

Teasdale – Corti Global Health Research Partnership Program
Revitalising Health for All:
Learning from Comprehensive Primary Health Care Experiences

Asian Region
Iran

**Contribution of Community Health Workers to the Implementation of
Comprehensive Primary Health Care in Rural Settings, Iran**

Final report

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Introduction

This study is part of the Global Teasdale-Corti Health Research Partnership Program which focuses on different aspects of comprehensive primary health care (CPHC). Teasdale-Corti project's review of literature outlined characteristics of ideal CPHC as: equitable access to basic health care, integration of rehabilitative, curative, preventive and health promotion components, community involvement/citizen participation, collaboration with/ involvement of other sectors, action on social determinants of health, incorporation of a rights-based approach to health, and explicit value of health equity. Drawing from this definition of CPHC, Iran study, investigated the role of community health workers, as a key component, in the implementation of CPHC.

Review of literature

The Alma Ata Declaration has presented the concept of primary health care in 1978 with a focus on social justice and equity, critical role of community participation, health promotion, multisectoral approach to health problems, and the need to provide appropriate technology to improving health. Strengthening health systems and health service infrastructure, including human resources have been argued crucial in order to revitalise primary health care approach and achieving the vision of the Alma Ata Declaration (Walley et al., 2008).

Health infrastructure and adequacy of human resources for health are placed special emphasis in the World Health Report 2006 (WHO, 2006). This report defines health workers to be “all people engaged in actions whose primary intent is to enhance health” including health professionals, community health workers and community members (WHO, 2006 p. 2).

During the Alma Ata conference in 1978, Community Health Workers (CHWs) were identified as one of the cornerstones of comprehensive primary health care. Furthermore, the concept of “task shifting approach” developed by WHO, has emphasised on the reorganisation of health services and the expansion of tasks undertaken by local health workforces to address the current shortage of human resource for health (WHO, 2008). Battacharyya et al (2001) state that current focus on health sector reform and decentralization of health systems rises the need for revitalising and sustaining CHWs programs.

CHW is not a new concept emerging after the Alma Ata conference. Barefoot doctors in China were one of the inspirations to recruit local people to provide basic health care services to rural people (Campos et al., 2004b). The history of community health workers in Iran also goes back to pre-Alma Ata. The *Behdar* (‘healer’) training project in 1942, West Azerbaijan Project in 1972 (Amini et al., 1983), and the Village *Behdar* training scheme of Shiraz University (Ronaghy et al., 1983), are all earlier examples of utilising local health workers to address health concerns of the rural poor. The West Azerbaijan project in Iran, developed in one province, aimed to expand medical and health services through the establishment of a comprehensive health delivery system and training of the auxiliary health personnel (Amini et al., 1983) which was the translation of primary health care approach into practice. In the same years as the West Azerbaijan Project, similar experiments were also conducted in other parts of Iran which trialled the use of auxiliary health personnel in delivering health services.

According to The Joint Learning Initiative on Human Resources for Health framework there are four levels of health workers: the family; informal and traditional workers; community

health workers and; professionals (Joint Learning Initiative, 2004). Community health workers, who are also called 'lay health workers', as the third category in the abovementioned definition of health workers are "men and women chosen by the community", "should have had a level of primary education" and "may be employed full-time or part-time and paid by the local community or by health systems" (WHO, 1987). However, the term CHW is broad in scope, can include well-trained health paraprofessionals and may involve voluntary or paid work, or both.

CHWs have a potentially important role in the implementation of health programs, realization of community participation and in improving health outcomes particularly in low-income countries (Lehmann and Sanders, 2007). Many studies conducted in different regions and sub-regions have examined performance, utilization, effectiveness, and job satisfaction of CHWs at country level (Arab et al., 2000, Berman, 1984, Chowdhury et al., 1997, Curtale et al., 1995, Dieleman et al., 2003, Lehmann and Sanders, 2007, Bhattacharyya et al., 2001). The review of the feasibility and effectiveness of CHW programs in developing countries by Lehmann and Sanders (2007) concluded that CHWs can help reducing mortality and morbidity in rural population through improving access to and coverage with basic health services, though incentive strategies are needed to ensure sustainability and effectiveness of the program.

Other studies examined factors that impact on CHWs' performance as the key persons in functioning of comprehensive primary health care. In some cases, the use of community health workers as agents to implement specific vertical health programs such as diarrhoea or respiratory disease diminished their role as agents for change who stimulate community ownership and participation and facilitate the implementation of the holistic approach of comprehensive primary health care. A study undertaken in Zambia has demonstrated that the concept of community participation is poorly perceived in relation to community health workers (Stekelenburg et al., 2002). Appreciation by managers, colleagues and community, job stability, income and training have been argued as main motivating factors for health workers in Viet Nam (Dieleman et al., 2003). The involvement of community in the selection process of CHWs and their contribution in health planning and implementation has been recognised as an incentive which affect CHWs motivation, retention and sustainability (Bhattacharyya et al., 2001).

Local studies undertaken in Iran have mainly focused on the contribution of CHWs to health outcomes in rural settings. Dramatic improvement in some health indicators such as infant, maternal and neonatal mortality rate, population growth, immunisation and child malnutrition have been attributed to the performance of rural CHWs (Asadi-Lari et al., 2004). Mehryar et al (2005) claim the recruitment and performance of CHWs as one of the most important factors in narrowing rural-urban gap in various morbidity and mortality indicators over the last few decades in Iran.

Despite the long experience of CHWs program in Iran and it's recognition by health authorities, studies that assess program effectiveness are principally outcome-oriented with few studies assessing the program from the viewpoint of Iranian CHWs themselves. This study intended to fill this gap particularly the geographical gap in Iran by a comprehensive exploration of CHWs program in Iran and the investigation of CHWs' perceptions about their contribution to the implementation of comprehensive primary health care and how barriers and enablers are perceived by this group of health workers.

Social and political context

After the Alma Ata Declaration in 1978, the Ministry of Health in Iran has developed a new health system for a more equitable allocation of health resources based on the primary health care approach. Health system reform coincided with the Iranian revolution in 1979 which spawned enormous political change within the country as well as an eight-year war with Iraq with major impacts on social and health conditions in Iran. The new health system was based on comprehensive primary health care and also saw the integration of medical education and health care services from 1984 (Khojasteh et al., 2009). This integration occurred in response to health workforce shortages and aimed to improve the country's development of human resources for health and to match health personnel education to population health needs more effectively.

The primary aim of the system has been to improve access to health care for disadvantaged group and to reduce urban-rural disparities in health outcomes. To reach the goal, rural community health worker program has been incorporated into the Iranian primary health care system to improve access to and utilization of health services in rural areas.

Rural Community Health Workers in Iran

Rural community health worker is called 'behvarz' in Iran. This term is derived from the combination of two Farsi words *beh* (good) and *varz* (skill). Behvarz is a locally sourced paid health worker with specialized training in the health needs of the rural population.

The village health house is the most peripheral health delivery facility in rural areas and the place from which the behvarz works. Each health house is designed to cover a target population of about 1500. According to the most recent statistics, in 2007 there were about 17,000 health houses in Iran with almost 31,000 male and female behvarzes working in these facilities which cover most of Iran's 65,000 villages (MOHME, 2008).

Age, gender, education qualification and area of residence are criteria which are taken into consideration in the recruitment process of behvarzes. The minimum level of education required for admission into the behvarz training program is now completion of secondary school education. Behvarzes should preferably be natives of the village where the health house is established. The rationale behind this is that: a) locally recruited behvarz has stronger ties to the community and will be trusted by the community which they serve, b) there is comprehensive understanding of the living and working condition, language, customs, and beliefs of people, c) a native behvarz is more likely to remain a permanent resident of the village which in turn facilitates constant access to health service, d) this also reduces the cost of transport for behvarz. Finally, the appointment of behvarzes should be confirmed by a committee consisting of representatives of the Behvarz Training Center and district PHC division and local rural councils.

The Behvarz Training Centres (BTC) provides pre-service as well as in-service training to behvarzes. Behvarz training program consists of theoretical and practical coursework divided into three grades over a two year period.

A wide variety of health programs are delivered by behvarzes. Behvarzes may also play a crucial role in the implementation of major components of comprehensive primary health care including community engagement, health promotion and intersectoral collaboration. Close relationships and trust between behvarzes and their surrounding community as well as their position within the society facilitate their role as agents of change to mobilize community resources, act as advocates for their community and build collaborative teams for action. The following diagram shows the potential inter-relationships between behvarzes and the health system as well as their own community:

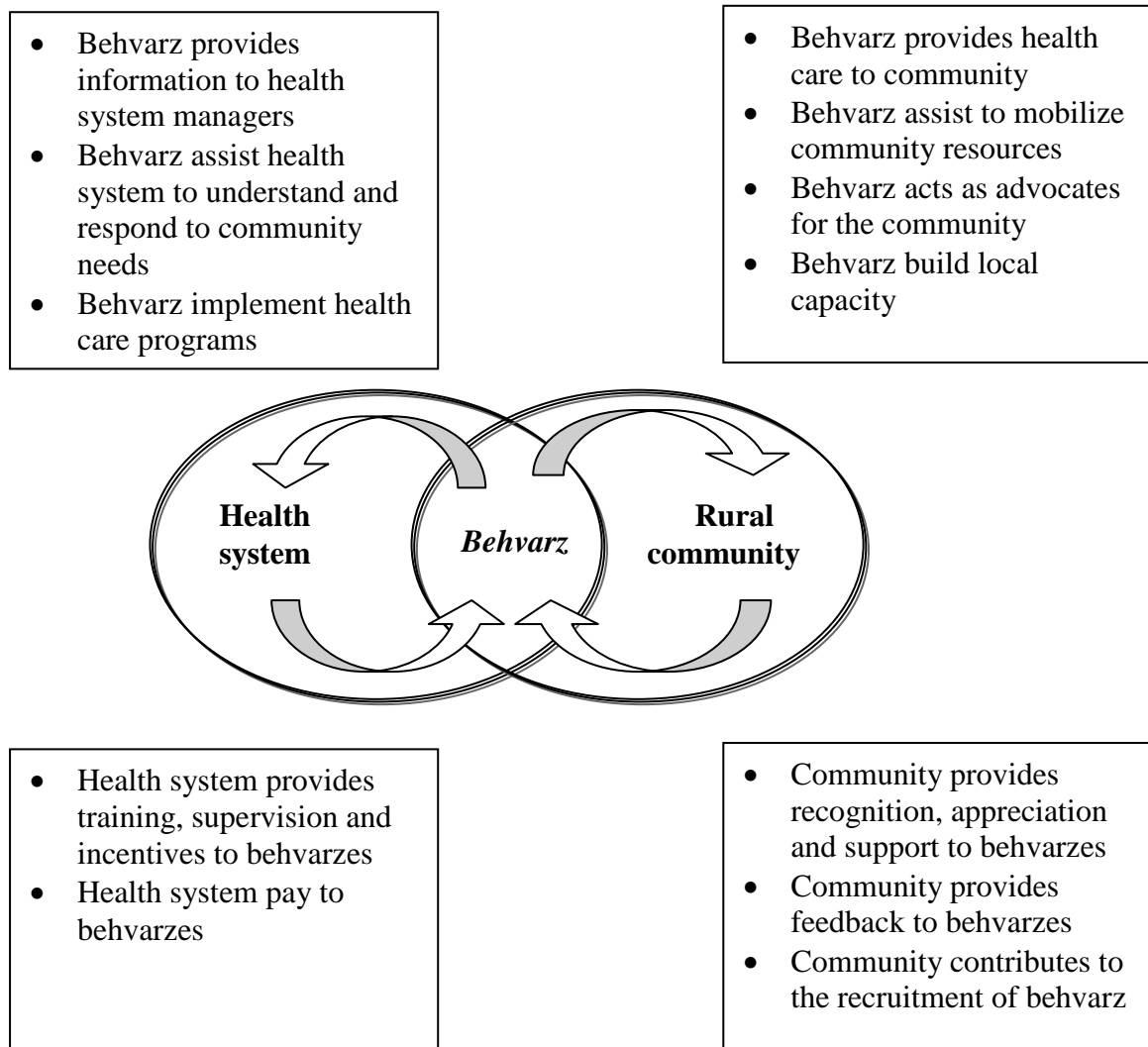
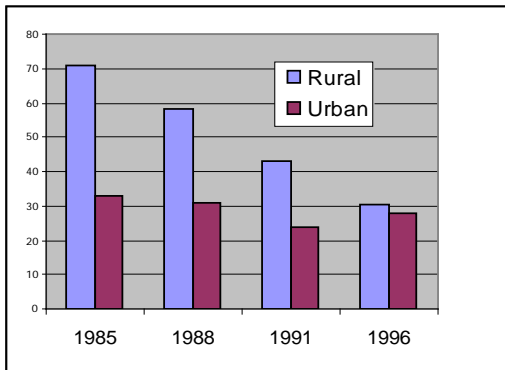


Figure 1 Interaction between behvarz and health system/rural community

After almost three decades of establishment of primary health care and the behvarz program in Iran, significant progress has been made for many health indicators. In particular, the gap between rural and urban areas in terms of various morbidity and mortality indicators has narrowed considerably. The following figure demonstrates urban-rural differences in infant and maternal mortality rates between 1974 and 1996 (Mehryar et al., 2005).

