

**THE USE OF RADIO AND AUDIOTAPES AS TOOLS FOR
PRIMARY HEALTH CARE EDUCATION IN THE AREA OF
MATERNAL AND CHILD HEALTH**

GABRIEL JOSE URGOITI

M.B.Ch.B. (ARGENTINA), D.C.H. (S.A.)

**A THESIS SUBMITTED TO THE UNIVERSITY OF CAPE TOWN IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN
PHILOSOPHY IN MATERNAL AND CHILD HEALTH**

SEPTEMBER 1991

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

DECLARATION

I, GABRIEL JOSE URGOITI hereby declare that the work on which this thesis is based is my original work (except where acknowledgments indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other University.

I empower the University to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

SIGNATURE

Signed by candidate

DATE

05 - 09 - 9/

ACKNOWLEDGEMENTS

I would like to thank Hester Van der Walt, my supervisor, for her sound advice, support and her constant encouragement during the writing of this work. She combined the rare quality of being always available when I needed her, and did so with a constructive and unobtrusive style so characteristic of her.

I wish to use the opportunity to express my sincere appreciation to my colleagues for believing in the radio project, in particular Prof Aties Malan and the Community Neonatology Service. You made it possible by giving me the time to work on something I strongly believe in.

To all the members of the Child Health Unit I wish to note my indebtedness for your constant support these past two years. Without the support of Prof Maurice Kibel and Dr Marion Jacobs this work would in many senses not have been possible.

I would like to thank the Kellogg Foundation for the fellowship that made it possible for me to do the M.Phil in MCH.

A special word of thanks to Mrs Beauty Jwambi with whom it was a pleasure to work on the radio and audiotape project. I also wish to express my gratitude to the community health workers and mothers of the Khayelitsha community for participating in the workshopping of the radio scripts.

To Bridgit Thompson I am indebted for reading the final draft of this document and for her valuable and caring comments.

Finally, I wish to thank my friend and companion Ursula Evans for her help, advice and support during the long process of writing up. Without her it would have been very difficult to complete this work. And last but not least, thank you to Woody for understanding and being patient during this time of hard work.

CONTENTS

1.	INTRODUCTION	1
2.	Methods of Study	5
3.	Definition of Terms	5
I	CHAPTER ONE: THE USE OF RADIO FOR EDUCATION IN PRIMARY HEALTH CARE	7
1.	The Importance of Non-Formal Education	9
2.	Mass Communication and Non-Formal Education	11
	2.1 A Look at Radio: Radio for Primary Health Care	12
3.	Characteristics of the Radio	14
4.	Radio Strategies	17
5.	What can Radio do for Primary Health Care and Community Development?	19
	5.1 Radio, an Effective Mass Communication Tool for Primary Health Care	21
	5.2 Radio Can Empower Communities and Individuals	24
	5.3 Radio, Primary Health Care Education and Knowledge Gain	26
	5.4 Radio is an Effective Medium to Inform Listeners about Health Facilities.	29
	5.5 Radio Plays a Catalytic Role in Attitude and Behaviour Modification	30
	5.6 Audiotapes, an Exciting and Effective Tool for Primary Care Education Through Community Participation.	34
	5.7 Is Radio a Cost Effective Tool in Primary Health Care?	37
	5.8 Conclusion	39
II.	CHAPTER TWO: RADIO AND HEALTH EDUCATION - EXPERIENCES IN ARGENTINA	42
1.	Introduction	42
2.	Geographical Location	43
3.	Social Context of the Region	44
4.	The Radio Programme	45
	4.1 Target Population	45
	4.2 Format	46
	4.3 Contents of the Health Slot	49
5.	Evaluation	53
6.	Conclusion	55
III.	CHAPTER THREE: RADIO AND HEALTH EDUCATION - EXPERIENCES IN SOUTH AFRICA	57
1.	The Widespread Need for Health Education	57
2.	The Target Population	62
3.	The Sample	64
4.	Feasibility Study	65

