



Promoting Community Health in Rural Jalna Through a College-Based Health Program

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Introduction

In India there is an urgent need to improve the health of women, especially rural women, where they are adversely affected by poverty, inequality, illiteracy, unfair socio-economic systems, religious structures and political systems. Most illnesses prevalent in poor and marginalized communities are exacerbated by social determinants of health, secondary to poverty and associated poor lifestyle choices. Discrimination, particularly against women, female children, lower castes and people from minority backgrounds, often prevents these groups from securing adequate access to water, food and a wide variety of basic services. Chronic malnutrition underlies much of the morbidity of women and children in the villages. Illnesses such as diarrhoea, dysentery, malaria and typhoid fever are aggravated by poor nutrition, inadequate sanitation and lack of access to safe drinking waterⁱ. Low incomes, long hours of work, child labourⁱⁱ and occupational hazardsⁱⁱⁱ also contribute to ill health.

The prevention and management of these conditions does not necessarily require learned professionals, sophisticated equipment or expensive medicines. Social action through community participation and increasing community awareness has a greater impact on rural health than medical approaches. Communities who are organized and empowered can improve nutrition and access to clean water and can better deal with social injustice.

Nowhere is this more evident than in reproductive and child health (RCH). Two hundred million women want to use family planning methods, but lack access to necessary information and services and the support of their husbands^{iv}. Unwanted pregnancy has a severe impact on the health and quality of life of women and their families. India has the highest burden of maternal mortality in the world with an estimated 136,000 deaths annually^{v, vi, vii}. The national Perinatal Mortality Rate (PMR) is 44/1000 live births; 49/1000 in rural areas^{viii}. It is estimated that annually, 1.2 million children in India do not survive their first month^{ix}.

The major causes of maternal death include haemorrhage, sepsis, obstructed and prolonged labour, toxæmia, unsafe abortion, and disorders related to high blood pressure and anaemia^x,^{xi}. Forty seven per cent of maternal deaths in rural India are attributed to excessive bleeding which comes about as a result of underlying and untreated anaemia. Anaemia, in turn, is caused by poor nutritional practices. Nationally, 65 per cent of all deliveries are still conducted at home, usually by untrained helpers^{xii}. One of the behaviours that accompany the low status of women is the tendency not to seek out health care for pregnancies. It is also associated with a lack of awareness and knowledge at the household level, inadequate resources to seek care



and poor access to quality health care. In India lack of transport facilities, inappropriate referrals or poor emergency preparedness at referral facilities also leads to the death of mothers^{xiii}.

The Matsyodari College Health Program

This project seeks to empower Indian rural communities to better manage their health by improving their health knowledge. Approximately 3,500 students attend the Matsyodari College of Arts, Commerce & Science, Jalna, which is a leading educational institution in the rural Jalna District in the state of Maharashtra. These students mainly come from rural villages and after graduation, many, especially the women, return to village life where it is uncommon for them to use their tertiary qualifications. We maintain that even if their qualifications, which are usually in commerce or the basic sciences, are not subsequently used in their villages, these graduates will have developed an understanding of how to source and synthesize information, and will have gained learning and teaching skills during their courses.

The Matsyodari College Health Program seeks to build on that strength by empowering students with enhanced health knowledge, attitudes and performance abilities not otherwise available in their courses. It is envisaged that although they may lack seniority in their villages, they will be seen as an educated and importantly, an acceptable local support, factors which will increase the effectiveness of their health message. It is hoped that they will become advocates for improved health in their home communities.

This paper reports on a pilot study to gauge the usefulness and the effectiveness of such a college-based program to improve the health knowledge of students and their attitudes towards community health awareness. This paper will explore the nature and extent of the problem, describe the program and present an early evaluation of its effectiveness and acceptability.