Infant Mortality Rate, 1985-1996, Iran



Maternal Mortality Ratio, 1974-1996, Iran

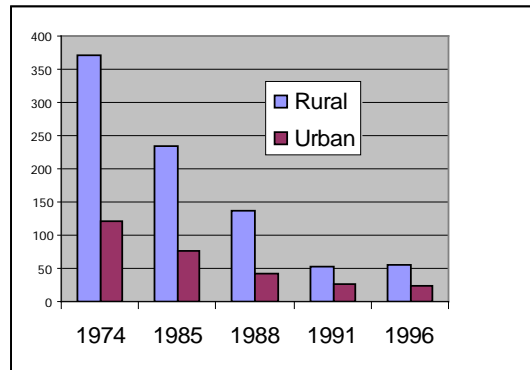


Figure 2 Urban-rural differences in infant and maternal mortality rates between 1974 and 1996

Immunization coverage is comparable in rural and urban settings with 96.7% and 97.1% of urban and rural children respectively having received their third shot of DPT vaccine in 1997. Other studies in Iran also examined the contribution of behvarzes to rural health outcomes, performance of village health workers with respect to specific health program and their job satisfaction (Asadi-Lari et al., 2004, Mehryar et al., 2005, Mehryar, 2004, Movahedi et al., 2008, Arab et al., 2000). It has been suggested that the significant improvement in rural health outcomes is strongly related to the performance of community-friendly health workers (Mehryar et al., 2005) although these improvements are unlikely to have been achieved through PHC alone since the period also saw economic growth, a rise in literacy rate and improvement in environmental services such as access to safe water and sanitation.

Most studies examined behvarz program through outcome measures. However, few studies has explored behvarzes' perceived barriers and enablers to the implementation of comprehensive primary health care in Iran. This study aimed:

Research Objectives

- To review past and recent CHWs- related policies to determine the extent to which they have created the conditions for improving the implementation of CPHC in rural settings, Iran
- To investigate CHWs perception of the principles and practices of CPHC and their role in improving its implementation in rural settings
- To examine CHWs perception concerning their recruitment and training process and the extent to which this process contributes to the implementation of CPHC
- To investigate CHWs perceptions of the existing enablers, barriers and remedial actions which strengthen or weaken their potential to contribute to implementing CPHC in rural settings

Research Questions

This study planned to answer two main questions:

1. What is the contribution of Community Health Workers to the implementation of CPHC in Rural Settings in Iran?
2. How can this contribution be strengthened?

by answering the following specific questions:

1. How have the past and recent health policies related to behvarzes created conditions for improving implementation of CPHC in rural settings in Iran?
2. How do behvarzes perceive the principles and practices of CPHC, and their role in improving its implementation in rural settings?
3. How do different approaches to the implementation of recruitment for behvarzes' affect their abilities to contribute to implementation of CPHC in rural settings?
4. How well does the training program contribute to the behvarzes' understanding of and abilities to contribute to implementation of CPHC in rural settings?
5. What are the perceived enablers/barriers/actions that would enhance their role in contributing to implementation of CPHC in rural settings?
6. What processes and policies would assist strengthening their contribution?

Methods

The intent of this study was to examine the contribution of behvarzes to the implementation of comprehensive primary health care in Iran. An exploratory study was undertaken to improve comprehension of the role of rural community health workers in Iran since very few studies have been considered in this area.

Different sources of evidence including secondary and primary sources were pursued. The first phase of the study included a review of national policies related to behvarzes. Primary data was collected in the second phase by undertaking qualitative interviews with a heterogeneous group of behvarzes.

Phase I:

Secondary data was collected by searching literature and published academic sources. Search terms including 'community health worker', 'behvarz', and 'Iranian primary health care' were used to search a number of sources including World Health Organization web site, PubMed, relevant international and Iranian public health journals, conference papers, internet search engines as well as bibliographies of retrieved articles. Furthermore, policy documents, unpublished reports, and behvarz training materials that were available through ministry of health archives in Iran were collected for analysis. Since the behvarz program in Iran traces back to almost three decades ago, the original aim of the study was to collect older policy documents as well as recent ones to be able to make a more comprehensive analysis of the related policies and their trends. However, the oldest documents that were available for collection were from 1996, long after the inception of the behvarz program in Iran. Therefore, we have limited the policy review from 1996 to 2009.

The Division of Network Development and Health Promotion (DNDHP) in the Iranian ministry of health is the place where all behvarz-related policies and programs are formulated and stored at the national level. After obtaining ethics approval from the Iranian ministry of health and Flinders University ethics committees to gain access these archives, an Iranian-

based co-researcher searched for available files and folders (hard copies as well as electronic files). Copies of the available documents were sent to the principal researcher for further review and analysis.

A total number of 32 documents in Farsi language including meeting minutes, letters, policy reports, training materials, operational plans, behvarz statistics in Iran, and research documents were reviewed and summarised into a tabular format by the principal researcher (SJ) who has Iranian nationality. Pre-determined categories from the CHW-related literature were used to create the initial table. New themes that emerged from the behvarz policy documents were added as a main or sub-category. To provide face validation for these categories and to ensure there were no missing policies in the review, a summary of the policy review was sent to a few key informants including an ex-minister of health and two heads of DNDHP who held office between 1996 and 2008. Their comments clarified some areas of policy content, such as the exact date of a policy development, details on training curriculum, behvarz recruitment committees, and in-service training.

Phase II:

The second phase of the study employed a qualitative inquiry to document community health workers' perceptions of their role within rural communities and their contribution to health improvement over time. Study participants were selected from behvarzes in 18 provinces in Iran. In order to include a broader range of participants, a profile of behvarzes throughout the country was compiled to provide information on the number of behvarzes in each province, their distribution, gender, work experience, and educational level. This information was collected from the Division of Network Development and Health Promotion in the Iranian ministry of health, where all behvarz-related information is stored at the national level. This information was used for sample selection. Figure 3 shows the provinces that were selected as study sites from different geographical locations in Iran.



Figure 3 Study Locations

Developed by Javanparast S

Three interviewers familiar with the Iranian primary health care network and the behvarz program were recruited and trained to conduct face-to-face interviews with behvarzes. Each interviewer travelled to 6 provinces (between October 2009 and February 2010) and conducted 5-6 interviews in each province. Interviews were conducted at the health houses in rural areas or in the district health centres depending on the preferences of the behvarz. The interviews varied from one to almost two hours. A total of 91 interviews were undertaken in 18 provinces reaching a level of theoretical saturation when further interviewing stopped providing new information and merely repeated what has been reported by previous interviewees (Minichiello et al., 1999). All interviews were conducted in Farsi. Although in some provinces particularly in North-west, West, and South of Iran, people speak in Turkish, Arabic and Kurdish or their local languages, behvarzes who participated in this study were able to speak in Farsi. Nevertheless, one of the interviewers was originally from a Turkish speaking province and was purposively chosen to overcome potential language barriers in a few selected provinces.

Participants were asked questions concerning behvarz recruitment, training, tasks and responsibilities, support and supervision. Behvarzes' perception about barriers to effective program delivery and suggestions for improvement were also sought. Interviews were recorded with the consent of participants and interview files were transcribed by the three interviewers. All audio tapes were checked against the transcribed text by the principal researcher (SJ). Using qualitative content analysis, interview data were coded to comparable categories. Category generation was based on the key concepts in the study questions producing master codes and sub-codes. Since the transcripts were in the Farsi language qualitative analysis software could not be used and all data were categorised and coded manually. The key themes and illustrative quotes were translated into English by the principal researcher.

Ethical considerations

Ethics approval from the Iranian ministry of health and Flinders University ethics committees were obtained to gain access to behvarz policy documents, profile and to conduct the interviews (Appendix I).

All study material were prepared by further discussion with research team and translated into Farsi language. An information package including a brief overview of the study, letter of introduction which addressed confidentiality issues and the consent form, all in Farsi language, were sent to study participant prior to the interview. All participants were asked to sign a consent form. (Appendix II)

All transcriptions and data analysis were done by the research team and no other transcribers were involved. Participants were assured of the privacy and confidentiality of their responses and disseminating the results of the study in the information sheets that they were given before agreeing to participate in the interviews. Due to behvarzes' position within health system, a special emphasis was placed on the confidentiality of participants' responses. They were informed that they can withdraw from the study at any time. The personal information and audio tapes have been kept in a secure location in the form of electronic data in the computer of the principal researcher (SJ).

Sources of support from beyond T-Corti (human, financial, in-kind, etc)

Financial and technical supports were provided by the Global Health Research Initiative (GHRI) and the project coordinators at regional and international levels. Additionally, the study benefited from in-kind contribution of provincial universities in Iran through the provision of free accommodation, meals and transport for interviewers during their field works.

Results

Phase I - Policy review findings

Since the inception of the Iranian behvarz program in 1979, national and provincial authorities have formulated, implemented and adjusted a wide range of related policies to manage the program and to address population health needs and the changing environment. The behvarz policy review undertaken in this study identified four key elements of the behvarz program, each of which is discussed below:

- tasks and functions
- selection and recruitment
- training, and
- support and supervision

Policy change over time is also described to identify trends and critical factors that have influenced program management.

Tasks and functions

The Health House (*Khane Behdasht* in Farsi) is the most basic unit of the Iranian PHC network and the behvarz is the first contact person providing health services and closely monitor the health of her population. The core responsibilities of the behvarz are: (a) annual census of the population; (2) collection, recording, and storage of health information and providing reports; (3) maternal and child health care; (4) family planning services; (5) health education; (6) environmental and occupational health; (7) disease control and management; and (8) home visits; and (9) referral. Every single household has its own log book containing the names, gender and ages of all family members, sanitation conditions of the household, history of pregnancies, details of under 5 care, and any other details of health and illness episodes within the family.

