

# Curbing Sociocultural Myths and Perceptions on the Etiology and Treatment of Cancer: A Narrative Review.

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## Abstract

**Background:** Cancer remains a leading cause of death worldwide, accounting for approximately 10 million deaths in 2020. Despite significant advances in prevention, early detection, and treatment, persistent sociocultural myths and misconceptions continue to influence patient behaviors and treatment outcomes, creating substantial barriers to optimal cancer care. **Objective:** This narrative review aims to identify common sociocultural myths surrounding cancer etiology and highlight their impact on patient care and management, while also proposing evidence-based strategies to address these misconceptions. **Methods:** A comprehensive narrative review was conducted to analyze prevalent cancer myths, their sociocultural origins, and their effects on patient care. The review synthesized existing literature on cancer misconceptions and evaluated interventions designed to address these beliefs. **Conclusions:** Sociocultural myths about cancer pose significant threats to effective cancer care and patient outcomes. A multidisciplinary approach involving healthcare professionals, community leaders, educators, and media platforms is essential to address these misconceptions. Implementing evidence-based, culturally sensitive interventions can improve treatment adherence, reduce stigma, promote early detection, and ultimately enhance patient survival rates and quality of life.

**Keywords:** Cancer Myths, Sociocultural Beliefs, Patient Care, Health Education, Misconceptions, Cancer Stigma.

## 1. Introduction

Cancer is a leading cause of death worldwide, with numbers scaling to nearly 10 million deaths in 2020, or 1 in 6 deaths, accounting for nearly 12% of deaths annually. The most common cancers are breast, lung, colorectal, and prostate cancers (1).

Despite significant advances in cancer prevention, early detection, and treatment, persistent myths and misconceptions continue to influence patient behaviors and treatment outcomes. These sociocultural

beliefs about cancer causation and treatment can significantly impact quality of life, treatment adherence, and ultimately, patient survival rates (2).

The proliferation of misinformation through various channels, including societal norms, social media, word of mouth, and unverified online sources, has created significant challenges at the time of diagnosis and throughout the course of management. Therefore, patients and their families must navigate between evidence-based medical information and culturally ingrained beliefs (3).

Therefore, the identification and management of these factors could lead to a significant and sustainable outcome in cancer management. According to Link and Phelan (2001), studies aimed at changing misconceptions and stigmatization must employ a multidisciplinary approach that involves psychologists, sociologists, anthropologists, and political scientists. In addition media coverage, religious leaders, improved healthcare, and advancements in treatment have also played significant roles (3, 4).

This narrative review highlights several sociocultural myths about cancer, its impact on patient care, and ways to mitigate these challenges in order to achieve holistic and stress-free cancer care.

### **Common Cancer Myths:**

**Myth 1: Cancer only runs in families:** Many believe cancer is solely a genetic disease passed through family, yet the majority of cancers result from DNA changes caused by aging or environmental factors (5)

**Myth 2 : Antiperspirants and bras cause breast cancer:** Research shows no link between routine use of antiperspirants, deodorants, or bras and breast cancer risk (5).

**Myth 3 : Biopsies or surgery cause cancer to spread :** Biopsies and surgeries are vital for diagnosis and treatment and do not cause cancer to metastasize (5).

**Myth 4 : Cancer is always fatal :** Cancer is often perceived as a death sentence. In fact, many cancers are treatable and curable, especially if detected early. Survival rates for several cancers have improved significantly due to advances in detection and treatment (6).

**Myth 5 : Sugar feeds cancer :** While cancer cells consume glucose, there is no evidence that eating sugar causes cancer or makes it grow faster. However, excess sugar consumption can contribute to obesity, a risk factor for some cancers (6).

**Myth 6 : Only smokers get lung cancer :** Smoking is the leading cause of lung cancer, but non-smokers can also develop lung cancer due to factors such as radon exposure, secondhand smoking, air pollution, and genetic predisposition (6).

**Myth 7 : Cancer is contagious :** Cancer cannot be transmitted from person to person. The only exceptions are related to certain viruses like HPV or hepatitis B and C, which can be spread and increase cancer risk, but the cancer itself is not contagious (7).

**Myth 8: Physical injuries cause cancer :** Physical injuries, such as bruises or bumps, do not cause cancer. Sometimes, such an injury may draw attention to a pre-existing tumor, but trauma does not trigger cancer formation (7).

**Myth 9: Mobile phones, microwaves, and power lines cause cancer :** Currently, scientific evidence does not support the notion that non-ionizing radiation from mobile phones, microwaves, or power lines causes cancer (7).

Myth 10 : Vaccines cause or worsen cancer : Vaccines, such as HPV and hepatitis B vaccines, prevent infections that cause cancer and do not promote cancer development (5, 7).