Scope of the problem

Socio-economic and demographic characteristics of Jalna district

Jalna District (pop 1.6 million: 81% rural) is one of the eight districts of the Marathwada Division (pop 15.6 million: 76% rural) (see Map 1). Marathwada is one of the five divisions of Maharashtra State (pop 96.7 million) in India (pop 1,027 million)^{xiv}. Jalna District is divided into 8 administrative Blocks, which service 970 villages (see Map 2).

A survey of Maternal and Child Health and Contraception was carried out in the Jalna District by the Government of India in 1999 as part of its national Reproductive and Child Health (RCH) Program. This survey was entitled The Rapid Household Survey, Reproductive and Child Health Project Phase-II, 1999^{xv}(RHS1999). The surveyors interviewed 702 men and 875 women throughout Jalna District who came from 1019 households (853 rural and 166 urban), which represents a household population of 2826 males and 2724 females in total. The survey provided valuable information on the socio-demographic make up and the awareness of RCH issues in the Jalna District and is referred to as a major source for this discussion.

The RHS1999 found that the people of Jalna District are predominantly Hindu (78%), of whom 53% are high caste. The remainder are from underprivileged minority groups: Other Backward Castes (OBC:26%), Scheduled Castes (SC:14%) and Scheduled and Nomadic Tribes (6%). Of the total rural population of Jalna District (1.3 million), 25% live below the poverty line (BPL). This increases to 31% in rural areas.

The difference between the urban and rural standard of living was highlighted by RHS1999 which used a three-tiered Standard of Living Index (SLI) class scale (RHS: p8). In rural areas,

87% were in the poor SLI class, while in urban areas, 17% were high class, 57% medium class and only 25% poor SLI class.

The official overall literacy rate in Jalna is 64.5% and in the rural areas of Jalna this drops to 61%. These aggregated figures hide women's literacy rates. While the literacy rate for men in Jalna District is 79%, it is 49% for women overall, falling to 46% in rural areas. The RHS1999 looked at currently married women aged 15-44 and found that 72% of rural women and 36% of urban women were illiterate. About 47% of urban women and only 20% of rural women had completed secondary education. (RHS1999: p16.)

Maternal and Child Health (MCH) services utilisation by women in Jalna district

Overview

Health services in the Jalna District are delivered through nine rural hospitals, 38 Primary Health Centres (PHC) and 211 sub-centres, and are administered through the eight administrative Blocks. The annual MCH Indicator Monitoring, District Jalna, which compiles rural data, reported that there were 34,092 live births in Jalna District in 2004-5. They reported a 1.9 per cent stillbirth rate, a perinatal mortality rate (PNMR) of 24/1000 and a maternal mortality rate (MMR) of 3.5/10,000 (most cases not reported)^{xvi}. Jalna District has one of the highest rates of infant mortality in Maharashtra.^{xvii}

Utilisation

The RHS1999 calculated that from its sample group, 318 women had had live or still births between 1 Jan 1996 and 31 Dec 1998. A quarter of the rural women and 11.2% of the urban women had had no antenatal care at all. Only one-third of rural women had had the recommended minimum of two tetanus immunizations, regular iron/folate tablets and at least three antenatal visits. This compares with 60% of urban women and 100% of high SLI women.

Seventy-two percent (79.4% rural and 33.3% urban) of babies were delivered at home. Jalna District has some of the lowest uptake rates for both ANC's (antenatal care) and institutional deliveries in Maharashtra^{xviii}. Of those delivered at home, although 41% used a government-provided Disposable Delivery Kit (DDK), only 18% were attended by trained personnel. Auxiliary Nurse Midwives (ANM) are expected to visit women at their homes within two weeks of delivery. Only 19.5% of women reported that this had occurred, but it was much more likely for rural women (22.8% vs 1.9%) than for urban women and for those with a poorer SLI.