While the initial behvarz program was associated mostly with infectious disease and maternal/child health, changing disease profiles have expanded the range of what is considered 'basic' health care and, hence, behvarzes' responsibilities. The inclusion in recent years of programs on elderly health, mental health, diabetes, hypertension, oral health, and youth health indicate an increased breadth of activities and workload demands now facing behvarz. Policy documents from 2004 also emphasised social and cultural development, and community engagement in health promotion activities as part of the behvarz responsibilities. Table 1 shows a list of tasks and responsibilities assigned to behvarz in 2008; those with an asterisk were introduced in the program after 2006.

Table 1 Behvarzes tasks and responsibilities 2008

Annual census and data collection
Filling in related book logs and forms
Providing basic health care:
• Health care for children under 8
• Integrated Management of Childhood Illnesses (IMCI)
• Maternal care (pre and postnatal care)
• Delivery (by female behvarz) *
• Oral health *
• Family planning services
• Elderly health *
• Youth health *
• Community based rehabilitation *
Preventive activities
• Vaccination
• Health education
• Screening *
Disease management
• Treatment of diseases with specific protocol
• Symptomatic treatment of non-emergency cases
• Follow up of patients with tuberculosis, diarrhoea, etc)
• Providing care for non-communicable diseases (hypertension, diabetes, mental disorders, goitres, accidents, cancer, etc) *
School health
• School environment health
• Annual physical exam of students and case detection
Environmental health
• Food safety via regular supervision of centres of food production, storage and distribution
• Sanitation
• Safe water
• Collaboration with other sectors in environmental health projects
Occupational health
Collaboration with rural health councils *
Collaboration with family doctors in rural health centres *
Completing insurance forms and patient referral to health centres *
Promoting community participation and other social sectors in health programs
Submitting reports and statistics to health centres

Selection and recruitment

Reviewing behvarz policies in Iran revealed that the selection and recruitment process has strongly reflected the WHO definition of CHWs as: “members of the communities where they work [who] are selected by their communities”.(WHO, 1989) There is strong evidence of the engagement of local people, religious leaders and rural families in the selection of behvarz. By 2004, a more formal process involving behvarz recruitment committees had been established in each district to:

- identify villages that were short of behvarz using the standard of one male and one female behvarz per 1500 population
- assess the behvarz position vacancies
- introduce the behvarz program to rural communities, rural council and religious leaders and
- advertise and find the most appropriate candidates by using local media.

A written examination and interview with the candidates are the final steps of behvarz recruitment.

The qualification demanded of behvarz candidates has changed considerably over the time period of this review. The minimum required qualification increased from primary school in 1996 to a high school degree in 2004. Only if none of the applicants had a high school degree would a candidate with a lower educational level be selected. Since 2005, behvarz have also been selected from candidates with tertiary education (undergraduate degrees in health-related courses such as public health, family health, midwifery, and environmental health) as long as they met the other selection criteria.

The Iranian PHC program relies on both male and female behvarzes. This means that there are nearly equal numbers of male and females with females comprising 17,000 out of almost 31,000 behvarz (almost 54%). All health houses have at least one female behvarz and the male behvarz is selected as the second behvarz.

In addition to the above criteria, behvarz candidates have to be resident in the rural area for at least one year. If there is no applicant from the main village, applicants from neighbouring villages can be recruited. Moreover, to ensure the long term retention of behvarz in rural areas priority is sometimes given to the local candidates or to female candidates whose husband has a permanent job in the village.

Training

Induction and continued training of behvarz have received considerable attention in Iran. The training program is divided into three blocks over a two year period, and consists of theoretical and practical classes as well as clinical placements in health houses and rural health centres. Behvarzes are centrally trained at a District Behvarz Training Centre (DBTC), which is part of the district health system. Behvarz trainers have tertiary degrees in family health, disease management, environmental health, midwifery and nursing. Training courses are held twice a year with a maximum of 15 and minimum of 7 behvarzes. Students receive free training and financial support (free accommodation, meals, transport) throughout the two-year period of their training. In return, they are formally obliged to remain in and serve at the village for a minimum of four years after the completion of their study.

Policy documents indicated that new training contents have been introduced in different periods of time to meet the changing health needs of rural communities. The inclusion of a behvarz midwifery program for rural areas that do not have access to a maternal facility is an example. The program includes 5 weeks of theoretical training and clinical placement in public hospitals or other maternal facilities. Each student has to undertake 5 deliveries with assistance and 10 deliveries and postnatal care independently, pass the theory exam and complete the clinical placement to be awarded the certificate. Graduates are provided a free maternity bag and conduct home deliveries in their villages.

Another example of change in behvarz training policy is the inclusion of behvarz training as part of tertiary education. This policy change was based on the notion that: a) provision of behvarz training at university level will encourage a larger number of rural high school graduates to choose 'behvarz' as their future job; and b) a better educated behvarz is more acceptable to their community and can provide higher quality health care to rural families. The length of the course, held in district universities, is two years and leads to an undergraduate degree. Candidates with a high school degree who meet the eligibility criteria (2 years residence requirement in their rural area, physical and mental health, success in entering exam and interview) are able to enrol in the program. Main topics are adopted from Behvarz Training Centres with some extra topics on computer, administration and finance, English, epidemiology and statistics, mental health, anatomy and physiology, microbiology,

and physical examination. Graduates from this course return to their own villages and serve as behvarz in health houses.

The content of behvarz training materials has been updated regularly. In 1996 behvarz national and provincial health authorities reviewed training policies and operational plans to ensure that the policies and plans addressed current health needs and covered an appropriate range of health topics. Table 2 below demonstrates the training topics and units.

Table 2 Topics covered in CHW training following review in 1996

Topics	Hours of theory training	Hours of practice
Grade I		
Introduction to primary health care system	8	-
Ethics	4	-
Socio demographic status of the village	8	10
Population census (statistics, family profile, etc)	12	34
Communication skills including home visits	12	18
Human body (1)	12	12
Personal health	12	-
Child care (1)	36	52
Immunisation (1)	30	44
First Aid (1)	10	30
Simple symptomatic treatment (1)	30	38
Environmental health (1)	22	44
Introduction to human nutrition	6	6
Communicable diseases (1)	18	24
Religious issues	12	-
Theory and Practice	4 months	
Clinical placement	2.5 months	
Total	6.5 months	
Grade II		
Human body (2)	12	-
Maternal care	24	34
Family planning and consultation	22	22
Child care (2)	12	22
Immunisation (2)	10	24
Communicable diseases (2)	32	28
Simple symptomatic treatment (2)	14	20
Environmental health (2)	12	18
Non-communicable diseases (1)	18	12
Acute Respiratory Infection (ARI)	24	36
Religious issues	12	-
Theory and Practice	3 months	
Clinical placement	6 months	
Total	9 months	
Grade III		
Delivery (this topic is only for female students)	32	56
Communicable diseases (3)	28	12
Non-communicable diseases (2)	20	18
School health	12	22
Occupational health	12	12
Environmental health (3)	12	20
First Aids (2)	12	22
Community participation	14	20
Religious issues	12	-
Theory and practice	3 months	
Clinical placement	4.5 months	
Total	7.5 months	

In 2006, the course topics were reviewed again. Several new topics, including health education, oral health, elderly health, research methods and problem solving, introduction to statistics, intersectoral collaboration, and natural disasters, were added to the training material. Inclusion of new topics on the health system and rural community, intersectoral collaboration, social determinants of health and well being, communication skills, human rights and cultural beliefs, and health education demonstrates a policy shift towards a more comprehensive notion of PHC in Iran.

In-service training of behvarzes has also been recognized in Iran and is formally planned and structured at regular intervals in the form of workshops, monthly meetings, and refresher courses all aimed at integrating new policies and changes into the behvarz's work. A magazine is published quarterly called "Behvarz" which aim to update behvarzes by including articles on health issues and latest policy documents and changes.

Support and Supervision

It appeared from the policy documents reviewed that the Iranian CHWs are supported in a range of different ways. The behvarz is a full-time government employee and therefore is subject to the service regulations and disciplinary procedures that apply in Iran. The remuneration of behvarzes, funded through government budgetary allocations, is considered a motivational factor to assure program sustainability. Other incentives to promote quality and retention include: training allowance; celebration of a "National Behvarz Day"; creation of the "excellent behvarz award"; provision of personal loans; and the distribution of the behvarz magazine in all health houses every three months.

Regular supervisory visits to health houses are planned and performed by rural health centres, and provincial and national teams aim to evaluate program effectiveness and to increase the quality of care. A number of checklists which are designed by provincial and national health deputies are used to check: a) data recording, b) behvarz's knowledge; c) drug supplies and equipment; and d) work-related problems and suggestions from behvarzes.

One of the more unique practices of the Iranian CHW program, revealed by policy review, was the establishment of a "behvarz council" in 2006 with the aim of engaging behvarzes in problem identification, problem solving, knowledge transfer and policy making. Behvarz councils have been established at different health system levels, from the local health centre to the district, provincial and national levels. An election is held during one of the monthly behvarz meetings at district level and all behvarzes vote for 3 male and 3 female behvarzes.

Behvarz council meetings are held on a regular basis to discuss a broad range of issues concerning the behvarzes' work, such as recent policies, behvarzes' viewpoints about in-service trainings, work-related problems, and recommendations to overcome logistic or any other problems. Meeting minutes and the final report are submitted to the higher level council for further follow up. Behvarzes' representatives are responsible for transferring ideas and solutions to other team members and to follow up issues raised in the meeting.

Phase II - Findings of behvarz interviews

A total of 91 semi-structured interviews were undertaken in 18 provinces in Iran. Table 3 shows the characteristics of behvarzes interviewed.

Table 3 Characteristics of behvarzes interviewed (Total N=91)

Gender		Age (yrs)				Work experience (yrs)			Marital status		Educational level			Place of residence	
M	F	≤ 29	30-39	40-49	≥ 50	≤10	11-20	21-30	married	single	primary	Secondary	tertiary	Urban	rural
37	54	7	51	28	5	24	44	23	83	8	23	63	5	31	60

Roles and responsibilities

The Behvarzes were asked to report on the range of duties they perform during a normal week. A wide range of tasks and responsibilities were reported by our study participants that were consistent with what was revealed in the policy documents. (Table 4).

Table 4 Behvarz roles and responsibilities

Child health care	Vaccination, growth monitoring, IMCI, breastfeeding promotion and education, supplementary feeding
Maternal health care	Prenatal, natal and postnatal care Health education, delivery, family planning
Communicable disease management	Case detection, management, follow up and referral of diarrheal disease and acute respiratory disease in children, tuberculosis, malaria, hepatitis, AIDS, etc
Non-communicable diseases management	Case detection, management, follow up and referral of patients with diabetes, hypertension, mental disorders, goitres, accident and injuries, asthma, thalassemia, anaemia
Elderly health	Healthy eating, physical activity,
Oral health	Dental screening of children, pregnant women and elderly and referral to dentist/dental assistant in rural health centre
Youth health	Health education, healthy eating, addiction
School health	School environment, regular visits, physical examination of students on annual basis
Environmental health	Food safety via regular supervision of centres of food production, storage and distribution, Sanitation, Safe water, Collaboration with other sectors in environmental health projects, home visits
Occupational health	Farmers' health, health education, work safety
Simple symptomatic treatment and first aid	The provision of those medications behvarzes are allowed to prescribe such as painkillers, antibiotics for upper respiratory infections in children and supplements,
Annual population census	Updating rural household profiles by performing annual census
Reports/forms	Filling in forms, writing reports and collecting data
Meetings attendance	In-service training sessions, behvarz councils, etc

The range and scope of these activities give a good idea of the very important contribution the behvarzes make to rural health in Iran. The behvarzes also ranked the above list based on the importance, workload and time they spend on each task. This analysis showed that health education, maternal and child health and environmental health were reported as the most time-consuming tasks.

