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Dissertations into Practice

Abstract

This article represents two-firsts for the feature – it is the first to report on a study outside the UK and the first to examine the health information needs of community health workers. Sonika Raj is pursuing PhD at the Centre for Public Health, Panjab University, Chandigarh, in India and she conducted her research in Chandigarh. The article outlines the important role that health workers at community level play in determining health outcomes in the developing world, including Chandigarh. It demonstrates that while those workers recognise their information needs, there are many issues affecting their ability to access health information effectively, not least their limited access to appropriate technology and training.

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Keywords: community health workers; information need; information seeking behaviour; PhD thesis; questionnaires

The health information seeking behaviour and needs of community health workers in Chandigarh in Northern India

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Introduction

The World Health Organization conceptualises primary health care as a set of health services that can meet the challenges of a changing world.[1] An important component of the rejuvenated concept of primary health care is the role played by community health workers, who act as a bridge between the health care delivery system and the community. Community health workers enable health programmes to achieve three interconnected goals: building a relationship between the health care provider and laypersons in the community, improving appropriate health care utilisation and educating people to reduce health risks in their lives.[2] Access to reliable, relevant and implementable health information to health care providers has been identified as one of the key determinants for reaching the United Nation's Millennium Development Goals.[3] Yet, workers at grassroots levels have substantial unmet needs for information[4] and the literature has shown that community health workers lack knowledge about various aspects of health.[5–11] A thorough assessment of the health information seeking behaviours and needs of basic level health workers is a prerequisite to improving the utilisation of health information resources by them. Furthermore, improving knowledge about the health information seeking behaviour and needs of these health workers can play an important role in saving the life of a community as a whole.

Health information seeking behaviour is broadly viewed as the ways by which individuals obtain

information about health, illness, health promotion and risks.[12] The particular information needs of health care workers depend upon the type of care they provide to health care consumers. For instance, the health information seeking behaviour and needs of community health workers are different from those of doctors. Providing health information to those who need it at the lowest level of the health system will help to strengthen the health system and improve the quality of services. The issue of availability of relevant and reliable health information to health care providers has not been adequately addressed by the international community.[13] Globally, limited literature is available on the health information seeking behaviour of grass root level health workers. For this study, the community health workers were defined according to criteria established by the World Health Organization[14]:

- members of the communities where they work,
- should be selected by and answerable to the communities,
- supported by the health system but not necessarily a part of its organisation,
- have shorter training than professional workers.

The present study was conducted to assess the health information seeking behaviour and needs of community health workers in Chandigarh in India.

Methods

This cross-sectional study was conducted among community health workers in the Union Territory, Chandigarh in Northern India during the months of November and December 2013. The study jurisdiction has a population of around 1.1 million, 90% of whom reside in urban areas. There are 23 villages (rural) and 26 municipal wards (urban) in Chandigarh. It has excellent health indicators as compared to most of the states of India.

The study population included the following:

- *anganwadi* workers – village level honorary workers who are selected by community for providing maternal and child health services,
- auxiliary nurse midwives – the first contact people between the community and the health system, responsible for providing primary health services,
- pharmacists,
- NGO members,
- *sarpanch* (Headman of village) – elected head of a statutory institution of local self-government at village level called panchayat (village government).

A semi-structured questionnaire was used to collect data from community health workers on their information seeking behaviour, needs, attitudes, barriers to accessing health information and the usage of information and communication technologies (ICTs). The questionnaire was first constructed in English and then translated to the local language, Hindi, for better understanding by community health workers. It was subsequently translated back into English. The study tool was pilot-tested in a population different from the study area, and appropriate modifications were performed. Based on the 'Rule of 100', a sample size of 100 community health workers was determined.[15] From a total of 23 villages (rural) and 26 municipal wards (urban) in Chandigarh, one-third (n = 8 and 9, respectively) were selected. The investigator visited the villages and wards on a pre-arranged schedule and administered questionnaires to *anganwadi* workers, auxiliary nurse midwives, NGO members, *sarpanch* and pharmacists. Prior clearance from the Institute Ethics Committee of Panjab University, Chandigarh, was obtained and informed written consent from the study population was taken prior to data collection. Data entry and analysis were carried out using the IBM SPSS 16 package (SPSS Inc., Chicago, IL, USA). The Fisher exact test was used to determine significance, and a P value of <0.05 was considered significant.

