist stereotypes were also common in pandemic humor, with women portrayed as nagging and men as useless.⁵⁵ Rather than relieving stress by finding joy and meaning during the pandemic, this type of humor assigned blame and fostered resentment.

IMPLICATIONS FOR PRACTICE, POLICY, AND RESEARCH

Humor during the pandemic reflected the diversity of society. The use of humor depends on many factors including the intent of the joke-creator and the cultural/societal context of both giver and receiver. An individual's situation can also affect the appreciation of humor. In Italy, for example, those in towns less affected by COVID-19 were more likely to find pandemic humor funny than those who knew someone affected.⁶² The simultaneous individual and collective nature of humor makes it difficult to conclude its effects on health and well-being.

The challenge of disconnecting the effects of overall lifestyle from a sense of humor makes it difficult to reach conclusions based on correlations. For example, some of the studies reviewed herein found that humor helped individuals cope with the COVID-19 pandemic. But other studies found that anxiety about the pandemic decreased an individual's sense of humor.⁶³ Were those with a more developed sense of humor less anxious about the pandemic because of their humorous nature, or were they more likely to use humor because they were less anxious? Research into humor as a therapeutic intervention struggles with this distinction: is physical health helped by humor, or is it easier to have a healthy sense of humor if you are in good physical health?⁶⁴

Many formal laughter therapy interventions are paired with exercise, such as in laughter yoga, making it difficult to separate the effects of the laughter and the exercise. In one study, for example, laughter yoga and simple exercise therapy were found to be equally beneficial to women experiencing depression.⁶⁵

Humor, the cognitive construct, and laughter, the physiological response are natural and universal human behaviors with the potential to become powerful tools for promoting the health of individuals and communities. When practiced with situational awareness, humor is a useful tool for sharing health education principles. Finally, practitioners must recognize the complexity of humor as they seek to use it: types of humor, humor's relationship to and difference from laughter, the receiver's individual and social circumstances, and the perspective of humor in the large cultural context -- all important foci to be further explored and understood. One positive outcome of the COVID-19 pandemic may be a fuller realization of the potential of humor as a healing modality.

CONCLUSION

This review of studies on humor and laughter behaviors employed during the COVID-19 pandemic points to the need for further work on the potential of humor and laughter for use in direct care interventions, health messaging, health education, and in improving the social bonds and connections among health professionals, patients, and students. Humor is a complex, universal coping mechanism that gets us through difficult childhoods, adversity at work and home, and life in general. Its complexity and social/cultural roots make it difficult to analyze and objectify. Nevertheless, continued research on the functions of humor and laughter will illuminate its power in health and healing and make us ready for the next pandemic.

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The authors declare that they have no conflict of interest.

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