“Mothers and children are the most important target groups so the time we spend for their health care is the most” (#33, female, 44 yrs)

“Health education is included in all other programs so the time we spend on it is very high” (#54, female, 38 yrs)

“I spend most of my time on environmental health, follow ups and occupational health care” (#45, male, 44 yrs)

The role of behvarz gender in providing care

Our study revealed that although there is no specific gender related policy, in practice task allocation appears to be strongly influenced by cultural and religious beliefs so that women’s care is given by a female health worker. For example, the female behvarz is generally responsible for tasks that are performed within the health house such as maternal and child health and recording data, while the male behvarz deals with the activities outside the health house. These activities are: following up cases of communicable disease, performing environmental and occupational health checks such as assessing the chloride level of drinking water in rural households, ensuring hygienic toilets, negotiating with other sectors for the collection of domestic waste, and the implementation of a food safety program.

“Our male behvarz does all the environmental and occupational health so I don’t spend too much time on that. It is easier for them to do the duties outside the health house.” (# 71, female, 42 yrs)

“Women prefer to be served by myself [female behvarz]... when a woman comes for family planning services or prenatal care and I’m not in she leaves the health house and won’t talk to our male behvarz. I think they feel more comfortable with me” (#1, female, 43 yrs)

“We did not have female behvarz for 4 years and during that period of time pregnant women did not come for their prenatal care in spite of my follow ups...it’s a cultural thing that they feel embarrassed to talk to me about these issues” (#25, male, 44 yrs)

Apart from the roles that are clearly identified in the behvarz program, other tasks are performed that are not recognised by the health authorities but which the behvarzes strongly believe are crucial in building relationships with their rural community and improving program effectiveness. These tasks include attending social events in the rural area, consulting with religious leaders and other trusted people, and cleaning the health house:

“We take advantages of every single opportunity to convey health messages to people so we must attend different social events like religious events or ceremonies, etc. I believe it is part of our job...or sometimes I’ve got an old lady coming to check her blood pressure, she wants to sit and chat with me for hours, I have to listen to her... I can’t stop her because I have other duties to do. I have to respect her so she respects me back” (# 4, male, 38 yrs)

“There are also other things that we do but are not recognised by program planners. As you see they take huge amount of our time like cleaning the health house everyday” (#61, male, 34 yrs)

Behvarzes interviewed demonstrated a broad understanding of health including social determinants of health even if they didn't always have time to act on them.

Almost all respondents placed a special emphasis on 'health education' as their principal role and what they saw as the most important factor influencing rural health. This was followed by environmental health interventions that addressed basic determinants of health related to sanitation, potable water, road safety and other physical risks.

“Health education is the most important thing we do because people's awareness would increase and this is what we aim for” (#11, male, 34 yrs)

“All these changes that you see in rural environment are the result of health education provided by us. People's beliefs and behaviour changed a lot and it makes everything easier for us.” (#23, male, 46 yrs)

Behvarzes' perceptions about their training courses (content, length, quality)

Almost all behvarzes interviewed expressed a positive experience of their initial training courses. From the view point of our participants a combination of theoretical and practical classes as well as placement in health houses under the supervision of trainers provided high quality training what increased their knowledge, skills and confidence in not only the provision of health care services but also better communication with people and rural organisations outside the health sector.

The majority of behvarzes noted the friendly environment of Behvarz Training Centres and the close relationship with the trainers. A number of behvarzes viewed their training courses as the best experience they have ever had in their life.

“ It [training course] was excellent. Our trainers really cared about us. Before starting the course, I was very shy, couldn't talk with people. But when I finished the course, I gained enough confidence to be able to talk with top level managers.” (#63, female, 39 yrs)

“Placement in health houses under the supervision of our trainers was the best part. The course increased my motivation and interest in this field. It was an excellent life experience for me” (#82, male, 32 yrs)

While there was a consensus amongst behvarzes on the quality of the initial training, continued training received different views in terms of frequency and quality. Most behvarzes mentioned that they have regular refreshing classes, usually once or twice a month, when new programs integrated within the system, new policies or policy changes, and/or new forms and books are discussed. A review of the existing programs, assessment via written exams, and computer skills were mentioned as other topics that are covered by in-service training courses. It was also considered as an opportunity to meet other behvarzes, built friendships, and to share experiences.

Some behvarzes noted the lack of appropriate physical space and facilities, lack of practical sessions, not being based on local needs, occasional disparities between what is taught and supervisors' expectations, and repetition of different topics as the main problems associated

with their in-service trainings. Classes are mainly run by physicians who are in charge of the rural or district health centre or program officers that seemed an issue of concern for many behvarzes as they are not familiar with behvarz training techniques, and not linked to the behvarz training centre.

“In one session they try to cover too many different things. At the end, you hardly get something out of it” (#2, male, 38 yrs)

“We have to get updated, for sure because sometimes our education level is lower than the people we serve. But I prefer BTC trainers to run these classes than a doctor from the district health centre.” (#50, male, 34 yrs)

Behvarzes’ perceptions about their contribution to rural health

There was general consensus that behvarzes have made significant contribution to rural health gains over the last few decades. A majority of behvarzes, particularly older behvarzes who have been serving the community for many years, provided comparative data on major health indicators and how these indicators have improved as a result of their work in rural areas.

“I remember many years ago we had to go to people’s house and talk for at least one hour to do vaccination for their children but now they follow up child’s vaccination themselves. We don’t need to contact them anymore. It shows that they’ve become much more sensitive to health issues and it all happened due to our hard work and consistent education” (#28, male, 40 yrs)

“In the past people believed that they should have 10 children but now you rarely see a family with more than 2-3 children. It’s all the result of our hard work on family planning program and health education.”(#83, male, 42 yrs)

“When I started my job about 20 years ago maternal mortality was very high but now we have no maternal death. Our prenatal care and health education for pregnant women have been very useful. There is similar trend for the infant and under 5 mortality rates”(#39, female, 46 yrs)

Our respondents also believed that the environmental health program including sanitation, safe water, food safety, and waste collection that have been done in collaboration with other sectors, have had a significant impact in reducing infectious disease over time.

“I believe that what we have done in the area of environmental health is the most effective intervention...now domestic waste is collected on daily basis, you can’t see animal waste in rural area anymore, and as a result the rate of diarrheal and other infectious diseases declined a lot” (#45, male, 44 yrs)

Factors facilitating Behvarzes’ performance

Respondents identified some of the factors which facilitate successful implementation of the behvarz program in rural areas. These include building lasting and sustainable relationships with their communities based on trust and recognition from the community; and their own strong motivation to serve rural people, and high level of health knowledge and skills.

“Being from this area helps me a lot. I know my people very well. People trust me which is very important” (# 18, male, 40 yrs)

“If a specialist prescribes a medicine for somebody here, s/he won’t take the medicine unless s/he consults with me first even though I don’t know what it is for... this is an example of how people trust me” (#33, female, 44 yrs)

“Our training courses are very comprehensive so having knowledge and skills gives us enough confidence to work easily” (#64, male, 31 yrs)

A few respondents stressed on the crucial role of higher level health managers and incentive system in facilitating behvarz performance.

Barriers affecting behvarzes’ performance

Workload, the lack of a support system, and poor supervisory mechanism were the most common barriers raised by respondents that impede effective implementation of the behvarz program in Iran.

The behvarzes’ heavy and increasing workload is perceived as a threat to the quality of health services by the majority of informants. Integration of new programs within the Iranian primary health care system, and the inclusion of extra forms and paperwork – leading to duplication – were frequently cited.

“To be honest, we spend most of our time in filling the forms and recording statistics, we have to record a child’s injection in too many different forms which wastes our time” (23, male, 46 yrs)

“Every single unit in health department expect behvarz to do a set of tasks. They don’t even think of the scope of activities we have to do and they don’t care about our problems” (#10, female, 31 yrs)

“Variety of tasks makes us confused and tired...besides on the top of all these tasks other sectors expect us to help them in their projects because we are the only person who knows everybody in the village very well. Like last year we spend too much time on collecting data for [a health-related organisation], with no payment, you know...” (#58, male, 36 yrs)

Insufficient support systems including infrastructural support such as health house facilities, physical space and maintenance, recognition by higher authorities and incentives were common challenges cited by behvarzes. Most of the respondents felt that they are not fully supported by the health system.

“We don’t have enough space and educational materials in our health house for the educational classes, sometimes I have to pay out of my own pocket for maintenance of health house.” (#13, female, 43 yrs)

Despite formal supervisory mechanisms being in place, as revealed in policy documents, poor quality supervision was one of the barriers reported by behvarzes. In most cases, supervisory teams do not provide sufficient technical and emotional support and are not educative. Instead a large number of our respondents stated that supervisors mainly focus on their weaknesses rather than strengths.

“Supervisors should provide advice and support but they only reflect our weak points. They haven’t solved my problem at all” (#25, female, 28 yrs)

“We have supervisors from different units, everybody expect us to do the best in their area of interest. Nobody consider our high workload and our expectations.”
 (#38, male, 28 yrs)

Table 5 shows other potential barriers reported by behvarzes.

Table 5 Perceived barriers of behvarzes’ performance

Lack of educational opportunities	<i>...I have started my job with high school degree but now I have to get unpaid leave to be able to continue my education at university level. Due to the financial problem this is not possible for me. (#10, male, 27 yrs)</i>
Lack of health house facilities and poor maintenance	<i>It is about one year that the health house’s window is broken, the fridge doesn’t work properly and hasn’t been fixed yet, our sphygmomanometer is broken. I have followed these up too many times with no success (#6, female, 38 yrs)</i>
Job stress and mental health issues	<i>Expectation from behvarz and job stress is too high. Nobody cares about our mental health. (#41, female, 28 yrs)</i>
Lack of mechanisms for job promotion	<i>There is no opportunity for job promotion. After 30 years we are treated the same as a new employed behvarz (#50, male, 34 yrs)</i>
Shortage in behvarzes	<i>We have been told that the standard number is 2 behvarzes per 1500 population but there is 3000 population in our village and we are only 2 behvarzes. It doubles our workload. (#52, female, 32 yrs)</i>

Most behvarzes noted that behvarz council initiative, as a strategy to increase behvarz contribution to problem identification and solution, has not been effectively translated into practice. A number of behvarzes interviewed were not aware of behvarz council and its responsibilities, while others reported that the council meetings are not held regularly, the issues discussed in the meetings are not followed up, and there was no action by health authorities to address behvarzes’ problems and concerns.

“Behvarz council has not been effective in our area. I am a member of behvarz council but what is the point if you discuss issues and don’t see any action at the end?” (#42, male, 38 yrs)

“We have behvarz council in our centre and only had one meeting with the head of district health centre. We gathered the viewpoints of other behvarzes and passed it on to the higher level authorities but there has been no action on it. It is a good idea but in practice it does not work properly.” (#34, female, 29 yrs)

Discussion

Review of behvarz policies in Iran during the last 15 years supplemented by in-depth interviews with a broad range of behvarzes highlighted a few points regarding CHWs program in Iran and the extend to what it relates to the principles/outcomes of comprehensive primary health care.

It seems that in many areas behvarz policies and practices in Iran are consistent with the principles of PHC as outlined in the Alma-Ata Declaration. Table 6 demonstrates how well the behvarz program in Iran embodies the principles of comprehensive Primary Health Care.

