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# Seeking cervical cancer information from interpersonal sources among Malaysian women in Selangor

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**ABSTRACT**

**Background:** Cervical cancer is the second most common cancer among women in Malaysia after breast cancer. Previous studies have focused on the association between information disclosure about cervical cancer through the mass media and intention to undergo Pap Smear tests, but its remain unclear whether or not women use interpersonal communication to seek cervical cancer information. **Objective:** This study explores the information seeking behaviour using interpersonal sources among women who underwent a Pap Smear test in Klang valley. **Results:** The level of trust in interpersonal sources is higher than the usage level of interpersonal sources to seek cervical cancer information. **Conclusion:** Having a better understanding of cervical cancer information seeking behaviour through interpersonal communication will facilitate information intervention for women in Malaysia, especially in Selangor.

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## INTRODUCTION

In 2012, there was a reported 500000+ new cervical cancer cases globally (Ferlay *et al*., 2013). Cervical cancer has emerged as a major public health problem among women in Malaysia (Azlan Aziz, Nur Airena Aireen Azman, Adzmel Mahmud, Rosdiana Abd Hamid, & Khairuddin, 2013). Some 143 000 women die from cervical cancer worldwide ("HPV and cervical cancer", 2011). Current estimates indicate that 2145 women are diagnosed with cervical cancer annually of which 621 die from the disease (Bruni *et al.*, 2014). The most invasive cervical cancer is found in women who do not undergo regular Pap Smear tests. The American Cancer Society report (2011) has shown that regular Pap Smear tests can help detect cervical cancer when in its earliest stage.

Cervical cancer is the second most common cancer among women in Malaysia (Bruni *et al.*, 2014), however, literature shows that comparatively few studies have been conducted on cervical cancer and most of the existing research concentrates on breast cancer. Special attention should be given to cervical cancer because the Pap Smear test has shown to be effective in reducing deaths from cervical cancer. Irrespective of such successes, unfortunately many women continue not to undergo regular Pap Smear tests (Nelson, Moser, Gaffey, & Waldron, 2009). This may be because despite being exposed to cervical cancer information through mass media, many women remain unaware of the seriousness of cervical cancer. Furthermore, the information that is available through health agencies, pharmaceutical companies, special interest groups, and through the media is often conflicting, incomplete, or written in a highly technical language that escapes general audiences (Varma, 2009).

Hornik (2002) argues that healthy behaviour is not only influenced by health campaigns but also prompts discussion. Media may be very useful in raising awareness, but interpersonal communication is necessary for behavioural change. Morton and Duck (2001) state that media has the potential to influence individuals, but their impact is limited because of interpersonal communication, which has

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primacy over media messages. Interpersonal communication is the key sources of social influence; a process critical to change in health behaviour. There is a rich literature on influence and communication in social network and its relation to health behaviour (Glanz, Rimer, &Viswanath, 2008). However, the relationship between interpersonal communication and behaviour change in the theoretical stage remains unexplored (Valente, Poppe, & Merritt, 1996; Valente &Saba, 1998). There also exists a plethora of studies in health communication, but studies related to doctor-patient communication remains limited (Khan, Hassali, & Al-Haddad, 2011; Nor Aida Maskor, Krauss, Mazanah Muhamad, & Nik Hasnaa Nik Mahmood, 2013; Norazah Mohd Suki & Norbayah Mohd Suki, 2011; Tan, Hayati Yaakup, Shamsul Azhar Shah, Aida Jaffar, &Khairani Omar, 2012). Therefore, the purpose of this study is to gain a better understanding of the information sources used by women to engage in self-help. More specifically, this study aims to determine the usage levels of interpersonal sources to seek cervical cancer information and the level of trust in interpersonal sources.

***Interpersonal Sources of Cervical Cancer Information:***

Interpersonal communication is the process of creating social relations between two or more individuals (Fisher & Adams, 1994). Among the features of interpersonal communication is a process of continuous interaction, constant change, and forming a dyad, which means an interaction between two individuals occurs in a relationship (Gamble & Gamble, 2014). Interpersonal communication plays a unique and irreplaceable role in the area of health communication because patients will experience emotional disorder, which in turn will affect how they interact with other people (Duggan, 2006). Therefore, the role of interpersonal communication, especially in the field of health, cannot be ignored.

Health practitioners are a major provider of health-related information. They are an important source of information about health in meeting the needs of patients (Rutten, Arora, Bakos, Aziz, & Rowland, 2005). A review by Rutten *et al.* (2005) showed that medical specialists are the most powerful source of influence on individuals in making decisions concerning health, especially for patients who are in phases where they are diagnosed as having cancer and those who are undergoing cancer treatment.