4.	Constraints in Planning the Programme: Issues of control.	68
4.1	Getting Radio Time	68
4.2	Getting the Programme Taped	69
4.3	Striking a Compromise	70
5.	The Programme	71
5.1	Aims	71
5.2	Contents of the Programme	71
5.3	Style and Method of Developing the Scripts	72
5.4	Format of Presentation	74
6.	Evaluation	74
IV.	CHAPTER FOUR: EVALUATION OF THE RADIO XHOSA PROGRAMME	75
1.	Introduction	75
2.	A Brief Experiment with Live Time	76
3.	Written Feedback	78
4.	Views on the Radio Project Evaluations from other Medical and Social Scientists	79
5.	Potential Size of Our Audience	80
6.	Informal Evaluations of the Project	83
7.	The Pilot Survey	84
5.1	The Survey	85
8.	A Wider Survey	87
8.1	Discussion	89
8.2	Conclusion	90
9.	Overall Assessment of my South African Experiences	91
V.	CHAPTER FIVE: AUDIOTAPES AND HEALTH EDUCATION	95
1.	Background to the Audiotape Project	95
2.	The Audiotape Project	97
2.1	The Target Population	97
2.2	Type of Audiotape	97
2.3	Aims of the Project	98
2.4	Producing the Audiocassettes	98
2.4.1	Compiling and Developing Material for the Contents of the Audiocassettes	98
2.4.2	Selecting Health Topics	99
2.4.3	Compiling the Health Songs	99
2.4.4	Using Popular Music	100
2.4.5	Getting the Message Across: From Rehearsals to Creative Workshops	100
2.4.6	Producing the Audiotape	101
2.5	Piloting the Audiotape	102
2.5.1	The Sample	103
2.5.2	Method	104
2.5.3	Results and Discussion	107
2.5.3.1	Knowledge of Neonatal Jaundice	107
2.5.3.2	Acceptability of the Audiotape	110
2.5.4	Concluding Comments	111
VI.	CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS	113
VII.	REFERENCES	119

INTRODUCTION

1. Purpose and Overview of Study

Why does a medical doctor decide to write about the use of radio in primary health care - an area that doctors and health workers traditionally do not research?

Up to now, very few health professionals have ventured into this area to learn from the experiences and methodologies of the social sciences. But things are beginning to change. Since the Declaration of Alma Ata¹ in 1978 - which asserts Primary Health Care as the key to attaining acceptable levels of health by the year 2 000 - the realization that the most effective approach to health is one that is comprehensive and holistic is increasingly winning ground. The maxim that it is not only health workers who have a contribution to make to health for all, but that everybody is responsible for their health is beginning to take root, even if at a snails pace. And in this movement radio is beginning to play a pivotal role. As primary health care begins to gain ground, radio as a tool of health education is beginning to gain ascendancy.

The story of how I come to be involved in radio and Primary Health Care is quite simple. The reasons lie in the

important but under-explored links between the need for mass communication and health. It arose as a pragmatic response to real human need.

When one is working in the field, especially in developing countries, one quickly comes to realize that it is almost impossible to reach many of the people that really need health care. Accessibility to health services is a major problem particularly in the rural areas and in the deprived peri-urban and urban communities. The lack of money, transport, roads and geographical obstacles are just some of the barriers that block access to health services.

Yes, the reality of working under such constraints can be demoralizing and frustrating or alternatively challenging and creative. For many medical professionals this represents a true crossroads and the question becomes "To do something, or nothing for those historically neglected populations?" To venture out into untrodden areas and take the risk of failure, isolation lack of support and even recrimination from the medical fraternity or to remain with the acclaimed, well endowed and safe? Simply, where does one go from there?

