Original Article

Utilization and Impact of Electronic and Print Media on the Patients’ Health Status: Physicians’ Perspectives

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Aims: Despite an increased popularity of print and electronic media applications, there is a paucity of data reflecting doctors’ opinions regarding efficient utilization of these resources for the betterment of public health. Hence, this study aimed to investigate the perception of physicians toward the effect of electronic and print media on the health status of patients. Setting and Design: The current research is a cross-sectional study conducted from January 2015 to July 2015. The study population comprised physicians rendering their services in different hospitals of Karachi, Pakistan, selected by the nonprobability convenience sampling technique. In this study, 500 questionnaires were distributed through email or direct correspondence. Methods and Materials: Physicians’ perception toward the impact of electronic and print media on the health status of patients was assessed with a 20-item questionnaire. Different demographic characteristics, such as age, gender, institution, position, and experience of respondents, were recorded. Quantitative data were analyzed with the use of Statistical Package for Social Sciences, version 20.0 (SPSS, Chicago, IL). The association of the demographic characteristics of the responses of physicians was determined by one-way ANOVA using 0.05 level of significance. Results: In this study, 254 physicians provided consent to show their responses for research purposes. A response rate of 50.8% was obtained. Nearly one-third of the respondents negated that patients get health benefit using electronic and print media. The majority did not consider electronic and print media as lifestyle-modifying factors. Physicians thought that patients particularly do not rely on mass media for acquiring health information and consider healthcare professionals as unswerving information resource. Conclusions: Mass media can be productive resources to augment awareness among patients, although physicians seem unconvinced about the extended usage of print/electronic media.

Keywords: Electronic media, patients’ health, physicians, print media

INTRODUCTION

Mass media are frequently used for seeking health education as being largely influential, accessible, and play a major role in modifying attitudes and behavior of the people.1-3 Rapid growth of the Internet triggered an information revolution of unprecedented magnitude. Mass media are suggested to be the most significant, although not necessarily the most accurate, source of knowledge. Researchers have raised concerns regarding the use of the Internet to recognize and treat health issues since patients can misapprehend or misuse information, particularly in the absence of communication with a physician. It could be possible owing to inadequate health literacy, insufficient eHealth literacy, or lack of capability to sort through online media.

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Previous research already reported that mass media influence doctor–patient relationship. In developing countries, there is a general perception that the physician is authoritative in providing advice and medical treatment to patients. Interestingly, doctors in the Philippines viewed mass media influence as a challenge whereas doctors in the United States regarded it as an opportunity to initiate conversation. A literature survey showed that innovative media technologies advance patient empowerment and user satisfaction, improve access to information, provide a variety of personalized health information, and manage the sum of communications patients can have with physicians. Current health communication literature suggested that doctors and patients should increase the amount of interactivity through latest media communication techniques. Therefore, this study investigated Pakistani doctors’ perceptions regarding the use and impact of mass media on their patients’ health status.

Materials and Methods

Study design and study period

This study was cross sectional and conducted from January 2015 to July 2015.

Study population

The study population comprised physicians rendering their services in different hospitals of Karachi selected by the nonprobability convenience sampling technique. Physicians were surveyed with a 20-item questionnaire to assess their perceptions toward the impact of electronic and print media on the health status of patients. Different demographic characteristics, such as age, gender, institution, position, and experience of respondents, were recorded. This study instrument was adopted from a previous study and later modified. The first section of the questionnaire included questions focusing on the physicians’ opinions regarding the impact of electronic media including the Internet, television, and radio on the health status of patients. The second section assessed their views relating to the impact of print media including newspapers and magazines. The five-point Likert scale ranging from 1 = “strongly disagree” to 5 = “strongly agree” was used to record the perceptions of physicians.

Ethical approval

The questionnaires were distributed to the physicians who expressed willingness to participate in a survey after explaining the purpose of the study. Verbal consent was obtained, and the questionnaires were collected after 1 week.

Data analysis

Data were analyzed using the Statistical Package for Social Sciences, version 20.0 (SPSS, Chicago, IL). Frequencies and percentages were computed for demographic characteristics. The association of the demographic features of the responses was determined using one-way analysis of variance with 0.05 as the level of significance.

