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Article in *Medical Teacher* · March 2012

DOI: 10.3109/0142159X.2012.670321 · Source: PubMed

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## WEB PAPER

# Social mapping: A potential teaching tool in public health

SOUNDAPPAN KATHIRVEL, KATHIRESAN JEYASHREE &amp; BINOD KUMAR PATRO

Post Graduate Institute of Medical Education and Research, India

## Abstract

**Background:** Mapping is a fundamental way of displaying spatial human cognition. It is a rapid technique of summarising and presenting large amount of information. Social map is a technique that finds use as a participatory rural appraisal tool.

**Aim:** To evaluate the feasibility of using social mapping as a public health teaching tool.

**Methods:** A resident doctor posted in the Urban Health Training Centre was assigned to do social mapping of an urban resettlement colony. The area was first divided into segments. The mapping was done by people residing in each segment and compiled with the assistance of the resident doctor.

**Results:** Social mapping helped the student acquire various cognitive, affective and psychomotor skills. It also helped in understanding the geographical area, people, language, cultural practices, social networks and interactions. It trained the student in using rapid appraisal techniques, cartography, effective and succinct summarising and presentation of data of social relevance. The different language and cultural background of the community was the main challenge encountered.

**Conclusion:** Social mapping is an excellent learning and a very practical teaching tool in public health, especially when the researcher/health care provider has little knowledge about his/her field practice area.

## Introduction

'Maps are more than piece of paper. They are stories, conversations, lives and songs lived out in a place and are inseparable from political and cultural context in which they are used' (Warren 2004). There are two main types of maps. The first one is a *sketch map* which is a simple, easy and rapid way of mapping the study area, with the participation of local residents. This gives an opportunity to develop a good rapport with the community and displays information on the spatial distribution of resources of social importance and relevant to health and illness. It is not scaled and hence not meant to be complete or exhaustive, e.g. social map and village resource map. The second one is the more complex and sophisticated *scale map*, which gives more complete and scaled measurements of the area for defining territories, e.g. administrative maps, political maps and revenue maps. (Rambaldi 2005)

Social map is a participatory rural appraisal tool which intends to map the social structures and institutions of the area. The landmarks for social map are resources which can be religious places like temples, churches and *gurdwaras* or health care related areas like hospitals, private doctors, alternative medicine practitioners and traditional healing centres or areas for social interactions like community centres, marriage halls, markets, parks, *balwari* (crèches) and police station or public utility structures like water pumps, dumping grounds and drainage system in an area. It will be drawn by the local residents themselves with the help of a facilitator. If the area is very big, then it may be split into segments which may later be combined. (Sontheimer et al. 1999)

## Practice points

- Social mapping is an effective participatory learning tool in Public Health
- It is a rapid inexpensive method to gain knowledge about the community, its social structures, institutions and networks
- It teaches the researcher community participation, rapid appraisal techniques, cartography skills, succinct presentation of data of social relevance.

## Background

Indira Colony is an urban resettlement colony in Chandigarh, India, and is the residence for thousands of migrant employees. The people who reside in the colony are mainly from other Indian states, namely Punjab, Haryana, Rajasthan, Uttar Pradesh, Himachal Pradesh, Bihar and some from West Bengal, Manipur and Tamil Nadu. The most commonly spoken language is Hindi. Daily wage labourers occupy the major part of this colony, with some businessmen and government employees as well.

School of Public Health, Post Graduate Institute of Medical Education and Research (PGIMER) established its Urban Health and Training Centre (UHTC) in Indira Colony in February 2003. The centre is headed by one faculty in-charge (Assistant Professor, Community Medicine). One Senior Resident and one/two Junior Resident(s) are posted at this

**Correspondence:** Binod Kumar Patro, Department of Community Medicine, School of Public Health, PGIMER, Chandigarh-160012. Tel: +91-9216217398; fax: +91 172 2744993, 2744401; email: patrobinod@yahoo.co.in



Figure 1. Social map of Indira Colony, Chandigarh.

centre on rotation for a period of 6 and 3 months, respectively, to deliver health care services and experience community-based medical education. The centre provides preventive, promotive and curative services 6 days a week from 8.30 am to 3 pm. The resident doctor is expected to learn and practice public health skills including clinical skills as a family physician, communication skills and managerial skills. S/he is expected to develop a holistic approach to health problems in the community with special focus on social determinants of health.