Under such conditions, I believe the realization to try alternative pathways is pressing. The need to become creative and to explore different ways of tackling old problems, different ways of communicating health messages

to the people that need them most, is urgent. In my search for answers and in the experiences of others throughout the world, I discovered that mass communication through radio and cassettes can be an extremely powerful tool for communicating health practices or doing health education. This is particularly true when a community participates in all stages of a media project. Within non-formal education, these mediums have been well put to use in communicating health messages, creating awareness about health issues, helping in attitude and behaviour change, and finally, in helping people become responsible for their own health and the health of their families and communities.

I believe that in this period of transition in South Africa, the time has never been riper for the trial of new approaches and should be used opportunely and wisely. In this climate I believe that I have something important to communicate, to share with you: my experiences in radio and primary health care and the contributions of others in this field. I do this in the conviction that you will be persuaded to the importance of the place of mass communication, particularly radio and audiotapes, in primary health care and community development.

In the following chapters, I will discuss the effectiveness of radio and audiotapes as appropriate tools for health communication particularly suited to reaching deprived and isolated communities. I will refer to the striking

achievements in radio and audiotape projects by drawing on the experiences of more than sixty radio and cassette projects concerned with primary health care in developing countries. I will present a detailed description of my Argentinean and South African radio experiences, focussing on how the two programmes came into existence, the different stages they have gone through, the problems and constraints encountered as well as their strengths and successes. I will describe the audiotape project I am involved in, and demonstrate how audiotapes can be used alone or in conjunction with radio for primary health education.

I will argue for the need for community based radio stations relying on full community participation and ownership, that are sensitive to community needs and priorities and that respect their culture. Health workers have to be ready to play a role, when the present broadcasting system in South Africa changes, and broadcasting licenses become available to start developing community based radios that will empower communities to take command of their own destinies.

I conclude this document by underlining what for me are the most important issues that emerge from this work and make recommendations for the future of radio in primary health care.

2. Methods of Study

The methods of study employed in this work encompass a literature review of radio projects situated in Third World Countries and two case studies reflecting my radio experiences in Argentina and South Africa. I will also present my audiotape experiences. The evaluation techniques involved face-to face and focus group interviews, the setting up of experimental and control groups and participant observation.

3. Definition of Terms

Frequent use of the terms Primary Health Care and Holistic Approaches to Primary Health Care are made in this work. I have used them with the understanding as expressed in the Alma Ata Declaration:

3.1 Primary Health Care is essential care based on practical, scientifically sound, and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at cost that the community and country can afford to maintain at every stage of their development in the spirit of self reliance and self determination.

3.2 By a holistic approach to primary health care is meant an approach that addresses the major health problems of a community providing promotive, preventative, curative and rehabilitation services accordingly. It includes education relating to health problems and

methods of prevention and control, promotion of food supply and proper nutrition, adequate supply of safe water, basic sanitation, maternal and child health including family planning, immunisation against infectious diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs. Finally, it involves in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications, and other sectors, and demands the co-ordinated efforts of all those sectors.

CHAPTER ONE

THE USE OF RADIO FOR EDUCATION IN PRIMARY HEALTH CARE

"Radio is the art of communicating meaning at first hearing."

- Laurence Gilliamy²

Today, radio has become the world's foremost mass communication medium³ and has been assimilated into the daily lives of millions of people. It is a tool widely relied on by state and private sector equally to inform, influence and entertain and is put to many ends. For instance, it is impossible to conceive of national development without the mass communication media, because of the centrality of communication to any national development exercise. Its potential to educate and bring about widespread changes in primary health care should not be overlooked. We cannot think of achieving "health for all" without educating and communicating en masse. For this reason it could have a key role to play in safeguarding the health of nations.

Educationists are well aware of the fact that learning does not only occur within the confines of the classroom. In fact, the formal learning situations of primary, secondary and tertiary education only partially fulfill development needs, particularly those of developing countries. Too often the real needs of the people are overlooked or cannot be coped with, and the varying needs for human resource development are neglected. The needs

referred to here cover the wide spectrum of human learning needs related to basic survival and well being. For instance:

- * nutrition,
- * sanitation,
- * maternal and child health,
- * family planning,
- * small farm management,
- * housing improvement,
- * cultivation of vegetables and fruit on family lots and
- * basic everyday consumer economics.