Results and Discussion

In this study, 500 survey forms were distributed among the physicians belonging to different hospitals of Karachi via email or direct correspondence. Two hundred and fifty-four physicians provided consent to use their responses for research purposes. The response rate observed was 50.8%. Table 1 summarizes the demographic characteristics of respondents, such as age, gender, institution, position, and experience of physicians. The ratio of the respondents’ gender was nearly equal, i.e., 51.96% were female and 48.0% were male. More than half (53.54%) were rendering their services in private hospitals or clinics. The majority reported to have an experience of fewer than 5 years (63.38%) and be involved in a clinical setting (62.59%).

The physicians’ opinions regarding the impact of electronic media including the Internet, television, and radio on the health status of patients. The second section assessed their views relating to the impact of print media including newspapers and magazines. The five-point Likert scale ranging from 1 = “strongly disagree” to 5 = “strongly agree” was used to record the perceptions of physicians.
three-quarter of the respondents (75.97%) conferred that patients did not get any health benefit and 59.83% thought that patients did not acquire healthy lifestyle using print media. Nearly half of the study population alleged that patients seek appropriate medical help sooner and get useful risk estimates and information regarding the purchase of medicines or other health products using print media. Around 70% of the respondents refuted that patient spending time on getting information from electronic/print media is useful.

Our results support the findings of the research carried out in Belgium and Glasgow in which majority had ever sought any health information online. In another study, physicians responded that surprisingly a small proportion of their patients use the Internet for health information. The frequently identified benefits for the patient were information, advice, and social support, although being misinformed was a commonly reported problem for patients.[7,21] Mass media are presently involved in many campaigns for improving the health status of the general public, still the public is currently deprived of not receiving these benefits. One possibility of less efficient utilization of mass media for getting health information could be the low literacy rate in our country.

The response of Pakistani physicians reflected that they might not be prepared to face well-informed patients or those having detailed information from the electronic/print media. They anticipated that spending time on electronic/print media for seeking health information about their ailment is futile. These sources might be not reliable or accurate and sometimes upset the patients’ feeling of well-being.[21] Another reason might be that patients getting information about their particular ailment leads to a misconception of disease or start of self-medication. The physicians then face additional investigation from patients or patients asking for specific prescription drugs that are not correct practice from the physicians’ viewpoint.[22] In countries such as Pakistan, the concept of the healthcare team is not well established, and physicians are the most reliable and definite source of information in their point of view. Benefits or harms of the electronic/print media need not be sidelined. Sometimes physicians

| Table 1: Characteristics of study population |
|--------------------------------------------|
| Characteristics | Number (%) |
|-----------------|------------|
| Gender          |            |
| Male            | 122 (48.03)|
| Female          | 132 (51.96)|
| Age (years)     |            |
| 25–30           | 154 (60.62)|
| 31–35           | 29 (11.41) |
| 36–40           | 25 (9.84)  |
| 41–50           | 35 (13.77) |
| 51 and above    | 9 (3.54)   |
| Organization    |            |
| Private         | 136 (53.54)|
| Public          | 118 (46.45)|
| Position        |            |
| Consultant      | 36 (14.17) |
| Chief medical officer | 55 (21.65) |
| Head of department | 18 (7.08)  |
| Resident medical officer | 75 (29.52) |
| Professor       | 18 (7.08)  |
| Lecturer        | 52 (20.47) |
| Experience (years) |         |
| Less than 5     | 161 (63.38)|
| 5–10            | 43 (16.92) |
| 11–15           | 22 (8.66)  |
| 16–20           | 17 (6.69)  |
| 21 and above    | 11 (4.33)  |
| Field           |            |
| Clinical        | 159 (62.59)|
| Academics       | 90 (35.43) |

