

Original Paper

# Effects of Internet Use on Health and Depression: A Longitudinal Study

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## Abstract

**Background:** The rapid expansion of the Internet has increased the ease with which the public can obtain medical information. Most research on the utility of the Internet for health purposes has evaluated the quality of the information itself or examined its impact on clinical populations. Little is known about the consequences of its use by the general population.

**Objective:** Is use of the Internet by the general population for health purposes associated with a subsequent change in psychological well-being and health? Is the effect different for healthy versus ill individuals? Does the impact of using the Internet for health purposes differ from the impact of other types of Internet use?

**Methods:** Data come from a national US panel survey of 740 individuals conducted from 2000 to 2002. Across three surveys, respondents described their use of the Internet for different purposes, indicated whether they had any of 13 serious illnesses (or were taking care of someone with a serious illness), and reported their depression. In the initial and final surveys they also reported on their physical health. Lagged dependent variable regression analysis was used to predict changes in depression and general health reported on a later survey from frequency of different types of Internet use at an earlier period, holding constant prior depression and general health, respectively. Statistical interactions tested whether uses of the Internet predicted depression and general health differently for people who initially differed on their general health, chronic illness, and caregiver status.

**Results:** Health-related Internet use was associated with small but reliable increases in depression (ie, increasing use of the Internet for health purposes from 3 to 5 days per week to once a day was associated with .11 standard deviations more symptoms of depression,  $P=.002$ ). In contrast, using the Internet for communication with friends and family was associated with small but reliable decreases in depression (ie, increasing use of the Internet for communication with friends and family purposes from 3 to 5 days per week to once a day was associated with .07 standard deviations fewer symptoms of depression,  $P=.007$ ). There were no significant effects of respondents' initial health status ( $P=.234$ ) or role as a caregiver ( $P=.911$ ) on the association between health-related Internet use and depression. Neither type of use was associated with changes in general health ( $P=.705$  for social uses and  $P=.494$  for health uses).

**Conclusions:** Using the Internet for health purposes was associated with increased depression. The increase may be due to increased rumination, unnecessary alarm, or over-attention to health problems. Additionally, those with unmeasured problems or those more prone to health anxiety may self-select online health resources. In contrast, using the Internet to communicate with friends and family was associated with declines in depression. This finding is comparable to other studies showing that social support is beneficial for well-being and lends support to the idea that the Internet is a way to strengthen and maintain social ties.

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**KEYWORDS**

Depression; health; social support; Internet

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