Nurses are also a favourite source of information for many cancer patients. According to Nor Aida Maskor *et al.* (2013), oncology nurses in Malaysia are involved in the communication process with doctors, patients, and family members of patients. Oncology nurses play the role of intermediary by providing information regarding cancer to cancer patients as well as repeating important information affirmed by the doctor. The results of their study showed that frequent interaction between nurses and patients strengthens the ties between the two parties and hence leads to an increase in patient trust in the nurses.

Jusang Bolong (2006) stated that interpersonal relations are an interaction process involving two individuals who are engaged in the transmission and reception of messages. Messages that are stimulated through the interaction process affect one another. The level of interpersonal relations is defined as an increase of the level of impersonal relations to the level of personal relations from the aspects of interdependence, area of interaction, depth of interaction, code exchange, mutual understanding, commitment, and social networks.

Aside from formal information on health from professional health practitioners, informal health communication is also related to access to health care. Social networks play a role in helping individuals gather, interpret, and understand complex information (Calkins, 2008). Katz, Ang, and Suro (2012) conducted a study to examine how information from various informal sources affects access to information on health and its effects. Through telephone interviews with 114 Latin adults, the study found that the ecological health of informal communication does not only play a role in identifying symptoms of chronic diseases that have risks, but can also help in establishing self-confidence towards being proactive in disease prevention and taking action to treat the disease.

Family members are found to be play an important role in influencing decisions concerning health. The finding by Rains (2007) supports the trust given by patients to information about health conveyed by family members. He added that the information relayed by a family member acts as guidance for them in making decisions to carry out health related treatments. The information conveyed and moral support given to family members of patients can also help families to make good decisions with respect to cancer treatment decisions that will be undertaken (Nor Aida Maskor *et al.*, 2013). Accordingly, family members should be explored and reviewed for its role in cancer treatment.

According to Seo and Matsaganis (2013), sharing information with family members or friends can encourage individuals to adopt healthier eating habits, especially for those who are exposed to information about health through the mass media. However, their study showed that the role of interpersonal communication as a mediator influencing the actions of individuals to adopt healthy eating habits is only valid for those who have a low level of education. Talks on health through interpersonal communication are found to be effective in encouraging individuals to adopt a healthy lifestyle, especially for individuals who are

exposed to information about health through the mass media and those who have gone through the process of obtaining relevant information regarding health.

Delivery of information about cancer screening through community health centres, public hospitals, and churches are found to be effective among the African-Americans and Hispanic populations (Hay *et al.,* 2009). Social institutions have been effective in increasing knowledge, awareness, and community involvement towards health improvement. For example, information on health is relayed through workplace communication, radio, newspapers, and through libraries. Telephone counselling, the Internet, computer-based courses, and storytelling are also utilised to reach a specific community. Among the storytelling techniques used is the sharing of real experiences. Other strategies used include materials being matched to the characteristics of the community by ensuring that the information provided is in accordance with the context of that particular community's culture and use of their native language.

Then after, the influence of leaders' opinions has prevailed in society, whether consciously or unconsciously. There little doubts the ability of social institutions to influence the daily life of the community. Research by Muturi (2007) found that faith-based organisations in Jamaica are social and cultural institutions that play an important role in influencing the daily life of the community in terms of the formation of values, beliefs, and behaviours related to sexual and self-understanding. Individuals tend to refer to the opinion of leaders when they have to make a decision because they feel that their leaders' opinions are a reliable source of information.

Muturi also affirmed that interpersonal relations and communication are essential components in health behaviour. His study showed that leaders have the ability to influence the community's behaviour through face-to-face interaction. This is so because he found that social influences have occurred in communities in Jamaica, in that applied change in behaviour occurred after interacting with their religious leaders. It turns out that religious leaders serve as a source of information regarding various issues, especially for the community who have limited learning opportunities and have limited access to the mass media. Thus, social networks and communities are important in conveying values, beliefs, and norms of the social system.

***Methods:***

A total of 396 women who underwent the Pap Smear test in Selangor were selected using Taro Yamane's (1976) formula. Questionnaires totalling 148 were distributed at Bandar Botanic Klang Health Clinic, 164 questionnaire distributed at a Health Clinic located at Seri Kembangan, 60 questionnaire at Jenjarom Health Clinic and 24 questionnaires at Dengkil Health Clinic. The questionnaire comprised of demographic details, the level of trust in interpersonal sources, and the usage of interpersonal communication to seek information on cervical cancer. The number of questions totalled 30 items.