| Table 2: Physicians’ opinion regarding the impact of electronic media on health status of patients |
|--------------------------------------------------------------------------------------------------|
| Statement                                                                                         |
| Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|----------------|-------|---------|----------|------------------|
| Patients get health benefit                                                                     |
| 0             | 8 (3.14) | 52 (20.47) | 148 (58.26) | 46 (18.11) |
| Patients change their lifestyle beneficial for them                                               |
| 6 (2.36)       | 30 (11.81) | 81 (31.88) | 109 (42.91) | 28 (11.02) |
| Patients seek appropriate medical help sooner                                                     |
| 1 (0.39)       | 21 (8.26)  | 111 (43.70) | 97 (38.18)  | 24 (9.44)   |
| Patients get useful information regarding the purchase of medicines or other health products    |
| 2 (0.78)       | 52 (20.47) | 90 (35.43)  | 101 (39.76) | 9 (3.54)    |
| Patients get more informed about their disease condition                                         |
| 0             | 12 (4.72)  | 73 (28.74)  | 154 (60.62) | 15 (5.90)   |
| Patients get useful risk estimates regarding their disease                                       |
| 1 (0.39)       | 40 (15.74) | 68 (26.77)  | 120 (47.24) | 25 (9.84)   |
| Patients get advice on their minor ailments                                                      |
| 1 (0.39)       | 15 (5.90)  | 89 (35.03)  | 136 (53.54) | 13 (5.11)   |
| Patients become more confident about self-care                                                   |
| 3 (1.18)       | 20 (7.87)  | 79 (31.10)  | 132 (51.96) | 20 (7.87)   |
| Patient started unnecessary self-medication                                                     |
| 0             | 6 (2.36)   | 39 (15.35)  | 144 (56.69) | 65 (25.59)  |
overlook the benefits of the electronic/print media and emphasize only on the harms that their patients are exposed to. A survey conducted in Chicago reported physicians’ negative feelings about direct-to-consumer advertising on television or radio due to disadvantages of misleading biased views of patients and increased cost.[22] Philippine doctors also want patients to perceive that they hold superior knowledge base/ intellect vs patients and have greater access to quality medical information than patients. The accessibility and proficiency of having medical knowledge accord them a higher status, and this builds an outlook of patients’ dependency on their healthcare professional for dispensing information, diagnosis, and treatment. A hierarchical relationship between the doctor and the patient always seems to be tightly knitted and needs to be acknowledged by patients for building mutual trust and confidence. Thus, doctors perceive it as a challenge when their patients carry information from the media sources.[15]

Results of statistical analysis are summarized in Table 4. Age, organization, and position of the respondents were statistically associated with their response to the question that spending time on electronic/print media is useless ($p < 0.05$). Other researchers also endorsed that the age of the physician is associated with their opinion about the reliability of the Internet or other sources. Young doctors are more in favor of using the Internet by their patients.[21] Another study conducted in Glasgow mentioned that recently graduated doctors considered the Internet to be more reliable than senior ones.[23] Keeping in view the findings, it is rational to conclude that physicians of the younger generation favor utilization of mass media to have the broadest reach and impact on their patients’ health.

In this study, a minor percentage (17.7\%) claimed that patients started unnecessary self-medication. Coping and self-care in patients improved as a result of using the Internet or gaining information from the television,
radio, and newspapers, which were reported to benefit these patients in developed countries.\[21\] Pakistan is a developing country with weak political–economic structure and has poor health indicators.\[24\] The reach, impact, and frequency of public service messages launched by the government on television, on radio, and in newspapers need not be ignored to improve the health state of such countries where health is a significant burden on their economy. Rather, this expects to be efficiently used in case of pandemics or any other prevalent diseases in a specific community. However, there are some barriers to reduce seeking health information from such sources, including low socioeconomic status and low educational level of patients, in underdeveloping countries such as Pakistan.

A more detailed survey in the future will provide the real picture of the scenario. Patients’ opinions should also be asked to check the validity of the physicians’ perspectives. Another recommendation is that the health professional should be taken on board when any information or health-related issue is presented on television, on radio, and in newspapers.\[12\] To cope with the need of the modern era, many types of research recommend that physicians acknowledge the patients’ interest in seeking knowledge from any source. They should discuss the reliable sources on television, on radio, and in newspapers with their patients rather than being threatened by the information their patients bring.\[23\]

The primary limitations of our study are the small sample size and restriction to the population of two institutions. Likewise, the possibility of proper recall and social desirability response bias is also expected. Time duration and lack of funds directly affected the survey sampling and further extension of this work.

**Conclusions**

Mass media can be efficiently used to inform patients although physicians seem not convinced about the extended use of print/electronic media. Findings from this study point toward the fact that physicians contemplated that spending time on electronic/print media by the patient for seeking health information about their ailment is futile. These sources might be not reliable or accurate and sometimes upset the patients’ feeling of well-being.

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**Conflicts of interest**

There are no conflicts of interest.

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