Results

A total of 100 community health workers participated in the survey and Tables 1 and 2 show the demographic profile of the study participants. The mean age of the study population was 36.1; most (89%) were females, educated up to at least matriculation (90%) and married (93%).

Table 1 Socio-demographic profile of the participating community health workers

Variables	*n* (*N* = 100)
Age group (in years)	
20–30	26
31–40	42
41–50	23
>50	8
Gender	
Male	11
Female	89
Educational qualification	
<Primary	5
Primary pass but <10th	5
>10 but <graduate	61
Graduate	24
Postgraduate	5
Marital status	
Married	83
Unmarried	15
Widow(er)	2

Table 2 Types of community health worker and length of experience

Type of health worker	
Auxiliary nurse midwife	43
Anganwadi worker	32
NGO member	14
Sarpanch	7
Pharmacists	4
Work experience (in years)	
1–5	52
6–10	14
11–15	15
>15	19

Almost all the respondents (92%) acknowledged the need for health information in their daily routine. The main reasons they reported for seeking health information were as follows: educating the community (68%), upgrading knowledge (55%), self-health promotion (45%), out of interest (41%) and queries of patients (38%). The most preferred sources for health information were non-print resources like television and radio (79%) and interpersonal communication through training/workshops (79%), as shown in Table 3.

The health topics for which respondents wanted to seek information were immunisation, child health, maternal health, nutrition, communicable and non-communicable diseases, as shown in Table 4.

Table 3 Preferred information sources for community health workers

Preferred sources of information*	*n* (*N* = 100)
Print	
Books	36
Newspaper/magazines	43
Govt. Guidelines	37
Leaflets	37
Non-print	
Television/radio	79
Internet	20
Interpersonal communication	
Trainings/workshops	79
Communication with colleagues/seniors	47

*Multiple responses.

Table 4 The health topics which community health workers wanted information about

Information topics*	*n* (*N* = 100)
Child health	38
Maternal health	46
Family planning	33
Immunisation	56
Communicable diseases	30
Non-communicable diseases	39
Nutrition	45

*Multiple responses.

Moreover, a majority of them wanted their information in multimedia format (videos and films) and in local languages. The majority of respondents wanted health information material in Hindi (60%) followed by Punjabi (27%) and English (24%). Among the participants who did not seek health information, the most frequently mentioned reasons were unavailability of information source (4%), had adequate knowledge (3%) and no interest in work (1%).

With regard to computer access, only 19% had access to a computer and half of those (10%) used a computer in their daily course of work, as can be seen in Table 5. The reasons for not using a computer were as follows: no access (81%), do not know how to use (88%) and lack of time (25%). However, all had felt the need to get computer training in their jobs. Regarding the availability of mobile phones, almost all (95%) health care workers had mobile phones and the majority ($n = 69$) can use short message services

Table 5 Community health workers: computer and mobile phone access

	Computer *n* (*N* = 100)	Mobile *n* (*N* = 100)
Access		
Yes	19	95
No	81	5
Provider		
Department	1	2
Self	18	93
Use to access health information		
Yes	10	38
No	90	62
Reasons for not using*		
No access	79	5
Do not know how to use	88	24
Lack of time	25	20
Not interested	12	7
Lack of money to pay bills	6	65
Would like to access health information		
Yes	72	89
No	28	11

*Multiple responses.

Table 6 Barriers to accessing health information identified by community health workers

Barriers to accessing information*	*n* (*N* = 100)
Non-availability of needed materials	63
Overload of information	12
Outdated information	20
Lack of practical information	49
Lack of incentives	8
Technical language	23
No finances to acquire information	25
Contradictory statements about a particular topic	20
Poor quality of health information materials	8
Lack of time	45
Work overload	38
Not relevant to local scenario	28
Has to travel to get information	4

*Multiple responses.

(SMS). However, only two of the mobile phones were provided by the community health workers' departments. The major reason for not using mobile phones to access information was lack of money to pay bills (65%).

The barriers to accessing health information are shown in Table 6. The key factors were as follows: non-availability of needed materials (63%), lack of practical information (49%), lack of time (45%) and work overload (38%).

Fisher's exact test was used to find associations between the perceived health information needs of community health workers and independent variables. Age ($P = 0.00$), educational status ($P = 0.00$) and work experience ($P = 0.00$) were found to be significantly associated with the perceived health information needs of community health workers. In other words, those who were younger, more educated and less experienced were more likely to have perceived health information needs than their colleagues.