The questionnaires took approximately 10 minutes to complete. Strategies used to encourage more target groups to take part in this study include a display flyer at four of the selected clinics and a welcoming woman who waited to carry out test smears in the selected health clinics. Other strategies used to enhance the rate of feedback from the target groups included provision of incentives in the form of money and mystery gifts given to women who participated in this study.

The measures included in this study are based on self-report, and are measured at baseline. Participants provided information about their demographic factors, the usage of interpersonal sources to seek cervical cancer information, and the level of trust in interpersonal sources. Demographic factors include their age, race, marital status, and education level. A total of 13 items concerning interpersonal sources is listed in the questionnaire which is divided into three, namely, medical practitioner, health agency, and social network. Medical practitioner includes doctors, nurses, and health professionals. Health agency includes telephone hotline, cancer society, health care providers, and counsellor. Social network includes friends, co-workers, family, neighbours, religious leaders, and patients.

Participants provided information about their usage of interpersonal sources to seek cervical cancer information by answering, "How frequently did you use the following interpersonal sources to seek for cervical cancer information every day?"This question included five response options consistent with a Likert-type scaling format using a 5-point response scale ranging, including 1 = didn't use at all, 2 = very seldom (less than half an hour per day), 3=seldom (an hour to two hours per day), 4=often (three to four hours per day), 5=very often (more than five hours per day). The level of trust in interpersonal sources was measured on a five point Likert-type scaling format ranging from 1= doesn't trust at all through to 5=trust a lot. The completed questionnaires will be analysed using SPSS version 22.0.

*Findings and Discussion:*

A total of 396 questionnaires were distributed randomly amongst the selected respondents. Completed questionnaires were tested by using SPSS version 22. Of the respondents, 188 (47.8%) were aged between 29-37 years, 91 respondents (23.2%) were aged between 20-28 years, 64 respondents (16.3%) were aged between 38-46 years, 37 respondents (9.4%) were aged between 47-55 years, and 13 respondents (3.3%) were aged between 56-65 years.

The majority of the 383 respondents (96.7%) were married, 8 respondents were single and 3 respondents widows. A total of 219 respondents (55.6%) were Malay, 135 respondents (34.3%) were Chinese, 33 respondents (8.4%) were Indian and 7 respondents (1.8%) were of "other" races.

As for the education level, 9 respondents (2.3%) has a Master degree, 59 respondents (15.0%) had Bachelor degrees, 74 respondents (18.8%) had Diplomas, 9 respondents (2.3%) had certification, 24 respondents (6.1%) had STPM, 167 respondents (42.4%) had SPM, 17 respondents (4.3%) had PMR, 33 respondents (8.4%) had UPSR and 2 respondents (0.5%) were of the "others" education level.

Table 1 shows the results obtained from the preliminary analysis of the level of usage of interpersonal sources to seek cervical cancer information categorised according to the three aforementioned groups. The results illustrated in Table 1 shows that 39.6% of respondents have a low level of usage of medical practitioners and 29.1% respondents have moderate usage of medical practitioners. Only 31.3% of respondents have a high level of usage of medical practitioners to seek cervical cancer information.

However, the results of this study show that seeking cervical cancer information through nurses is higher compared to doctors and health professionals. The findings of the current study are consistent with those of Nor Aida Maskor *et al.* (2013) who found oncology nurses in Malaysia play the role of intermediary in providing information regarding cancer patients as well as repeating important information affirmed by the doctor. Women were more likely to inquire about cancer screening and diagnosis, support services, psychosocial issues, and general cancer site information from nurses (Squiers, Rutten, Treiman, Bright, & Hesse, 2005). As a result, oncology nurses should be able to provide information of both high quality and of appropriate quantity and assist individuals to interpret the information provided by others (Koutsopoulou, Papathanassoglou, Katapodi, & Patiraki, 2010).

It can be seen from the data in Table 1 that 61.6% of respondents have a low level of usage of health agencies to seek cervical cancer information. The telephone hotline appeals to those who are reluctant to get help face-to-face, and do not want to spend the effort and expense of arranging for transportation and childcare (Zhu, 2000). However, more than half of the respondents reported not using the telephone hotline to seek cervical cancer information. Almost half of the respondents do not seek cervical cancer information from cancer societies and counsellors.