Table 6 Principles of comprehensive PHC in the community reflected by the behvarz program in Iran

Principles of comprehensive PHC approach as notified in the Alma-Ata Declaration	Evidence from behvarz policy review and interviews of how well the principles and elements of PHC are reflected in Iran		
	Strong presence	Somehow presence	weak presence
Universal access and coverage on the basis of need (equity)	✓		
Comprehensive care with emphasis on disease prevention and health promotion	✓		
Community and individual involvement and self-reliance		✓	
Addressing social and environmental determinants of health		✓	
Intersectoral action for health		✓	
Appropriate technology and cost-effectiveness in relation to available resources	✓		
Equitable increase in population health outcomes	✓		

CHWs are part of systematic primary health care strategy in Iran. Distribution, selection and recruitment of behvarzes from the communities they serve facilitate not only the equity in access to the health care services based on rural needs but also in practical implementation of community participation. Almost all rural people have easy access to basic health care via a trained and community-friendly health worker. Experiences from other countries have also shown that CHWs recruited from local communities have had greater impact on utilisation, creating better health awareness and improved health outcomes (Abbatt, 2005, Lewin et al., 2005, Rosato et al., 2008). Behvarzes also believed that the recruitment strategy and being part of the community facilitate people's easy access to health care services.

The provision of comprehensive initial and continued training renders behvarzes responsive to their communities' needs. Training content and task description of behvarz, from the inception of the program in 1979, demonstrated a high priority given to disease prevention and health promotion along with the management of common illnesses. Behvarz training policies also revealed regular review and adjustment based on changing pattern of illness and population needs. Behvarz's educational level has been given significant weight, of which the higher level qualification requirement for new behvarzes is one example. This change may be a reaction to a pattern of an overall increasing literacy rate in Iran particularly among the rural population. Adult literacy rose from 41.8% in 1979 to 57.1% in 1988, and then jumped

to 74.5% in 1997 (PBO, 1999). The latest Demographic and Health Survey (DHS) in Iran reported that 79.4% and 65.4% of rural males and females, respectively, are literate (MOHME and UNICEF, 2000). This implies that new and young behvarzes who enter the PHC system are more likely to be respected and to be seen as credible sources of information and service if they have higher level of education.

Behvarz interviews also revealed training courses and the interaction with the trainers in Behvarz Training Centres as strengths of behvarz program in Iran. Comprehensive training of behvarzes is well reflected in their skills and knowledge of primary health care. In many other countries also the initial induction and continuing training for CHWs have received considerable attention (Abbatt, 2005, Campos et al., 2004a, Sanders and Lehmann, 2007).

This study demonstrated a trend towards a more social approach to health. This shift is visible in policy content such as training curricula as well as task descriptions. The inclusion of topics on social determinants of health, intersectoral collaboration and community engagement into behvarz training and job statement demonstrates the move towards a more comprehensive approach to primary health care (Labonte et al., 2008). However there was a general consensus amongst behvarzes that the long list of basic health care tasks in practice may leave little time for behvarz to serve as agents for community development and change. The workload of behvarzes and its increasing trend seems an issue of concern that needs consideration from policy makers.

The development of interactive mechanisms to engage behvarzes in the cycle of program evaluation, problem identification, and policy making via behvarz councils was an innovative initiative visible in policy documents. While this seems an opportunity that gives voice to the Iranian CHWs, interviews with behvarzes showed that in practice this process did not lead to problem solution or any evident change in practice or PHC system organisation. The barriers in translating policy into practice need to be identified and addressed.

Our study supported the earlier conclusions by Mehryar (2004) that Iranian health system reform based on primary health care approach, and particularly the emphasis on rural health provided by CHWs, account for the dramatic improvements in infant and maternal mortality rates, and particularly the convergence between rural and urban health indicators. This study only allows us to make tentative comments regarding the causal validity of the relationship between Iran's PHC program and these aggregated health improvements; although we can state that the recruitment and training of Iranian behvarzes, in terms of content and skill sets, is consistent with the types of health gains noted by Mehryar (2005).

A recent Cochrane review assessed the effects of lay health worker interventions at primary and community levels of care on maternal and child health and the management of infectious disease in different settings (Lewin et al., 2010). The review concluded that there is evidence of the effectiveness of CHWs in promoting child immunisation, breastfeeding, increasing the likelihood of seeking care for childhood illnesses, and reducing childhood mortality and morbidity. The review by Lehmann and Sanders (2007) also provides examples of effectiveness and cost-effectiveness of CHW programs on health outcomes particularly in the field of child health.

This study, however, highlighted some obstacles in aspects of the functioning of CHWs program in Iran and in the process of translating policy into practice. The most serious problems concern support services, supervision and workload. The amount of time behvarzes

spend in meeting cultural expectations, crucial in building trust and community engagement, does not appear to be sufficiently appreciated by the health system. An abundance of duplicative paperwork suggests the need for a comprehensive review of the reporting processes for all health programs running in health houses. Our finding is supported by a study undertaken in Kurdistan province in Iran that investigated individual, work-related and environmental factors impacting job satisfaction among CHWs (Arab et al., 2000) and concluded that the high number of programs integrated within primary health care network and the lack of financial and non-financial incentives are factors that lead to job dissatisfaction amongst CHWs.

Little evidence was found in the policy documents about the quality and outcome of existing supervisory mechanisms. The quality and consistency of behvarz supervision and the extent to which the existing behvarz supervisory mechanism in Iran has assisted in resolving barriers, provided actual support, and sustained behvarz interest and motivation are issues that were not documented in the policy review. Interviews with behvarzes supported existing pitfalls in the supervisory mechanisms. A large number of behvarzes believed that supervisions are not supportive in nature, rather disappointing due to the high level of expectations by supervisors and a view of seeking negative aspects of behvarz performance made them to feel disappointed. The crucial role of effective supervision and support in the success of CHW programs and maintaining the motivation of the CHWs is widely acknowledged in the literature. (Gray and Ciroma, 1988, Ofosu-Amaah, 1983) These findings suggest that behvarzes' supervisory mechanisms (who should be supervisors with what specific tasks) require health authority attention, to avoid what could be early signals of dissatisfaction.

While it is clear that the experience of the Iranian behvarz program may not readily transferable to other settings as health problems, economic and political factors, cultural determinants, population distribution and resources available have considerable local specificity, these experiences have important lessons to offer and can inform others who deal with similar problems in very different settings.

Strengths and limitations of the study and research instruments
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Strengths

- Field works and access to the Iranian community health workers were key components of the qualitative phase of our study. As in all field work research, managing entry into field research is an issue of concern which depends on the type and scale of the setting and the nature of the research (Johnson, 1975). In many cases, the researcher is not granted permission to enter the setting, or is rejected by stakeholders. Conducting qualitative research in a setting such as Iranian primary health care — with its own relationship, structure and norms — entails different types of resistance during the course of a research project. In our study, the research user (GRH) played an important role in facilitating the process and overcoming strict official bureaucratic process within Iranian health system.
- Developing trust via personal relationships is arguably a critical factor to enhance the acceptability of the researcher in the social settings and to gather valid data (Johnson, 1975). The development of personal relations of trust with the members in the setting of

this field research was gained through the interviewer's expertise and work experience in the Iranian primary health care setting, particularly behvarz program.

- This study benefited from a strong research triad. Professor Fran Baum, study mentor, has expertise in primary health care research and has been one of the international faculties in this project. Dr Gholamreza Heidari has a senior managerial position (advisor to the minister of health and the chancellor of Boushehr University later in the course of study). His position facilitated the whole process of research implementation in Iran. The early career researcher, Sara Javanparast, has had experience of working within the Iranian PHC and has expertise in primary health care research.

Limitations

- The first phase of the study (policy review) examined the content and trend of behvarz policies in Iran during the last 15 years. The lack of access to policy documents from the very beginning of the behvarz program prevented a more comprehensive policy analysis that would allow examination of policy changes over a longer period of time. Furthermore, the secondary data available for this review provided little evidence relating to the policy development process, which made it difficult to identify principal stakeholders involved, and the role of research findings, in policy formulation.
- The second phase of the study (interviews with behvarzes) investigated community health workers' viewpoint about the implementation of comprehensive primary health care in Iran. However, we acknowledge that exploring the perceptions of health policy makers and community members as the other two key stakeholders within primary health care system are crucial in examination of the level of "comprehensiveness" within Iranian primary health care. The inclusion of these two groups, however, was beyond the time and scope of the resources available to this study. Study of other stakeholders requires additional funds and resources.
- Since all interviews were conducted and transcribed in Farsi language, we were unable to use NVivo qualitative analysis software for data handling and coding. Therefore, categorisation and data coding were done manually by the study researcher which was a very time consuming task.
- Geographical distance of the researcher (SJ) who locates in Australia can be considered as a limitation. However, a few strategies were put in place to overcome this barrier including the recruitment of a co-researcher in Iran, regular contact with the co-researcher and interviewers via Skype, travel to Iran at two stages of the study, and regular contact with the research user.

Discussion of KTE

Triad experience

Research triad including the early career researcher, research user and mentor provided excellent opportunity for partnership which in turn built a supportive environment for research in Iran.

Dr Gholamreza Heidari, the research user, has had many years of experience within the Iranian PHC. When the study commenced in 2008, he was advisor to the Minister of Health. In 2010 he was appointed as the chancellor of Boushehr University in Iran. His expertise in the area of primary health care and his senior managerial position within the Iranian health system smoothed the research process including getting ethics approval in Iran, access to community health workers, recruitment of co-researcher and qualified interviewers, attracting in-kind support and resources, and research management. It is also expected that he would play a pivotal role in uptake of research findings by health policy makers in Iran. Nevertheless, his busy time schedule prevented prompt reply and actions in some occasions.

Professor Fran Baum, study mentor, provided technical support at different stages of the study and highly contributed to dissemination of findings such as publications and conference presentations. Her commitment to the research and availability has been a great advantage to the research team.

Overall, team members' expertise, commitment, respect and passion in this research established a supportive environment to research both technically and practically. We have had an excellent experience of working in triad.

Outcome mapping exercise

Outcome mapping exercises during training workshops helped to identify the boundary partners i.e. individuals, groups and organisations in which the research is trying to make change, identify the most important actors within each organisation, prioritise them based on their potential contribution to the 'roll out' of a more comprehensive primary health care. However, due to the complexity of this process further work needs to be done in order to find the best strategies to form new relationships between boundary partners and research triad. The role of research user in the translation of research finding into policy and practice seems crucial.

Indications of any uptake of findings

Research user has already discussed study aims and initial findings in the monthly meeting with the minister of health. We intend to design a more structured plan of how the findings can be exchanged/transferred to the health policy makers as well as the community health works in Iran.

Capacity enhancement

Training workshops

Annual workshops provided a great opportunity to learn basics of primary health care research (particularly during the first workshop), exchange ideas and get feedbacks, meet members of other research teams in the region, and to report study progress.

Opportunity to interact with other research teams

In Asia region, there have been a few teams working on community health workers program. Annual workshops have been helpful in sharing research experiences with other teams and to get familiar with CHWs program in other countries.

Summary

To sum up, the Iranian CHWs program provides a compelling example of comprehensive PHC – in that behvarzes provide basic health care but also work with community members and other sectors to address the social determinants of health. The breadth of the tasks performed demonstrate that they contribute to rendering PHC in Iran more comprehensive than is often the case in national programmes where services have tended to be more selective (WHO, 1989). The behvarzes were clear that the work they have done over the last three decades has made a significant contribution to improving the health of Iran's rural population. Lessons learned from this study of the Iranian CHWs program including training, facilitation role, trust and relationship with community members that are supportive of behvarzes may be applicable to programs in other countries presently aiming to ameliorate their health worker shortage by increasing mid-level cadres while improving rural retention of health personnel.

