

## Conference Paper

# Internet as an Effective Source of Health Information and Intervention in Several Countries: A Systematic Review

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**Abstract**

Internet now becomes people's need for finding health information. This systematic review was to find out the effectiveness of the internet as a source of health information and health intervention in several countries. In developed countries, all research showed that most of the internet users tend to search health information from reliable sources and official websites. No significant result shown in improving health behavior. This systematic review found that the health workers can exploit the internet facility to approach and promote community health status.

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## 1. Introduction

A growing trend in health care in the past decades was the increased availability of information about health, health care and specific diseases on the Internet (Ayers and Kronenfeld 2007). Currently, the internet has 513 million users worldwide. The young people continue to be one of the highest users of the Internet, often use this media to get answers to their questions, and also to search the health-related information (Sarchiapone 2013). Until 2014, Internet users in Indonesia had reached 88.1 million which were equal to 34.9% of its citizens (Indonesia APJI 2014).

Based on the National Cancer Institute's Health Information study, 68% of respondents were looking for the health-related information from the internet as their first reference, and only 16% contacted the health provider (Volkman et al. 2014). Meanwhile, a lot of information through this media on the internet were not valid. Everybody can give any information through this media (Kammerer et al. 2015), where many of that information was only based on experiences (McCaw et al. 2014; Guardiola et al. 2011).

On the other hand, the internet can give many advantages for health providers to become more flexible in reaching citizens using the alternative way besides the conventional methods. Several studies showed that the more a person found information from

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the internet, the more possible that person changed their lifestyle and health behavior (Ayers and Kronenfeld 2007; Davies et al. 2012; Maxwell 2015; Roman 2014; Milinovich 2014; Nawi and Jamaludin 2015; Plencner 2014). Another study also found that internet is an effective way to get more information besides the therapist, and the health providers, especially information related to nutrition and pregnancy (Huberty et al. 2013). Internet also constitutes a promising and cost-effective treatment alternative for a wide range of psychiatric disorders and somatic conditions (Rozental et al. 2015).

The Internet is a promising health information source and one of the facilities for health intervention if it's used in a proper way and for a correct population. Systematic Review of the previous studies needs to be done in several countries in the world to find out the effectiveness. The Internet can create and develop proper methods in promoting quality of health.

## 2. Methods

This study used Systematic Review based on PRISMA 2009. Data were obtained from online journals databases such as ProQuest and Science Direct because many studies were related to the topic. To get the latest data, the publishing year was limited from 2013 until 2016. The keywords used was internet intervention and health behavior.

### 2.1. Study selection

## 3. Results

## 4. Discussion

The studies above were held in developed countries, which had a higher living standard, high technology, and evenly economic development (Wikipedia 2015). The research in the countries of the America and Europe continents showed that Internet were more proactive and made the information from the Internet as additional information beyond the data obtained from health practitioners and tended to use the facilities of Internet-based applications available to improve the quality of their health independently. While the countries in the Asian continent, most of the internet users use the internet to find health information, only a few are willing to freely use the facilities of Internet-based applications that have been provided to improve the quality of their health. From this study, most of the respondents nowadays tend to use the internet to find out almost any information, in this case, is health-related information. Some of the respondents use the