Besides that, social ties are a source of information exchange among members constituting a network. Table 1 also indicates that there are slight differences in terms of percentage of moderate and high level of usage of social networks. Family members have the highest score, while friends have the second highest score, followed by friends, co-workers, neighbours, religious leaders, and patients. Consequently, knowledge and awareness of their families is vital in influencing their manners of taking appropriate action to face the cancer (Suriati *et al.*, 2012). However, if family's knowledge and awareness of cancer is insufficient, this may led to making incorrect decisions in coping with cancers.

**Table 1:** The Level of Usage of Interpersonal Sources among Respondent

| Interpersonal sources | Frequencies | Percentage |
|---|---|---|
| Medical practitioner | | |
| Low (3-6) | 157 | 39.6 |
| Moderate (7-10) | 115 | 29.1 |
| High (11-15) | 124 | 31.3 |
| Health agency | | |
| Low (4-9) | 244 | 61.6 |
| Moderate (10-15) | 117 | 29.4 |
| High (16-20) | 35 | 8.9 |
| Social network | | |
| Low (6-13) | 36 | 9.2 |
| Moderate (14-21) | 171 | 43.2 |
| High (22-30) | 161 | 40.7 |

Although the focus of this study is to determine the usage level of interpersonal sources to seek cervical cancer information, we are also interested in investigating the level of trust in those interpersonal sources. Thirteen items on the questionnaire measured the level of trust in 13 types of interpersonal sources, categorised into the same three groups.

Table 2 shows the results obtained from the preliminary analysis on the level of trust in

interpersonal sources. 65.7% of respondents have a high level of trust in medical practitioners, which is higher than the level of trust in health agencies and social networks. Not surprisingly, health professionals with whom people have personal contact are the most trusted sources (Lawson, Forbes, & Williams, 2011).

**Table 2:** The Level of Trust in Interpersonal Sources among Respondent

| Interpersonal sources | Frequencies | Percentage |
|---|---|---|
| Medical practitioner | | |
| Do not trust at all (3) | 1 | 0.3 |
| Low (4-7) | 12 | 3.2 |
| Moderate (8-11) | 122 | 30.8 |
| High (12-15) | 260 | 65.7 |
| Health agency | | |
| Do not trust at all (4) | 7 | 1.8 |
| Low (5-9) | 37 | 9.4 |
| Moderate (10-14) | 150 | 37.9 |
| High (15-20) | 201 | 50.6 |
| Social network | | |
| Do not trust at all (6) | 7 | 1.8 |
| Low (7-14) | 37 | 9.4 |
| Moderate (15-22) | 195 | 49.3 |
| High (23-30) | 129 | 32.5 |

Doctors have the highest score of trust compared to nurses and health professionals. However, the score of trust among medical practitioners is only slightly different. Tan, Hayati Yaakup, Shamsul Azhar Shah, Aida Jaffar, and Khairani Omar (2012) pointed out that Malaysian cancer patients appreciate the ability of the doctor to provide adequate information using good communication skills during the process of breaking bad news. Additionally, they have also discovered that Malaysian cancer patients highly appreciated the emotional, structural and informational support by doctors.

The score of trust towards health care providers is the highest among other sources in health agencies. This is followed by cancer societies, counsellors, and telephone hotlines. The family has the highest score of trust, followed by patients, friends, co-workers, religious leaders, and neighbours. Treatments and physicians come and go, but the family is often the primary support unit for the cancer patient (Harris *et al.*, 2009). Family is consistently cited as a more trustworthy and widely utilised resource, especially in regards to treatment decisions (Rains, 2007).

***Conclusion:***

It is interesting to note that the level of trust in interpersonal sources is higher than the usage level of interpersonal sources to seek cervical cancer information. Surprisingly, the results of this study show that the majority of sampled women have low levels of using interpersonal sources to seek information on cervical cancer, although they have a higher level of trust in those sources. This shows that women tend to believe interpersonal sources, although they do not frequently use such sources to seek for information.

To sum up, these findings are rather disappointing. This is an important issue for future research. Future research should look into why women do not seek cervical cancer. Communication interventions targeting cervical cancer could attend to women's progressive information needs. There are differences in samples, instrumentation, and methods used to investigate those who do or do not seek health information. However, there are limited studies that focus on a specific type of cancer.

Our study has several limitations. The first limitation is that our seeking index does not adequately allow us to determine the intensity of seeking information. For example, a woman who sought heavily from the other sources but not from interpersonal sources would rate lower on our seeking scale than someone who sought a little from two or three sources. The current scale may underestimate the actual amount of information that women sought. Another limitation is that although this is a large, population-based samples, all of our participants were women who had underwent a Pap Smear test in Selangor. As such, these results may not be generalizable to other populations.

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