In defence of this position and in support of non-formal education, Henry Ingle argues that:

"The development of human resources involves something that is far more basic than the conventional, academic and scientific body of knowledge and technical subject matter taught in schools. This something beyond has been described by some as improving the quality of life."⁴

It is in this context that non-formal education has unlimited potential, and that mass communication media have an unprecedentedly vital role to play in compensating for that missing link between formal and non-formal education and human development needs.

1. The Importance of Non-Formal Education

The pragmatic response to the weaknesses of formal education has been the mushrooming of non-formal education, an education focussed in human beings' needs. It is directed at helping people articulate their individual needs as well as those of the community, finding ways of mobilizing resources to meet those needs and taking command of their individual and collective destinies.⁵ Non-formal education involves learning that is not imposed from the outside, but is sought and developed by the learners themselves. Julius Nyerere described it as education for self reliance. It is identifiable not so much by its structure, but by the role it plays.

From a review of material in the field, Ingle defines non-formal education as "any organized activity outside the established framework of the formal school and university system, which aims to communicate specific ideas, knowledge, skills, attitudes and practices in response to a predetermined need."⁴

One of its greatest advantages is its flexibility. For instance it is suited to young and adult, literate and illiterate, and so forth. It is strongly identified with specific locally felt needs, local culture and local ways of expression. Moreover, it is not place and time bound. For instance, it can take place on the job, with families

at home, in discussion groups under a tree, in community centres, churches, temples or clinics.

As Ingle⁴ explains, the target population for this type of learning is the majority of the world's population which lives either a marginal rural existence within a vicious cycle of agricultural work of low productivity, or which barely survives as squatters in the cardboard shanties on the fringes of large crowded urban metropolises.

In short, the purpose of non-formal education is not the earning of a title or degree, but the life long challenge to bring about qualitative changes. It is an attempt to overcome the notion that persons lacking formal schooling must forever be sentenced to an existence of poverty, misery and squalor.

In other words, non-formal education is at the centre of any transformational national activity and especially so in developing countries. The question remains then, why has it remained so neglected and how can it be given status in health and particularly in primary health care?

I am not arguing that non-formal education is the answer to all human resource development questions, but wish to state that its task is much too great for it to be the responsibility of a single department or ministry of education. I am also not arguing against the need for

formal education. However, I do believe that a solution lies within interdepartmental and interagency co-operation between health, agriculture, education, housing and so forth. Integrated programs are what is required to bring changes to the milieu and lifestyles of the neediest. Like Ingles, I do argue that "particular attention be given to the interrelationship between formal, non-formal and informal systems of transmitting knowledge in society. Each system offers a partial solution ..., and in combination may represent the integrated approach needed for a more encompassing solution." ⁴

2. Mass Communication and Non-Formal Education

As can be inferred from the above, given its flexibility, non-formal education has the capacity to use an infinite variety of media. The constraining problems of time, geographical obstacles, shortages of trained people and limited economic resources all demand alternative strategies. Without the involvement of the media, the health sector cannot hope to inform the general public on health issues nor help to stimulate the process of community involvement, a prerequisite for deep seated changes.

So critical are the mass media in social transformation that in 1986 the WHO Expert Committee on Health Education concluded that the role of the mass media in the field of health was to:

- help strengthen political will by appealing to policy makers
- raise general health consciousness and clarify options concerning action that have a strong bearing on health levels
- inform decision makers and the public about the latest developments and limitations in health sciences and publicize relevant experiences for replication
- help deliver technical health messages for the public
- foster community involvement by reflecting public opinion, encouraging dialogue, and facilitating feedback from the community.⁶

2.1 A Look at Radio: Radio for Primary Health Care

Primary health care philosophy aims to have a comprehensive and holistic approach to health involving the community. To date, radio has played an important role in health communication and holds out many promises for the future of this field.