Morbidity

Almost three quarters (74%) of women reported at least one complication during pregnancy and two thirds (66%) reported post-partum complications. Of these, just over half (57% and 54% respectively) sought treatment (page iii). The RHS1999 reported that in Jalna during the survey period, there were eight infant deaths (7-28 days), all from rural areas. Four of these died from tetanus which is a preventable disease.

Some stated reasons for low utilisation

The RHS1999 asked the 73 women who did not get any antenatal care why this was so. Two-thirds of those from rural areas (67) and all six from urban areas stated that they could not see the necessity for ANC. The rural women also cited reasons such as: lack of knowledge of services, it was not customary to use these services, financial cost, distance, not permitted to go, and no time. Rural women commented that difficulties with the Maternal and Child Health Services included: the unfriendly attitude of the health staff, extended waiting times, its



inconvenient location, past experience of cursory examination by doctors/health workers, a heavy rush of patients trying to be seen, and rude behaviour from staff.

Forty-seven percent of women in rural areas were aware of contraceptive methods. This awareness is higher among the high caste, literate and economically sound. The RHS1999 reported that where the women have higher education and a higher standard of living, the mean number of children born to them is less. Both males and females had poor knowledge about reproductive and sexually transmitted diseases in rural areas. Their major sources of information were friends and relatives, newspapers and electronic media. Only 22.7% of rural women had a good awareness of HIV/AIDS.

It seems apparent that current systems for developing health awareness have not been effective in getting the health message to rural populations, particularly to illiterate and poorer women. It is envisaged that graduates of the Matsyodari College Health Program, whose capacities and attributes are described in this paper, will become an additional resource for village women and will be acceptable to them. It is envisaged that they will be able to contribute to an improvement in rural health without large establishment costs or maintenance costs.

Methods: The educational intervention

The educational intervention consisted of a two-day seminar (eight hours in total) followed by a one-day field trip to rural and remote villages of Jalna District. The components of the seminar were couple counselling, classes on breast-feeding, nutrition, HIV-AIDS and adolescent health. These sessions were delivered by a team consisting of community doctors, the principal of the nursing college and a social worker. Over a one-month period, pairs of students accompanied one of two health teams (viz; doctors, nurses, tutors and a pathologist) on routine outreach visits to 17 rural villages.

A questionnaire was designed in consultation with a psychologist and a medical practitioner (Director of the Reproductive and Child Health project of the local health NGO) to test the knowledge and performance of the students. It was applied before and immediately after the intervention. Twenty-four students completed the seminar, the field trip and both the pre- and post-intervention questionnaires. Students, the health workers and the villagers, also completed a post-field trip questionnaire some four months later. Responses from all three groups were compiled so as to evaluate the program.

Results

Student questionnaires

A comparison of the pre- and post-intervention questionnaires showed a great improvement in health knowledge and attitudes held by the 24 students. Twenty-one (87.5%) of the 24 students were dissatisfied with the health facilities/services available in the villages, and all 24 felt that the university/college should run health related courses. They all felt that this course enabled them to help improve the health status of their village community.

Specifically, after the intervention, they agreed that pre- and post-marriage counselling on reproductive health and contraception was very necessary. They expressed a need for a youth counselling centre in their village. All of them knew about food and nutrition, 80% had a good understanding of breast-feeding methods and the importance of information about HIV. All the 24 students expressed a keenness to help rural communities by being counsellors and advocates for environmental cleanliness and sanitation, to counsel parents to freely discuss



sexual issues with their children and most importantly, to counsel illiterate villagers on HIV – AIDS prevention and treatment.

The students generally felt that similar programs would help to eradicate superstitions, reduce problems of self esteem and lack of confidence in youth, take away the fear of diseases, and create a serious approach to the need for health education. Similar programs would enhance self awareness of an individual's health and general health knowledge, promote a healthy generation, educate adolescents on HIV, promote adolescent mental and physical awareness, improve family and social health, eradicate misunderstandings, prevent diseases, decrease the number of AIDS patients and the programs would make a cost-effective contribution in developing countries.