Myth 11 : Cancer treatment is worse than the disease : Although cancer treatments can have side effects, modern targeted therapies and improved supportive care mean many patients tolerate treatment well, with an improved quality of life and survival benefit (8).

## **2. Impact of Cancer Myths on Patient Care and Management**

Cancer myths significantly affect patient care and management in several ways:

1. Psychological distress and fear: Myths such as “cancer is always painful,” “cancer is a punishment or curse,” or “cancer always leads to death” can create anxiety, fear, and hopelessness, negatively affecting patients’ mental health, quality of life, and ultimately recovery (9).
2. Misinformed decision-making: Misconceptions like “a positive attitude can cure cancer” or “natural remedies work better than chemotherapy” can result in poor adherence to clinical recommendations or use of inappropriate alternatives, potentially delaying effective treatment (9, 10).
3. Stigma and social isolation: In many cultures, myths that associate cancer with shame, sin, or a curse can result in social withdrawal, neglect, and a lack of community or family support (9, 11).
4. Delay in seeking or accepting treatment: Belief in myths such as “cancer is contagious” or that “surgery spreads cancer” often leads to patients delaying medical care or refusing effective treatment, contributing to late-stage presentation and poorer outcomes (10, 11).
5. Hindrance to prevention and early detection: Myths that downplay the importance of screening or misattribute causes of cancer may prevent individuals from adopting preventive behaviors or seeking timely assessments (10, 11).

To improve outcomes, it is essential to address these myths through community education, counseling, and culturally sensitive awareness campaigns. Engaging patients and families with evidence-based information helps promote early detection, informed decision-making, and better quality of care.

## **Effective ways to curb sociocultural myths and misperceptions about cancer**

Some of the effective ways of curbing these misconceptions can be approached via several ways, some of which are highlighted below:

Culturally tailored public education campaigns: Comprehensive cancer awareness programs, including talks, radio, TV, print materials, posters, and community seminars, help correct common misconceptions and ensure accurate information reaches diverse audiences. Clear, context-specific health messages that directly address prevalent local myths are especially important. (12, 13)

Engagement of trusted community figures: Collaborating with religious leaders, traditional healers, local influencers, and cancer survivors to act as advocates has proven effective in promoting an evidence-based understanding and dispelling myths, as these individuals are often respected and can bridge the trust gap between the medical community and the public. (12)

Training for healthcare professionals: Equipping healthcare providers, social workers, and community health workers with the skills to recognize and discuss sociocultural beliefs enables them to counter misinformation sensitively and address patients' concerns directly during care encounters. (13)

School-based cancer education: Introducing age-appropriate cancer education in schools fosters early awareness and lays the groundwork for evidence-based attitudes that can persist into adulthood.

Responsible use of media and digital platforms: Implementing fact-based, regularly updated media campaigns and leveraging digital tools (including social media monitoring and digital literacy programs) to counteract online misinformation is crucial in a media-saturated environment. (14)

Establishment of accessible, community-based cancer screening and early detection services: Regular screening opportunities, coupled with education about their value, encourage help-seeking behavior and trust in modern medicine, thereby reducing reliance on myths. (13, 14)

Consistent myth debunking through FAQs and patient resources: Hospitals, clinics, and cancer organizations can create frequently updated materials (for example, handouts, web pages, public seminars) that address typical questions and debunk key myths in straightforward language. (15, 16).

### **3. Conclusion**

Sociocultural myths and misconceptions about cancer represent a significant barrier to effective cancer care worldwide, which continually influence patient behaviors and treatment outcomes despite medical advances. These deeply rooted beliefs create systemic challenges that extend beyond individual encounters to family and community involvement through psychological distress, treatment delays, social stigma, and poor adherence to medical recommendations. The association of cancer with shame or punishment in various cultures further compounds these challenges by creating barriers to open discussion and support-seeking behaviors, ultimately contributing to preventable morbidity and mortality.

However, evidence-based interventions combining culturally sensitive education with community engagement offer promising solutions to address these misconceptions. The proposed strategies—including culturally tailored education campaigns, engagement of trusted community figures, healthcare professional training, and accessible screening services—provide a roadmap for systematic change that recognizes myths as embedded within complex sociocultural systems requiring multifaceted responses. Moving forward, healthcare systems must adopt holistic approaches that acknowledge the cultural, social, and psychological contexts of cancer, requiring sustained commitment from multiple stakeholders to create environments where evidence-based understanding prevails over misconceptions. Ultimately, curbing cancer myths is about saving lives and ensuring equitable access to modern cancer care, goals that are achievable through dedicated efforts to address the cultural dimensions of cancer with the same rigor applied to its biological aspects.

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