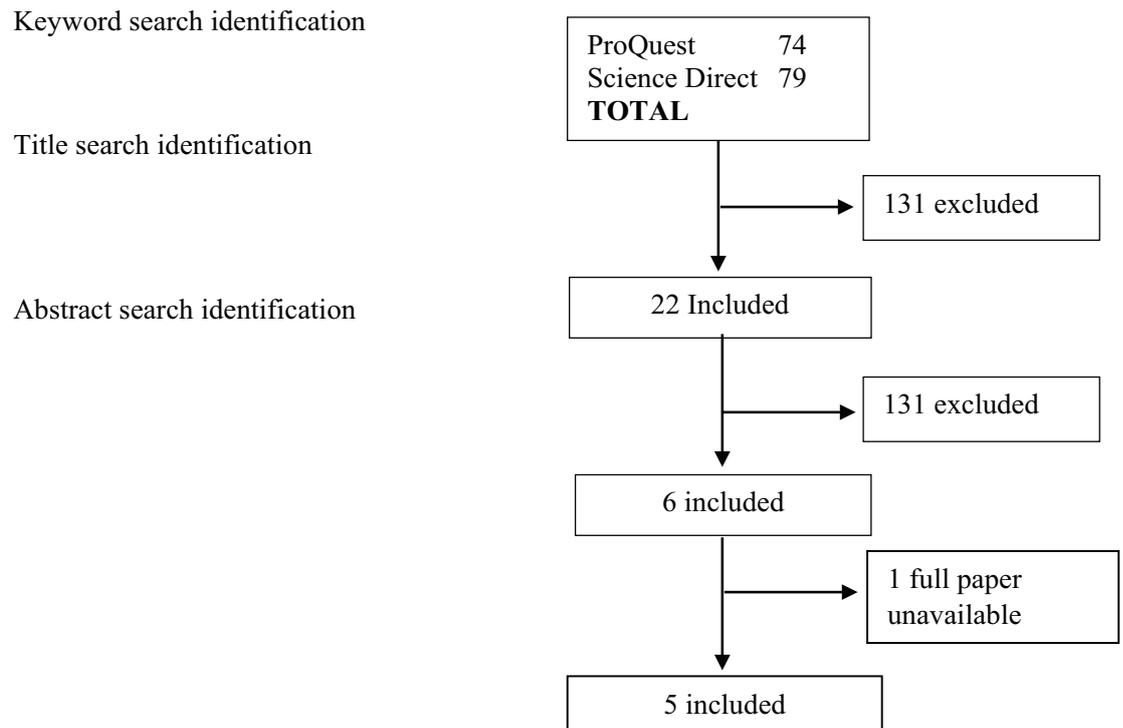


Figure 1: Selection Process.

information from the internet as an added knowledge after meeting their health provider mostly from social media, as their first reference in making their health decision, despite most of this information were not based on from scientific study result. The respondents also wish that the government and health organization provide more valid data on their official website, so they can feel safe to use the information. As we know together that finding practical and affordable ways to support the use of social media and encourage access to online health information and use of online health services could improve health literacy and self-management of health at the individual level and increase the efficiency in the provision of health services at the institutional level (Mano 2014).

## 5. Limitations

The study used different cases, methods and amount of sample, so that would not be easy to find out the relationship between each of them.

## 6. Conclusions

The Internet has become a crucial necessity in people’s daily lives. As a source of health information, unfortunately, there is still a lack of valid and appropriate information available in it. This systematic review suggests that the government provide more accurate

TABLE 1: Study Characteristic.

| Title   | Location                 | Respondents  | Method  |
|---|--------------------------|--|---|
| Study 1.<br>Describing the use of the internet for health, physical activity, and nutrition information in pregnant women (Huberty et al. 2013)                     | Midwestern United States | 293 women (pregnant or up to 1 year post-partum)     | Descriptive Analysis non-probabilistic sample   |
| Study 2.<br>Exploring the potential for Internet-based interventions for the treatment of overweight and obesity in college students (Schwartz and Richardson 2015) | Vancouver, Canada        | 706 University Student                               | Descriptive Analysis  |
| Study 3.<br>An Internet-based health management platform may effectively reduce the risk factors of metabolic syndrome among career women (Chen et al. 2013)        | Taiwan                   | 66 Career women with metabolic syndrome risk factors | Case-Control. Intervention using internet-based HMP ( <i>Health Management Platform</i> )   |
| Study 4.<br>Social media and online health services: A health empowerment perspective to online health information (Mano 2014)                                      | Israel                   | 1406 internet user                                   | Survey (questionnaire)  |
| Study 5.<br>Web-Based Surveillance of Public Information Needs for Informing Preconception Interventions (D'Ambrosio 2015)  | Italia                   | Internet content analyzed                            | Analyzed the usage of Google search engine and identified web pages containing preconception care recommendations. Monitored how the selected web pages shared on social networks Analyzed discrepancies between searched and published information and the sharing pattern of the topics |

information through their official website, and the health provider considers to optimally use the advantages of using internet intervention to promote a healthy lifestyle. This study may also be done in developing countries such as Indonesia.

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TABLE 2: Study Result Comparison.

| Study 1   | Study 2   | Study 3   | Study 4  | Study 5  |
|---|---|---|--|--|
| 94% use the internet to get information during pregnancy. 97.8% using Yahoo / Google 57% using health institution website. 50% use the information 94.4% with the government provide the valid information from official website. | 48% will use online page for a student to get health information. 91% use website to search general health information. 45% watch health information online video 75% believe the information provides by government and health organization. | All respondents showing behavior change after using this online application | Online health information empowers most of the examined individuals to use online health services. Among all social media, only those that offer to consult have a significant effect on the likelihood of using online health services. | Facebook was the most used social network for sharing. Nutrition, Chronic and Infectious Diseases were the most published and searched topics. Medication pages more frequently published than searched. Vaccinations elicited high sharing although web page production was low |

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