The students identified the following ways to organize health awareness programs:

- hold lectures, seminars and surveys to inform villagers;
- conduct discussions, contact programs, adolescent awareness guidance camps and counselling on female foeticide;
- help organise free medical camps for students;
- develop health magazines and health information brochures;
- train villagers in communication skills;
- hold street theatre highlighting the diagnosis and treatment of various diseases and
- undertake adolescent counselling, organise camps for men and women so as to create courses on various health related subjects (such as women's & children's health, old age health) which should be made compulsory.

They also said that parents and teachers should learn from the behaviour of the students.

The students' role as responsible citizens with reference to the health service and health awareness in the village would include convincing villagers to use the government health centres, giving help so as to monitor government health centres, the organisation of adolescent health counselling, and their participation and co-operation in every health program. They felt that students could change the, "attitude of the village male folk who are mostly addicted to substances like tobacco and alcohol". They would campaign against early marriages, give information on various diseases, bring together the educated youth in the village and create awareness through street plays and dramas. They would advocate for adequate transportation to reach the health centre, and would assist villagers to understand and accept new technologies in health and avail themselves of the benefits. In essence, they felt empowered to try to transform their rural society.

The purpose of the students' post-intervention questionnaire was to explore and assess the general health scenario of rural Jalna. Students found 54% of the youth did not understand the physical changes of adolescence, 58% of youth did not understand HIV, 71% of the girls did not understand what was nutritional food, 50% of women and 28% of men had little knowledge of contraception and 75% of women were not aware of the advantages of feeding babies colostrum. Students mentioned that very few women in the village knew that three ANC visits were recommended. Only 54% of students found contraceptive advice to be available in the village sub-centres, PHC's, rural hospitals or medical stores which they visited.

While visiting the antenatal clinics, 100% of students recorded that anaemia was a common health complication seen in village women. Other common conditions included: underweight babies, 42%; repeated abortions, 42%; multi gravidae, 75%; hypertension 12.5%; and still

births, 46%. Forty-one percent of students identified malnourished children in the villages they attended.

Students generally considered that the health centres were under equipped, with only first-aid facilities for the most common diseases (viz; cold and fever) and no haemoglobin detection machines. They were concerned that there were inadequate childbirth facilities, no transportation facilities from villages to the nearest centre and that the shortage of health staff resulted in the paid health workforce to suffer from overwork.

Students were surprised that so many of the village women were illiterate and superstitious. They were concerned that villagers did not know about HIV, would not talk openly about HIV and had little knowledge of reproductive and sexually transmitted diseases. They were also surprised that villagers were ignorant of correct breast-feeding methods. They found villagers tended to be unaware of and in the habit of ignoring their health problems, to avoid reporting them, and to be unaware of the health facilities available. They were also concerned about the persistence and prevalence of child-marriages and found many misunderstandings about the modern health system to be prevalent in the rural areas of Jalna district. Parents feared discussing sexual problems with their children and lacked awareness of the health implications of adolescent development. Students felt that health problems were one of the biggest hindrances to the country's development.

Health workers evaluation

These student appraisals were supported by evidence from the health team and village members. Three open questions were asked of the supervising community health workers some four months after the intervention. Some responses are listed here:

1. Should the students visit your health centre? Did it help you? How?

- *They can serve as health awareness agents in the rural community.*
- *They convey the importance of treatment for pregnant women and ask them to continue to access treatment.*
- *“When we are busy treating women for antenatal care the students are visiting the homes of the villagers conveying health messages to all the other family members, which is [normally] our responsibility”.*
- *They should have appropriate knowledge so that it is useful for the illiterate community.*
- *They help in maintaining discipline at the health centre and communicate useful health information [rather] than routine gossip.*
- *They are good communicators to the village adolescents, especially they can inform them about dreadful pandemics, like HIV.*
- *The students help in [monitoring] haemoglobin, BP, urine, and patients' height and weight through report writing.*