Future plans

Dissemination of findings

A dissemination strategy has been already discussed within the research triad in the form of peer review journals papers, conference presentation, etc. One paper is published (see next section 'additional resources' for the list of papers published and under review). The findings of the study have been also presented in the 138th American Public Health Association annual meeting in Denver, November 2010. SJ has been invited to present the findings of this study in a conference: "Community Health Centres: Acting today, shaping tomorrow", 9-10 June 2011, Toronto, Canada

Further researches

This study can be the basis of further researches on community health workers program in Iran. This work can motivate further studies to explore community members as well as health policy makers' perspective on behvarz program and whether the barriers/facilitators among behvarzes differ in nature and magnitude from those who are the planners and the recipients of health care services.

Translation of research into policy and practice

This study has policy implications by providing evidence for policy change and the translation of research into practice. The role of research user seems crucial in this regard.

Additional Resources

The findings of this study have been disseminated as academic papers, and conference presentations. The following are a list of publications in peer-reviewed journals.

Sara Javanparast, Fran Baum, Ronald Labonte, David Sanders, Gholamreza Heidari, Sakine Rezaie (2011) A policy review of the Community Health Worker Program in Iran, **Journal of Public Health Policy**, 32(2), p 263-276.

Sara Javanparast, Fran Buam, Ronald Labonte, David Sanders (2011) Community Health Workers' Perspectives on their contribution to rural health and wellbeing in Iran. **American Journal of Public Health (special issue on community health workers)** (under review)

Sara Javanparast, Gholamreza Heidari, Fran Buam, Contribution of Community Health Workers to the implementation of CPHC in Rural Settings, Iran. **138th American Public Health Association Meeting & Expo, Denver: USA; November 6-10, 2010.**

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Appendix I

Flinders University and Southern Adelaide Health Service
SOCIAL AND BEHAVIOURAL RESEARCH ETHICS COMMITTEE

Room B1, Union Building, Flinders University,
GPO Box 2100, ADELAIDE SA 5001
Phone: (08) 8201 5962
Email: human.researchethics@flinders.edu.au

FINAL APPROVAL NOTICE

Principal Researcher:

Address:

Project Title:

Project No.: Approval Expiry Date:

The above proposed project has been **approved** on the basis of the information contained in the application, its attachments and the information subsequently provided.

In accordance with the undertaking you provided in your application for ethics approval for the project, please inform the Social and Behavioural Research Ethics Committee, giving reasons, if the research project is discontinued before the expected date of completion.

You are also required to report anything which might warrant review of ethical approval of the protocol. Such matters include:

- serious or unexpected adverse effects on participants;
- proposed changes in the protocol; and
- unforeseen events that might affect continued ethical acceptability of the project.

In order to comply with monitoring requirements of the *National Statement on Ethical Conduct in Human Research (March 2007)* an annual progress and/or final report must be submitted. A copy of the pro forma is available from <http://www.flinders.edu.au/research/info-for-researchers/ethics/committees/social-behavioural.cfm>. Your first report is due on **17 March 2010** or on completion of the project, whichever is the earliest. *Please retain this notice for reference when completing annual progress or final reports.*



Andrea Jacobs
Acting Secretary
Social and Behavioural Research Ethics Committee
2 April 2009

cc: Prof Fran Baum, Dept Public Health
Dr Gholamreza Heidari, Ministry of Health and Medical Education, Simaye Iran Street, Shahrak Quds, Tehran, Iran



In the Name of God

To whom it may concern

This is to certify that the Project entitled : " Contribution of community health workers to implementation of comprehensive health care in rural settings ,Iran was presented and approved in the Ethics committee of this university dated 21 january 2009.

Keivan Zandi

Dr.KEIVAN ZANDI
Research Manager
Bushehr University of

OFFICIAL SEAL



Appendix II

Letter of Introduction

I hold the position of Research Fellow in the Department of Public Health, School of Medicine, Flinders University, South Australia.

I am the principle researcher in the research project titled: *Contribution of Community Health Workers in the implementation of Comprehensive Primary Health Care in rural setting of Iran*. This study seeks to investigate the contribution of rural Community Health Workers (*behvarzes*) to the implementation of comprehensive primary health care (CPHC) in Iran. As part of the research, we intend to examine *behvarzes* perceptions and understanding of comprehensive primary health care, how their recruitment and training assist to implement CPHC in Iran and perceived barriers and enablers.

I would be most grateful if you would volunteer to spare the time to assist in this project, by granting an interview, which touches upon certain aspects of this topic. No more than one and half hours on one occasion would be required.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will individually identifiable in the resulting report or other publications, you are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since we intend to make a tape recording of the interview, we will seek your consent, on the attached form, to record the interview, to use the recording or a transcription in preparing report or other publications, on condition that your name or identity is not revealed, and that the recording will not be made available to any other person. You may be assured that all records will be transcribed and translated by the research team and no other people are involved in this process. Also, you are free to review or edit your transcripts at any stage if you wish.

If at any stage you would like to ask questions about this project you can contact me as follows:

Address: Department of Public Health, Flinders University, South Australia

Phone: +61 8 7221 8466

Fax: +61 8 7221 8424

Email: sara.javanparast@flinders.edu.au or

Ms. Simin Rezaie by Phone at 021 4432 5423

Thank you
Dr Sara Javanparast

معرفی نامه جهت انجام طرح تحقیقاتی

اینجانب دکتر سارا جوان پرست شاغل در دپارتمان بهداشت - دانشکده پزشکی - دانشگاه فلیندرز واقع در ایالت استرالیا جنوبی می باشم.

به اطلاع می رساند اینجان مسئولیت طرح تحقیقاتی به نام " نقش بهورزان در مراقبت های اولیه بهداشتی جامع در ایران" را بر عهده دارم. هدف از انجام طرح مذکور بررسی نقش بهورزان در پیاده کردن سیستم مراقبت های اولیه بهداشتی جامع در ایران می باشد. بدین منظور در این طرح نظر بهورزان در خصوص مراقبت های اولیه بهداشتی جامع، نحوه استخدام و آموزش آنان و نقاط قوت و ضعف سیستم مورد بررسی قرار خواهد گرفت. برای رسیدن به اهداف طرح در نظر است تعدادی مصاحبه با بهورزان انجام گردد.

بدینوسیله از شما دعوت میگردد تا در صورت تمایل داوطلب گردیده و با شرکت در انجام مصاحبه که به جنبه های مختلف این مقوله می پردازد- در پیشبرد طرح مذکور مشارکت نمایید. مدت زمان پیش بینی شده حدود یک تا یک و نیم ساعت و طی یک جلسه خواهد بود

قابل ذکر است که کلیه اطلاعات داده شده به صورت محرمانه باقی مانده و هیچ یک از شرکت کنندگان به صورت انفرادی در نتایج طرح - گزارش و یا سایر نشریات نام برده نمی شود. در هر مرحله ای شما می توانید از مشارکت در طرح صرف نظر نموده و یا به سوالات خاصی پاسخ ندهید.

از آنجا که نیاز به ضبط مصاحبه جهت تکمیل طرح - تهیه گزارش و نشر در مجلات دارد- موافقت شما به صورت کتبی (فرم ضمیمه) لازم می باشد. مجددا تاکید می گردد که نام هیچ شرکت کننده ای در هیچ یک از موارد ذکر شده نیامده و نوار ضبط شده قابل دسترسی توسط فرد دیگری نخواهد بود. کلیه نوارها توسط تیم تحقیق پیاده و ترجمه خواهد شد. در ضمن- شما حق مرور مطالب گفته شده و تغییر آن را در هر مرحله از طرح خواهید داشت.

در صورت وجود هر گونه سوال و یا ابهام در زمینه این طرح می توانید به اینجانب تماس برقرار نمایید:
آدرس: دپارتمان بهداشت - دانشگاه فلیندرز - استرالیا جنوبی
تلفن: +61 8 2045862
فاکس: +61 8 2045693
ای میل: sara.javanparast@flinders.edu.a

با تشکر
دکتر سارا جوان پرست

Information sheet
(Community Health Workers Project)

Dear

Description of the project

You are invited to participate in a study that aims to examine the contribution of community health workers to the implementation of comprehensive primary health care in Iran. This is part of the bigger project (Teasdale-Corti Project) which intends to undertake new studies on comprehensive primary health care in different regions of the world. Studies show that Community Health Workers (CHWs) have a potential important role in the implementation of health programs, realization of community participation and in improving health outcomes in low-income countries. Since the establishment of primary health care system in Iran in 1978, rural community health workers (behvarzes) program has been incorporated into the Iranian primary health care system to improve access to and utilization of health services in rural areas. A wide variety of health programs are delivered by behvarzes and they have had significant contribution to rural health particularly maternal and child health, family planning and education. After almost three decades of behvarz program in Iran, significant progress has been made for many health indicators and the gap between rural and urban areas in terms of morbidity and mortality indicators has narrowed considerably.

This study aims to investigate behvarzes' perceptions of the principles and practices of C-PhC and their role in improving its implementation in rural settings, their perceptions concerning their recruitment and training process and the extent to which this process contributes to the implementation of comprehensive primary health care. The study also investigating existing enablers, barriers and remedial actions which strengthen or weaken behvarzes' potential to contribute to implementing comprehensive primary health care in rural settings. From this better understanding of the issue, it is anticipated that the Iranian PhC will strengthen to meet behvarzes' needs and to improve the quality of services provided to rural community.

Participant's role in the project

If you agree to participate, you will be asked to complete a face-to-face interview (approximately 90 minutes) to discuss about your views and perceptions related to the Iranian primary health care, your role within the system and your views about barriers and facilitating factors which prevent or assist you to perform comprehensively. The researcher will also give you a consent form and a letter of introduction. If you do decide to participate you will need to sign the consent form and send it back to the researcher.

How the research will be monitored

Research progress will be monitored by the Teasdale-Corti Project management team, and through meetings of the research group members.

Protection of privacy and confidentiality

All information that you provide will remain confidential. Only authorised research team staff members will have access to tape recordings or transcripts, and no information that could lead to your identification will be released.

Participants' right to withdraw from participation at any stage, along with any implications of withdrawal, and whether it will be possible to withdraw data

Participation is entirely voluntary and you have the right to withdraw at any time without prejudice.

Likelihood and form of dissemination of research results, including publication

This research will lead to the production of published journal papers, conference papers, and a report to Teasdale-Corti Project management group. The summary of finding will be also published in the monthly behvarz newsletter.

Expected benefits to wider community

Study participants may benefit from the study as this is the first study is being undertaken in Iran which explores the viewpoints of the community health workers. Their perceptions and comments can then be incorporated into the policy reform process which in turn helps to improve their role and to meet their needs and expectations.

The Iranian primary health care also benefits from the study as CHWs are the cornerstone of the system so their perceptions and understanding about their own role, health system and surrounding community assists to make evidence-based health system reform.

Broader community will also benefits from the study by moving towards comprehensive approach to primary health care which tackles socio-environmental determinants of health and ensures community health and well being.

Researcher contact details

Should you require further details about the project or have any concerns, please contact Ms Simin Rezaei by phone at

Thank you for your assistance

چکیده طرح تحقیقاتی جهت اطلاع بهورزان شرکت کننده در طرح

هدف از این طرح چیست؟

شما دعوت شده اید تا در یک طرح تحقیقاتی که نقش بهورزان را در سیستم مراقبت های اولیه بهداشتی جامع بررسی می کند شرکت نمایید. این طرح بخشی از یک پروژه بزرگ تری است که در نظر دارد مطالعات جدیدی را در زمینه در سیستم مراقبت های اولیه بهداشتی جامع در نقاط مختلف جهان انجام دهد. مطالعات انجام شده تا کنون نشان می دهد که این گروه از کارکنان بهداشتی نقش بسیار مهمی در اجرای برنامه های بهداشتی، مشارکت جامعه و بهبود شاخص های بهداشتی در کشورهای در حال توسعه دارند. از زمان شروع اجرای مراقبت های اولیه بهداشتی در ایران در سال 1359 برنامه بهورزی با هدف بهبود دسترسی به خدمات بهداشتی در مناطق روستایی در سیستم ادغام گردید. تعداد بسیاری از برنامه های بهداشتی توسط بهورزان اجرا می شود که نقش مهمی در ارتقا بهداشت و سلامت روستایی به خصوص بهداشت مادر و کودک، تنظیم خانواده، و آموزش بهداشت داشته و دارند. پس از گذشت حدود سه دهه از برنامه بهورزی در ایران پیشرفت های چشمگیری در بسیاری از شاخص های بهداشتی صورت گرفته و تفاوت های شهری-روستایی در خصوص شاخص های مرگ و میر و ناتوانی به طور قابل ملاحظه ای کاهش یافته است.

