Mapping incorrect causal beliefs about cancer: a systematic review.

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Background

- In 2012 there were over 14 million new cancer cases worldwide[^1].
- ~40% of cancer cases are linked with lifestyle / environmental factors[^2].
- People commonly believe in risk factors for which there is no evidence[^3].

- Improving our understanding of incorrect causal beliefs can improve communication strategies when educating the public about cancer.

Methods

**Aims:** To synthesise the qualitative and quantitative literature on the public’s incorrect beliefs about the causes of cancer.

**Search strategy**
- The literature was searched in March 2015 on Medline, EMBASE, PsycINFO, and PsycEXTRA using the search terms ‘cancer’, and ‘belief’.

**Article selection**
- English language, peer-reviewed studies on the presence/prevalence of at least one incorrect causal belief about cancer from a general population sample.
  - “No known association with cancer apparent in the latest evidence”.

**Quality assessment**
- Quantitative studies - the Newcastle-Ottawa Scale (NOS).
- Qualitative studies - Quality criteria for assessing validity and reliability.
Results

- 999 studies were identified.
- 16 studies were included.
- All at least ‘fair’ quality.
- Studies focused on beliefs about the causes of breast cancer (N=7), cervical cancer (N=2), colorectal cancer (N=2), or all cancer (N=5).
- 54 incorrect beliefs identified.
Results

1. *Biological factors* (14 studies) - **Physical trauma**, general health, and health-care issues.

2. *Mental health* (6 studies) – **Stress**, negative emotions, depression, anger, anxiety, and trouble in relationships.


4. *Demographic factors* (6 studies) - Being male, being married, occupation.

5. *Supernatural forces* (5 studies) – God, fate, and mystical causes.
Conclusions

• The general public holds a wide range of incorrect beliefs regarding causes of cancer.

• Physical trauma and stress were the most commonly reported beliefs.

• **Implications**
  
  – Clinicians should consider the wide range of beliefs their patients hold when communicating about cancer.
  
  – Public health campaigns may wish to identify and address their audience’s incorrect beliefs when offering advice.
  
  – Measures to assess knowledge of cancer risk factors should include incorrect as well as correct risk factors.