### Social mapping: As a teaching/ learning exercise

The resident doctor posted in UHTC, Indira Colony, was assigned the task of preparing a social map. On the first day, he interacted with the health workers of the area to understand the social history of the area and walked through the streets of the area twice. Then, he divided the area into segments. The people belonging to each segment were approached to map their social institutions and resource areas in the next 3 days. The mapping done by people of a particular segment was

cross-verified with those living in the other segment and also by the resident doctor himself. After verification, all the segment maps were combined into a single chart with legends to make it user-friendly (Figure 1). The same was submitted and experiences discussed with the concerned faculty.

### Social mapping: A public health learning tool

The skills inculcated in a public health student while performing social mapping in different domains of learning are presented in Table 1. Social mapping helps the researcher to develop a good rapport with the community and gives information about their cultural practices, language and social networking. Being aware of the social structures, organisations and health care institutions helps to better understand the determinants of health and illness in the area. A series of maps over a period of time give valuable information on health status of the people over a period, gross effectiveness of implemented policy, strategy or any intervention in that area (Mascarenhas & Kumar 1991).

**Table 1.** The skills developed by social mapping as a public health teaching tool.

Domains of learning	Skills developed by social mapping
Cognitive	Knowledge about <ul style="list-style-type: none"> <li>– social structure and institutions</li> <li>– spatial distribution of the structures and institutions and their relevance to health and disease</li> <li>– socio-cultural determinants of health</li> </ul>
Affective	<ul style="list-style-type: none"> <li>– Attitudes, beliefs and norms affecting health/illness related behaviour in the society</li> <li>– Orientation to the provision of culturally sensitive health care services</li> <li>– Attitude towards the cultural models and stereotypes in the community</li> </ul>
Psychomotor	<ul style="list-style-type: none"> <li>– Cartography</li> <li>– Summarising and presentation of data</li> </ul>

It can be used to present information on village layouts, infrastructure, demography, ethno-linguistic groups, health patterns, wealth and others (Mascarenhas & Kumar 1991). Social maps are not very demanding as far as the tools and equipments needed to prepare it are concerned. It can be made on paper/canvas with limited stationery and is easily portable. It increases the working memory and intellectual capacity of not only the participants, but also the facilitators (Pezzulo 2007). A combination of village resource map and social map is more comprehensive and can be used for various purposes (e.g. line listing of cases during outbreaks, pregnancy tracking, identity of water source, etc.).

The major challenges faced were due to the different language and cultural profile of the area, which is a common issue faced by the resident doctors, considering their varying cultural background. However, one of the very purposes of making a social map is to overcome these barriers. Another issue is getting the student and the faculty oriented to the potential learning opportunities in social mapping as a teaching tool. Though seemingly a simple exercise, it teaches many concepts in community medicine like community participation, rapid appraisal techniques, cartography skills, effective and succinct summarising and presentation of data of social relevance and looking beyond biological determinants of health. Most of these terms otherwise might sound as mere rhetoric with little practical relevance.

The social map does not provide complete, elaborate or accurate details because it is not scaled. It is subject to variation according to participants and the details presented should be cross-verified. Social maps made on paper will have problem of less participant involvement due to small size of the paper and the question of durability and long-term use is questionable (Mascarenhas & Kumar 1991). However, this can be overcome using computer software to scan, scale and preserve the map forever as was done by the resident doctor in this case.

To sum up, social mapping is an excellent learning and a very practical teaching tool in public health, especially when the researcher/health care provider has little knowledge about his/her field practice area and requires a deep, yet quick,

understanding about the people, their culture, their problems and felt needs. It is definitely a relief from the routine, monotonous teaching methods in public health in terms of completely involving the public health student and the community equally and fully.

**Declaration of interest:** The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

## Notes on contributors

SOUNDAPPAN KATHIRVEL, MBBS, is a Junior Resident currently pursuing his MD in community medicine at the PGIMER School of Public Health, Chandigarh, India. His research interests are in the field of cancer epidemiology and neglected tropical diseases.

KATHIRESAN JEYASHREE, MD (Community Medicine), is a Senior Resident at the PGIMER School of Public Health, Chandigarh, India, interested in epidemiology and biostatistics as applied to research for the larger benefits of the community.

BINOD KUMAR PATRO, MD (Community Medicine), is a Primary Care Physician and faculty member at the PGIMER School of Public Health, Chandigarh, India, interested in medical education with special focus on family medicine.

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