Discussion

The study indicated that most (92%) of the community health workers needed health information to carry out their daily activities. Their preferred sources of information were found to be training and workshops, television and radio followed by face-to-face communication with colleagues. The findings of the present study are consistent with results from other studies, which indicated that large proportions of health workers seek health information in their work.[16–18] A 2007 study by Constella Futures[9] in Uttar Pradesh, India, concluded that the biggest source of health messages for auxiliary nurse midwives (85%) and *anganwadi* workers (64%) was television. A study conducted in Pakistan also reported broadcast media, especially television, as a credible source of health information for health workers.[19] Similarly, in a study conducted in Malawi, face-to-face communication was found to be the most preferred method of sharing knowledge and information among health workers.[20] However, one of the studies noted that discussion with colleagues (2.7%) for provision of health information was poorly practiced as compared to books, protocol manuals, training sessions and the Internet.[18] The possible reasons for preferring training and workshops in the present study might be due to fact that face-to-face communication offers a rich means for information sharing, provides personal attention, clarifies doubts and gives on-the-spot feedback to the participants. Therefore, we recommend that the implementers

should harness the potential of largely available ICTs like mobile phones for improving one-to-one communication between different stakeholders.

Implications for policy and practice

The current study has demonstrated that although ICTs have developed and are playing a major role in the provision of health information generally, access to these modern ICT channels is still a distant dream for community health workers. The major identified reasons for low usage of computers in the study included the limited access to computer systems, high computer illiteracy rate and lack of time. Similar results were found in other studies.[4,18,20,21] So, there is a need to provide ICT infrastructure, training regarding their usage and a conducive environment for their use so that information should reach the community health workers. This, in turn, would benefit the community as a whole, as these grass root workers are an effective means of disseminating health information about various programmes to the general public and would improve the health outcomes of the population.

The current study indicates that most (84%) of the health workers have encountered information gaps about various types of health information. It is supported by different studies performed among health care providers in developing countries.[16,22] The main barriers to accessing information in the present study, namely the non-availability of needed materials, lack of practical information, lack of time and work overload, are similar to those found by studies in Uttar Pradesh, India, and elsewhere.[4,20,23,24] In the later studies, the major barriers to actionable information identified by grass root workers were too-technical information, untimeliness of information, too lengthy and non-practical information, language barriers and no access to the Internet. Literature has shown that community health workers have difficulty in understanding training manuals.[25,26] So, policymakers should develop health information materials tailored to the needs and education level of grass root workers. The information should be practical, context specific and in simple, local and easy to understand language that supports health promotion.

In the present study, more than half of health workers preferred multimedia resources like videos and films and non-print media for health care information. Other studies have cited printed materials as the most preferred source to seek health information.[16,20] The reason for the preference of multimedia in the present study could be due to the reason that information through videos and films is easy to understand, has greater impact and is a source of entertainment. So, we hereby recommend that implementers should provide the knowledge to the health care workers they need to save lives of their communities through multimedia format.

Age, educational status and years of work experience were found to be significantly associated with health information seeking behaviour in the cohort for this study. Similar results have been found elsewhere[18] where a positive association was found between age and Internet access. The reason for this could be that educated and young health workers are more keen to learn and are also capable of finding the information they require via ICT channels. Therefore, it is suggested that computer literacy training is provided during inductions and on-the-job training. The provision of ICT friendly environment in work areas will improve the overall efficiency of the health care system by strengthening worker knowledge, bridging the know-do gap and by improving health information and data sharing at all levels of the health system.

The study provides evidence to policymakers about the need to improve access to health information resources to community health workers, thus improving quality health care to a large segment of the population. By understanding the obstacles in health information seeking behaviour of basic health care providers, the policymakers should develop a national health information policy and strategies to implement it.

Conclusion

Almost all community health workers needed health care information to support their daily

professional activities, mainly in non-print format and in local language. Their main source of information was face-to-face communication during workshops and training followed by audio-visual media. They had limited access to modern ICT resources like computers. Mobile phones were universally present, but their usage for accessing health information by community health workers was limited. The main barriers to health information access were found to be the non-availability of needed materials, lack of practical information and time and work overload.

The study provides evidence to policymakers about the need to improve access to health information resources for community health workers. To tackle the issues which are preventing community health workers from accessing information effectively, policymakers need to develop a national health information policy and strategies to implement it. There is also a need to supplement this study with a qualitative assessment of the health information needs of community health workers. It will provide in-depth understanding of their needs, gaps and barriers, thus focusing the attention of policymakers and programme implementers on the issue.

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