با توجه به توضیحات داده شده این مطالعه در نظر دارد که نظرات بهورزان را در خصوص اصول و پایه های مراقبت های اولیه بهداشتی جامع و نقش آنان در پیاده سازی آن، نظرات آنان در مورد پروسه استخدام و آموزش و همچنین نقاط ضعف و قوت سیستم جستجو نماید. با جمع آوری چنین اطلاعاتی امید می رود تقویت سیستم در جهت ارتقای کیفیت ارائه خدمات بهداشتی به جامعه روستایی پیش رود.

نقش شما در این طرح چیست؟

در صورت تمایل، یک مصاحبه (حدود یک تا یک و نیم ساعت) با شما انجام خواهد شد تا نظرات شما در مورد مراقبت های اولیه بهداشتی در ایران، نقش شما در پیاده سازی آن و عوامل تقویت کننده یا تضعیف کننده آن جمع آوری گردد. یک معرفی نامه به همراه فرم رضایت نامه در اختیار شما قرار داده خواهد شد تا در صورت تمایل به همکاری امضا و به مسیول طرح برگردانید.

این طرح چگونه پیگیری می شود؟

پیشرفت طرح توسط تیم اجرایی و طی جلسات منظم مورد پیگیری قرار خواهد گرفت.

محرمانه بودن اطلاعات چگونه تضمین می گردد؟

لازم به یادآوری است که کلیه اطلاعات داده شده محرمانه باقی مانده و مشخصات شرکت کنندگان در گزارش نهایی ذکر نخواهد گردید. در ضمن می توانید در هر مرحله ای از ادامه همکاری منصرف و یا به سوالات خاصی پاسخ ندهید. خاطر نشان می گردد که کلیه مصاحبه ها توسط تیم تحقیق پیاده شده و فرد یا افراد دیگری در این پروسه دخیل نخواهند بود. در ضمن مشخصات شخصی شما در هیچ یک از گزارشات نهایی درج نخواهد شد.

نتایج طرح چگونه منتشر خواهد شد؟

نتایج طرح به صورت مقاله و گزارش نهایی تهیه خواهد شد. خلاصه ای از نتایج در مجله بهورزی نیز منتشر خواهد شد.

اجرای طرح چه منفعتی برای من و یا جامعه خواهد داشت؟

این مطالعه اولین باری است که نظرات بهورزان را در مورد سیستم بهداشتی جمع آوری می کند. اعمال این نظرات و پیشنهادات در سیاست های بهداشتی می تواند به بهبود نقش آنان و بر آوردن نیاز ها و توقعات بهورزان کمک کند. علاوه بر این، از آنجا که بهورزان نقش حیاتی در سیستم بهداشتی ایران دارند جمع آوری نظرات آنان به بهبود سیستم و جامعه روستایی نیز کمک می کند.

چگونه می توان با مجری طرح تماس گرفت؟

در صورت نیاز به اطلاعات بیشتر می توانید با خانم سیمین رضایی تماس بگیرید.

پیشاپیش از همکاری شما تشکر میگردد.

CONSENT FORM FOR PARTICIPATION IN RESEARCH

(by interview)

I

being over the age of 18 years hereby consent to participate as requested in the Letter of Introduction for the research project on “contribution of community health workers to the implementation of comprehensive primary health care in rural settings, Iran”.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.

5. I understand that:
 - I may not directly benefit from taking part in this research.
 - I am free to withdraw from the project at any time and am free to decline to answer particular questions.
 - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
 - Whether I participate or not, or withdraw after participating, will have no effect on any current employment status.
 - I may ask that the recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
6. I have had the opportunity to discuss taking part in this research with a my family members.

Participant’s signature.....Date.....

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher’s name.....

Researcher’s signature.....Date.....

موافقت نامه
(از طریق مصاحبه)

بدینوسیله اینجانب.....بالای 18 سال موافقت خود را جهت شرکت در مصاحبه مربوط به طرح تحقیقاتی " نقش بهورزان در پیاده کردن سیستم مراقبت های اولیه بهداشتی جامع در جامعه روستایی ایران" اعلام می نمایم.

در ضمن یاد آور می گردد:

الف) کلیه اطلاعات داده شده را مطالعه نموده ام.

ب) کلیه مراحل انجام کار برای اینجانب توضیح داده شده است.

ج) اینجانب موافق می باشم که مصاحبه انجام شده ضبط گردد.

د) می توانم یک نسخه از معرفی نامه و موافقت نامه را نزد خود نگه دارم.

ه) به نکات زیر آگاهی کامل دارم:

شرکت در این مصاحبه فاقد نفع شخصی برای اینجانب می باشد.

در هر زمانی می توانم از انجام مصاحبه صرف نظر نموده و یا می توانم به بعضی از سوالات پاسخ ندهم.

اطلاعات شخصی و نام اینجانب در نتایج منتشر شده درج نشده و محرمانه خواهد ماند.

عدم شرکت در مصاحبه و یا قطع آن پس از شرکت هیچگونه تاثیر منفی بر کار و یا شغل اینجانب نخواهد داشت.

اجازه خواهم داشت هر زمانی تقاضا برای عدم ضبط مصاحبه و یا عدم همکاری در طرح مذکور را نمایم.

و) حق تبادل نظر با سایر همکاران و یا خانواده جهت شرکت در این طرح را دارم.

تاریخ

امضا

بدینوسیله اعلام می دارم طرح مذکور برای داوطلب توضیح داده شده و او به صورت آزادانه موافقت به شرکت در این مصاحبه نموده است.

نام محقق

تاریخ

امضا

Research instruments

Interview schedule

Contribution of Community Health Workers to Implementation of CPHC in Rural Settings, Iran

Interviewer's name: -----

Date of interview: -----

Province/City: -----

Behvarz's identity number: -----

Gender: Male

Female

The main reason for our conversation today is to discuss issues associated with your role within the health house and your community. I would ask general questions about your feeling and understanding of primary health care system, what your current responsibilities are/ should be within the system.

I am particularly interested in talking with you because you are in charge of the health house and the one who provide health services to rural people. The Iranian health policy-makers are also very proud of behvarz program in Iran so your viewpoints are important in further development of this program.

To begin with, I'd like to talk a bit about yourself i.e. your work experience, education, the village you work in, etc.

1. Can you tell me how old are you?
2. For how long are you working as a behvarz?
(so you were almost ...years old when you started your job as a behvarz, is that right?)
3. Why did you want to become a behvarz? By this, I mean what did motivate you to become a behvarz?
4. What was your level of education when you started your job? Have you had any chance to continue education while working as a behvarz? (if yes, at which level did you continue your education?)
5. How many households/people are covered by your health house?
6. How many of you are working in this health house? Are you all male, female or both?
7. How far is your village from the main city?
8. Are you from this village?
9. Do you live in this village?

If yes:

10. what are the main reasons that kept you staying in the village? Do you face any problem residing in the village?

(Interviewer's note: for those who live in the city, should ask when have you moved to the city and what were the reasons for that after question 10?)

11. What is your marital status?

(Interviewer's note: for those who are married, should ask do your husband/wife work in this village?)

Now, let's talk more about your overall experience as a behvarz and the range of activities you do

12. What do you think are the most important causes of poorer or better health in your village?
13. How would you describe **your role** in helping people in the village become healthier, or to stay healthy?
14. What do you actually **do** to help people's health?

(Interviewer's note: as behvarz is identifying the list of things they do, you should check the list below and then show the list below and reemphasize the things that they have already mentioned.)

15. Here is a list of services that you may provide on a weekly basis:

(Interviewer's note: show the list below to the behvarz.)

- Child Health
(Immunisation, growth monitoring, breastfeeding, complementary feeding, CDD, ARI, IMCI)
- Maternal health
(Prenatal, natal and postnatal health, family planning, health education)
- Oral and dental health
- Environmental health
(Chlorination of water, sanitation)
- Occupational health
(Worker's education, work safety issues, guidelines)
- School health
- Disease control (TB, hypertension, mental disease, ...)

Is there anything else missing here?

Imagine over the course of an average week, how much of your time do you spend on each of the above activities? Can you tell me in approximate order which ones you spend the most time working on?

(Interviewer's note: ask behvarz to rank the activities according to the amount of time they spend on a weekly basis)

16. Now, which of these activities do you think contribute the most to making the people healthier over the last few years?

17. Why do you think so? I mean why these were the most important?

18. Who or which organisation do you usually collaborate with when working on the above areas? How do the current structure and performance of the rural councils support you to work with other sectors?

(Interviewer's note: probing on collaboration with other sectors by encouraging behvarz to describe a story of working with other sectors and factors for success or failure. For example asking questions like "what made it successful?" or "what were reasons for it not working well?"

19. Which groups do you work with the most? Can you describe to me the nature of their health problems? Can you give me some examples of how do you work with them in solving these problems?

Interviewer's note: this question is more about community participation in health activities. Encourage behvarz to describe cases of engaging specific group in the implementation of a health program. If there is any successful or failed story, ask them "why". What do you think were the reasons for success or failure?

20. Can you describe a time when you feel really effective in your role as a behvarz? (What activities? People you were working with?) What were the enabling factors?
21. Can you describe a time when you were not as effective as you liked? What were the reasons for that?
22. Thinking back on what you told me makes people healthier or sicker in your village, are there other activities you or others in the village could be doing to promote health even better?
23. What would enable you to contribute better to these activities?
24. How does your gender affect the kind of work that you do? The groups that you work or your performance and effectiveness in your work?

Now, would you like to talk a litter bit about your training courses?

25. Can you describe for me the training courses you took (the content and the process of learning)?
26. How adequate was your training course to encourage you and to increase your knowledge and skills? What was the most useful part of your training that you would have liked more?
27. How about in-service trainings? Can you describe the content and process of any in-service training you have ever taken?
28. What did you get most from in-service trainings?
29. How about behvarz recruitment process? How have you been selected as a behvarz? Which parts of this process you like or dislike the most?
30. Who are you supervised by? When you are supervised, what are the main things that supervisors expect you to know or do?
31. What do you think about the main barriers e.g. training, supervision, funding, workload or any other work-related issues which prevents you to act or serve the people the way you like?

32. How your viewpoints, feedbacks and complains about different issues are collected and handled?
33. Can you describe the role played by behvarz councils in planning behvarz-related programs? To what extent behvarz councils give you the opportunity to have voice in planning behvarz-related programs? Overall, how effective do you see behvarz council?
34. By this study, we are trying to figure out how we can provide recommendations for a better working environment for behvarzes. Is there any thing you think can help to improve your current working environment? How about the things to improve the overall behvarz program?
35. As a final question, can you simply describe for me what primary health care means to you? What more, if anything, do you think the behvarz program could do to make its primary health care work even more comprehensive?
36. Is there anything else that you think is important to add?