2. Do you really think they should keep visiting?

- *They should continue visiting to increase the health awareness of the community and to enhance the students own health experience.*
- *Only if the students continue to visit villages can they build a healthy and trust based relationship with the villagers. This will also help to maintain continuity in their work and students can, in a very friendly way, encourage village women and the community to continue to access medical treatment, without suspicion of their motives.*



- *If they visit regularly they can survey various diseases prevalent in the village and find methods to tackle them.*
- *Students can give information on various welfare programs to the villagers which the villagers mostly do not have.*
- *They can find out and study our workplace limitations.*

3. How would they be useful to the village community? Students can:

- *Give information to increase the nutritional level of food and generally improve the villagers' diet;*
- *Help in reducing infant and maternal mortality in rural areas;*
- *Promote safe motherhood and help in the family planning program;*
- *Eradicate suspicions of modern health services and build a friendly atmosphere;*
- *Help eradicate superstitions and some dangerous traditional practices;*
- *Give useful and important health information to the women who never step out of their houses, but who are very happy to be approached by girl students;*
- *Convey to the community the latest information on health because they are highly educated and well –versed in IT;*
- *Build friendly relationships with the village adolescents;*
- *Be effective in communicating health messages across the village community- they can put on street theatre or dramas on health related issues;*
- *Provide information on a range of diseases;*
- *Improve the health of the community*
- *Talk to the village community about chronic and serious illnesses such as HIV-AIDS;*
- *Improve their effectiveness by being involved in other community issues and activities that are unrelated to health;*
- *Assist pregnant women and breast-feeding women who are not looked after by their family very well. Frequently their health is not considered important and these students can help the women to improve their quality of life. This will improve the health status of the women in rural areas;*
- *Help to change the traditional attitudes of the villagers towards health, which are passive and uninformed, to a pro-active and engaged outlook.*

Discussion:

It was clear from this pilot that even a short health awareness and education intervention as described here had a dramatic and immediate effect on this cohort of 24 self-selected students. Their health knowledge, as determined by pre- and post-intervention testing, increased dramatically. The one-day field trip served to increase their awareness of the needs of their rural communities and to overwhelmingly increase their intention to become actively involved in meeting these needs.

Generally all the women of the different villages responded positively to the student's health visit and to the information program. All the health workers had a positive attitude to the students' visit to their health centre, and endorsed their involvement, not only for the sake of the villagers, but also as an adjunct and aid to their own service. The benefit of such a cohort of intelligent, well-motivated young health aides was acknowledged unanimously.



It is not, nor was it ever an objective of this program, to train health workers. The program seeks to increase the ability and willingness of these bright young students to contribute to health programs in their local communities. Their role would be to assist the paid health workforce in providing, improving and expanding health services for their families and neighbours. While this brief program does not seek to do more than this, it is envisaged that some graduates may seek to enhance their knowledge through other programs and become health workers in their own right. It would be deemed a success if this program increased that likelihood.

While these results would seem to justify the continued development of this program and are gratifying for the workers involved, much still needs to be done before an ongoing program can be established. The number of students was small and the variety of villages visited was limited in size and geography. The sample of health workers was small. Therefore, further testing in the field will be conducted on a larger scale before the program is expanded.

Indeed, this pilot project was carried out so as to justify the development of a curriculum for an integrated course. Its apparent success does not abrogate our responsibility to rigorously follow sound educational principles in researching and developing the curriculum. The first author has recently made a study tour of Australian indigenous programs in order to gain knowledge and insight into an overseas environment which also has significant health issues.

The study's cohort was self-selected and highly motivated and this is likely to have enhanced the likelihood of the program's success. As the future resources for this program are likely to continue to be extremely limited, future cohorts will also be self-selecting. We envisage an increase in the popularity of the course, and that future cohorts will be at least equally self-motivated. While we hope that the success of this program will inspire the creation of similar programs, and even the integration of the key elements of the program into mainstream courses, we do not propose that similar programs should ever be compulsory.

