Pseudoscience

[Authors Name]

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**Alternative medicine kills cancer patients (Fox, 2018)**

This article was published in NBC News on July 2018. According to this article cancer patients who use alternative medicine instead of standard therapy die earlier. It is also stated in this article that if alternative medicine is taken along with the standard treatment such as chemotherapy, surgery, and radiation then this medicine will not provide any harm. This study appears to be questionable as results which are given here are not available in any peer-reviewed article which shows lack of authenticity and no proper references are provided while quoting data from other studies. The only purpose of this article was to prove alternative medicines harmful to patients.

**Critique based on Smith’s 10 point (SMITH, 2015)**

**Point # 1. Did the study appear in a peer-reviewed journal?**

According to Smith, a good study is that which appears in a peer-reviewed journal. This article is not published in any peer-reviewed journal. The findings of this article are also not available in any peer-reviewed journal. For example, in this article, it is stated that those patients who prefer alternative medicine over standard medicines to treat cancer are 2 times more likely to die. Whereas in another article it was stated that risk of mortality increase to 2.5 times if a patient of cancer takes alternative medicine (Nick Mulcahy; Laurie Barclay, 2018).

**Point# 2: Who was studied, where?**

This article focuses on the use of alternative medicine in the treatment of cancer. In this study, humans are involved but there is no information on alternative medicines which cancer patients were using. This is again questionable. As there are so many alternative medicines and it is not sure which is a major cause of death in cancer patients.

**Point# 3:** **How big was the sample?**

According to Smith, studies with the large sample are more authentic. Although this article consists of a large sample size of 2 million but data lack authenticity. As in this article, it is stated that Yu along with his team member studied a record of almost 2 million patients of cancer. They compared the cases of patients (258) who took alternative medicine with those who were using conventional therapy (more than 1000). This is again questionable as this data do not match with the other study articles. In other articles it is stated that team from Yale University studies the record of 34 million cancer patients. The total number of cancer patients who use alternative medicine was 280 and those who use congenital therapy were 560. There is a great contradiction so on this basis these results can't be justified and seem not authentic (Johnson, Park, Gross, & Yu, 2017; Pomeroy, 2017).

**Point#4: Did the researchers control for key differences?**

According to Smith confounding factors should be controlled but in this article, it is stated that patients who were using alternative medicines were younger women. This article includes unmeasured confounders such as education, affluence, and other comorbidities. Selection bias is also seen so this cannot account for survival differences observed.

**Point #5: Was there a control group?**

According to Smith in the randomized studies control group should be present. This article includes data with the control group but the data included for the control group does not match with other studies and lack authenticity.

**Point #6:** **Did the researchers establish causality, correlation, dependence, or some other kind of relationship?**

According to Smith, it is very important to establish a causal relationship between different variables. This article lacks a causal relationship. No causal relationship is seen between different factors such as the effect of age, gender and education on using alternative medicine.

**Point #7:** **Is the journalist, or even the scientist, overstating the result?**

Yes, this article is overstating its result and it is again questionable. Because the results here lack authenticity.

**Point #8: Is there any conflict of interest suggested by the funding or the researchers’ affiliations?**

In this article, no conflict of interest is suggested by the author. As this article is based on the results of already published literature and does not require funding, therefore, authors have not mentioned the conflict of interest.

**Point # 9: Does the researcher seem to have an agenda?**

According to Smith, it is important to know whether the author has an agenda or not. By reading this article it seems that maybe the author has any agenda as author has tried his best to prove alternative medicine as a killer for cancer patients without any authentic results. No strong discussion is done to justify their objective.

**Point #10: Do the researchers acknowledge limitations and entertain alternative explanations?**

According to Smith limitation of study should be provided. In this article, the authors should have mentioned the limitation of this article so that readers can know what missing and what further has to be explored.

**References**

Fox, M. (2018, July 19). Cancer patients who use alternative medicine die sooner, study finds. *NBC News*.

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