*Interviewer's note: acknowledging behvarz's collaboration in the study by saying:
"Thanks a lot for your time, the information you have provided are valuable in better understanding of your perspectives on the program and helps to improve the effectiveness of behvarz program and your work satisfaction."*

نام طرح: نقش بهورزان در پیاده نمودن "مراقبت های اولیه بهداشتی جامع" در مناطق روستایی ایران

نام مصاحبه کننده: _____
 تاریخ مصاحبه: _____
 استان/ شهر: _____
 کد بهورز: _____
 جنس بهورز: مرد زن

دلیل اصلی صحبت ما امروز این است که با شما گفتگوی دوستانه ای در خصوص نقش شما در خانه بهداشت و محیط روستایی داشته باشیم. در طی مصاحبه من سوالات کلی در مورد سیستم مراقبت های اولیه بهداشتی و نقشی که شما در ارائه خدمات دارید (یا می بایست داشته باشید) خواهم پرسید و شما نظرات و یا احساسات شخصی خودتان را از این موضوع خواهید گفت.
 نظرات شما از آنجا حایز اهمیت است که شما گرداننده اصلی خانه بهداشت و ارائه دهنده خدمات بهداشتی در این روستا هستید. سیاست گزاران بهداشتی در ایران همواره به برنامه بهورزی افتخار نموده اند بنابراین نظرات شما در بهبود هر چه بیشتر این برنامه بسیار با ارزش می باشد.
 برای شروع مصاحبه کمی در مورد خودتان مثلا سابقه کاری تان- سطح تحصیلاتتان- و یا روستایی که در آن کار می کنید سوال می کنم.

1. برای چه مدتی است که به عنوان بهورز مشغول به کار هستید؟
2. چند سال سن دارید؟ (بنابراین حدودساله بودید که کار بهورزی را شروع کردید درست است؟)
3. چرا شغل بهورزی را انتخاب کردید؟ منظور من از این سوال این است که انگیزه اصلی شما از انتخاب شغل بهورزی چه بوده است؟
4. سطح تحصیلات شما در زمان شروع کارتان چقدر بوده است؟ آیا در طی مدتی که کار می کردید هیچ موقعیتی برای ادامه تحصیل داشته اید؟ (اگر بله در چه مقطعی ادامه تحصیل داده اید؟)
5. چند خانوار/نفر تحت پوشش خانه بهداشت شما هستند؟
6. چند نفر به عنوان بهورز اینجا کار می کنید؟ آیا همگی مرد، زن و یا از هر دو جنس می باشید؟
7. روستای شما چقدر از شهر فاصله دارد؟
8. آیا شما از اهالی همین روستا هستید؟
9. آیا شما در این روستا ساکن هستید؟ چه مشکلاتی را در خصوص سکونت در روستا می توانید بازگو کنید؟

قابل توجه مصاحبه گر: در خصوص کسانی که در شهر زندگی می کنند در ادامه سوال قبلی پرسید؛ چند وقت است که به شهر مهاجرت کرده اید و دلایل آن چه بوده است؟

10. آیا مجرد هستید یا ازدواج کرده اید؟ (در صورت متاهل بودن آیا همسر شما هم در همین روستا مشغول به کار است؟)

حالا می خواهیم کمی در مورد تجربه کلی شما به عنوان بهورز و کارهای که انجام می دهید صحبت کنیم. آیا موافق هستید؟

10. به نظر شما مهمترین عللی که موجب بالا بودن (و یا پایین بودن) سطح سلامتی مردم در روستای شما می شود چیست؟

11. آیا می توانید بگویید نقش شما در کمک به بالا بردن سطح سلامتی مردم روستا چیست؟

12. چه کارهایی انجام می دهید تا به بالا بردن سطح سلامت مردم روستای خود کمک کنید؟

قابل توجه مصاحبه گر: منظور از دو سوال بالا فهمیدن دیدگاه بهورز در مورد نقشش در بهبود سلامت جامعه روستایی و کارهایی که عملا انجام می دهد می باشد. سعی کنید این دو نکته از یکدیگر تفکیک داده شود.

دوم اینکه وقتی بهورز در حال شمردن لیست کارهایی است که انجام می دهد، به لیست زیر توجه کنید و مواردی را که بیان کرده است تیک بزنید.

13. این ها لیستی از کارهایی است که ممکن است در طی یک هفته انجام دهید:

قابل توجه مصاحبه گر: لیست زیر را به بهورز نشان دهید. اگر موردی را قبلا خود بهورز بیان کرده است دوباره آن را متذکر شوید و بگویید "همانگونه که خودتان هم اشاره کرده بودید...."

بهداشت کودکان (واکسیناسیون- کنترل رشد- ترویج شیر مادر- غذای تکمیلی- بیماریها ی کودکان...)

بهداشت مادران (مراقبت های پیش از زایمان- هنگام بارداری- پس از زایمان- آموزش بهداشت...)

بهداشت دهان و دندان

بهداشت محیط (آب آشامیدنی- توالی بهداشتی...)

بهداشت مدارس

بیماری های واگیر و غیر واگیر (اسهال- بیماری های تنفسی - فشار خون - سل - بیماری های روانی ...)

آیا چیز دیگری در ذهن شما است که از قلم افتاده باشد؟

حالا از شما می خواهم یک هفته کاری خود را در نظر بگیرید. فکر می کنید در طی یک هفته چقدر از وقتتان را صرف هر یک از موارد بالا می کنید؟ آیا می توانید موارد بالا را بر اساس میزان وقتی که برای هر یک صرف می کنید به ترتیب شماره گذاری کنید؟

قابل توجه مصاحبه گر: از بهورز بخواهید تا فعالیت های ذکر شده را بر اساس وقتی که برای هر یک صرف می کند مرتب نماید

14. فکر می کنید کدام یک از فعالیت های بالا نقش مهمتری در بالا بردن سطح سلامت مردم روستای شما در طی سال های گذشته داشته است؟

15. چه دلیلی برای این فکر خود دارید؟ چرا فکر می کنید این اقدامای مهمتر بوده اند؟

16 در حین انجام خدمات فوق معمولا با چه افراد/سازمان و یا ارگان خاصی همکاری می کنید؟ تا چه اندازه ساختار و عملکرد شورای روستا به شما کمک کرده است تا بتوانید همکاری بخش های دیگر را جلب نمایید؟

قابل توجه مصاحبه گر: ممکن است لازم باشد توضیح بیشتری در این زمینه بدهید ولی اجازه بدهید خود بهورز نمونه هایی از همکاری بین بخشی و علل موفقیت و یا عدم موفقیت را برای شما بیان کند. به عنوان مثال سوال کنید: "چرا در آن مورد خاص موفق بوده اید؟" و یا "فکر می کنید علت عدم موفقیت شما در آن مورد چه بوده است؟"

17. چه گروه سنی یا جنسی بیش از دیگر گروه ها مخاطب برنامه های شما هستند؟ معمولا مسایل مربوط به سلامتی این گروه یا مشکلات آن ها حول چه مسایلی می باشد؟ آیا می توانید مثال هایی در خصوص نحوه کار متقابل شما با این گروه خاص برای رفع مشکلات آنان بزنید؟

قابل توجه مصاحبه گر: این سوال در مورد نحوه مشارکت مردم در امور بهداشتی است. بهورز را تشویق کنید تا مواردی از مشارکت مردمی در امور بهداشتی را برای شما تعریف کند. مجددا اگر داستانی در زمینه موفقیت یا عدم موفقیت خود تعریف کرد آن را جویا شوید

18. آیا می توانید زمانی را به یاد بیاورید که احساس کرده باشید در جایگاه خود به عنوان یک بهورز بسیار مفید و مثمر ثمر بوده اید؟ (مثلا چه کاری کرده اید و یا با چه گروهی کار کرده بودید؟) فکر می کنید چه فاکتور هایی در این احساس رضایت شما موثر بوده اند؟

19. آیا حالا می توانید زمانی را به یاد بیاورید که نتوانسته اید به آن اندازه که دلتان می خواهد مفید بوده باشید؟ فکر می کنید دلیل آن چه بوده است؟

20. اگر به فاکتور های موثر بر سلامت مردم روستا که بیشتر در مورد آن توضیح داده بودید بر گردیم، فکر می کنید چگونه شما و یا سایر افراد روستا می توانید در بهبود آن کمک کنید؟

21. چه چیز هایی در انجام آن به شما کمک خواهد کرد؟

22. فکر می کنید جنسیت شما (مرد یا زن) چگونه در نوع و نحوه فعالیت شما (مثلا افرادی که با آن ها کار می کنید و یا کیفیت کار شما) تاثیر داشته باشد؟

موافقت‌حالا کمی در مورد دوره های آموزشی که گذرانده اید صحبت کنی؟

23. آیا می توانید در مورد دوره های آموزشی که گذرانده اید (از نظر محتوای آموزشی و روند آموزش) کمی برای من توضیح دهید؟
24. فکر می کنید کیفیت این دوره ها چگونه بوده است و تا چه اندازه در کسب مهارت و افزایش انگیزه شما تاثیر گذار بوده است؟ به نظر شما مفید ترین بخش دوره آموزشی که شما دوست داشته اید چه بوده است؟
25. آموزش های ضمن خدمت چگونه است؟ آیا می توانید در مورد این دوره ها کمی توضیح دهید؟
26. بیشترین چیزی که از بازآموزی های ضمن خدمت یاد گرفته اید چه بوده است؟
27. نظر شما در مورد نحوه انتخاب بهورز چیست؟ شما چه مراحلی را برای انتخاب شدن طی کردید؟ چه قسمتی از این پروسه را بیش از همه و یا کمتر از همه می پسندید؟
28. نظارت و بازدید از خانه بهداشت توسط چه کسانی انجام می شود؟ مهمترین نکاتی که هنگام بازدید ها از شما انتظار می رود که بدانید یا انجام دهید چیست؟
29. به نظر شما مهمترین مشکلات و موانع موجود در خصوص آموزش- نظارت- مسایل مالی - حجم کاری و یا هر مورد مرتبط به کار بهورزی که باعث می شود آن طور که دوست دارید نتوانید کار کنید چیست؟
30. نظرات - پیشنهادات و یا اعتراضات احتمالی شما چگونه جمع آوری و بررسی می شود؟
31. تا چه اندازه شورای بهورزی در برنامه های مرتبط بهورزان ایفای نقش می کند؟ با چه اندازه این امکان را در اختیار شما قرار داده است تا صدای خود را به مسئولین بالاتر برسانید؟ به طور کلی تا چه حد این شوراها را موثر می بینید؟
32. هدف اصلی ما از این طرح این است که بتوانیم پیشنهاداتی در جهت محیط کاری بهتر برای بهورزان ارائه دهیم. آیا چیزی به ذهن شما می آید که بتواند برای بهبود محیط کاری شما موثر باشد؟ چه چیزهایی به بهبود برنامه بهورزی کمک می کند؟
33. به عنوان یک سوال نهایی، آیا می توانید به طور خیلی ساده و مختصر تعریفی از "مراقبت های اولیه بهداشتی" برای من ارائه دهید؟ به نظر شما برنامه بهورزی چگونه در جامع و کامل تر بودن مراقبت های اولیه بهداشتی می تواند کمک کننده باشد؟
34. آیا چیز دیگری هست که از قلم افتاده باشد و یا شما بخواهید اضافه کنید؟

قابل توجه مصاحبه گر: از همکاری بهورز در این طرح تشکر کنید: "از اینکه وقتتان را در اختیار من گذاشتید خیلی متشکرم. اطلاعاتی که شما ارائه کردید بسیار با ارزش هستند و در فهم بهتر دیدگاه های شما در بهبود برنامه و رضایت مندی بیشتر شما بسیار کمک کننده خواهند بود."