Work on a curriculum and syllabus for a health enhancement and awareness course at Matsyodari College is at an advanced stage. It is envisaged that there may be two components: an introductory course similar to that described and a more advanced course later in the same academic year. Only graduates of the introductory course would be eligible to attend the second course which would build on the skills and attitudes developed during the introductory one.

Summary

This paper has presented the pilot study for a brief educational intervention which has the potential to dramatically improve health awareness in rural villages, particularly in developing nations. In this way, it seeks to improve the health status of rural communities. The model seeks to harness a hitherto untapped resource, that of intelligent, educated young people who come from these villages, and who would be expected to reintegrate after their return. Until now, these graduates would be equipped with degrees that would be of limited use in village life. The program seeks to build on the generic skill sets attained at university and to add health awareness, knowledge and skills, so as to better equip these graduates to perform as health advocates for their villages.

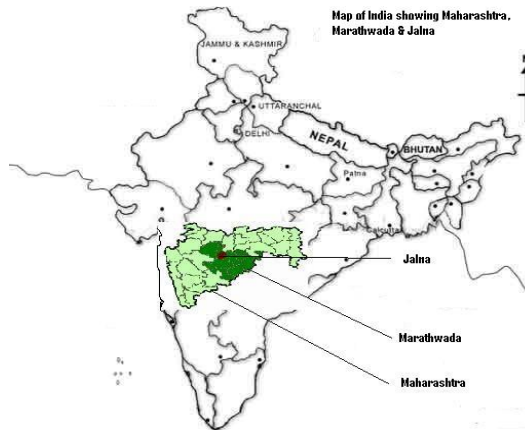


Figure 1. Map of India showing Maharashtra, Marathwada and Jalna.
(Source: <http://www.iird.org.in/marathwada.htm>)

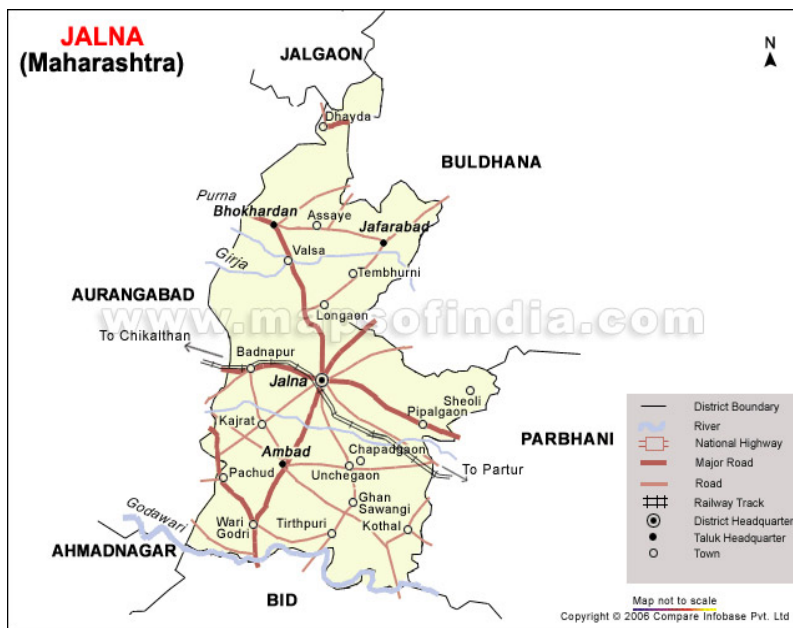


Figure 2. Jalna District Map (source: www.mapofindia.com)



Figure 3. Students of MSS College in the sub centre of village Akola during the field visit



Figure 4. Students counselling village women at the Antenatal Clinic



Figure 5. Students attending the orientation at the Akola sub centre

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