As the Director of Public Information and Education for Health of the WHO contends:

"It is not much of an exaggeration to say that in any 'new' country before there was a national flag, a national anthem and possibly a national airline, there probably was a national radio! In many least developed countries - where literacy is low and roads are

few, radio is virtually the only national delivery system of information."⁷

In my experience of working in developing countries, in rural and deprived peri-urban and urban areas, I have realized that radio and audio-cassettes are the best mass communication means for reaching the community. I am not recommending radio as the panacea to mend all ills, but argue instead for its integration into a holistic programme of communication. Radio or any media, can't be effective on its own.

There are several important points to note when using mass media in non-formal education. They are that:

- The role of the media is to accelerate the rate of social change and development, rather than begin the process.
- For the successful utilization of media and technology in non-formal education the media must come to the learner, rather than the learner to the media.
- It is important to involve the people that the programme is intended to serve right from the very beginning of the project. This involvement

must begin at the planning stage and continue through the stages of implementation evaluation, and eventual modification.

- Community members must be trained to use the media. Villagers making their own programmes are the most powerful form of facilitating community development.

To understand the attraction to radio throughout the world, it is important to explore the characteristics (and limitations) that single it out as the world's most popular form of mass communication.

3. Characteristics of the Radio

The most striking of all its characteristics is the fact that it is a blind medium of communication. For the listener, radio provides no text or visual images about its messages and the broadcaster remains invisible. The message merely exists in time. Consequently, it runs the risk of ambiguity and of misunderstanding and people involved in programming and broadcasting have to compensate for this weakness.

Radio only uses the auditory code, it is comprised of nothing but different sounds. The message depends primarily on speech, but in radio, speech is not only words

as in literature, but words as expressed in voice. For this reason the broadcaster plays a critical role. Although the blindness of the medium is posed as a constraint, paradoxically, through creative utilization it offers a space that other communication media do not possess. Its greatest advantage is its appeal to the imagination. Its ability to stimulate the imagination allows the individual listener to construct the scene around broadcast messages, transforming the broadcast into a unique and personal experience for each listener. In this way the broadcast message is put into an intimate relation with whomsoever it encounters. As Andrew Crisell so articulately explains:

"...radio is an intimate mode of communication not simply because its messages can be fully "realized" only inside the listeners head, but because they frequently reach him in circumstances of solitude and privacy and can accompany him in an unprecedented range of places and activities. That means that it can be, and is, assimilated into his daily existence much more than are the other media, and to much greater extent than ever before." 2

Hence, another crucial advantage of radio is its **flexibility**. It allows the listener the freedom to perform other activities while listening to a programme.

The code and signs of radio are words, sounds, music and silence. The latter is crucial because the absence of sound can also be heard and has the potential of becoming a potent stimulus to the listener, providing a gap in the sound for the imagination to work. In radio, context is the key to the meaning of sounds, music and silence, and the means by which the context is established in radio, is at bottom, verbal.

Radios are cheap. The large-scale manufacture and distribution of inexpensive battery operated transistor radios has drawn much of the worlds population into the international communications network. Even though ownership of a radio may not be universal, according to UNESCO, few communities are without at least one receiver and portable radio sets have become the main information source in the Third World. In the first World, radio has become so cheap that by the end of the seventies, each household in the U.K. was reported to have 2.53 radio sets. ⁸

Radio is accessible and can reach a cross section of any nation, cutting across discriminatory categories such as gender, levels of education and economic status. Radio can reach isolated areas and become a unique information source.

4. Radio Strategies

As said earlier, it is unrealistic to think that radio alone can upgrade the health of a community. Radio should be used as one of the media tools available to health workers, and used in conjunction with specific radio related strategies. Jamison and McAnany formulated the following strategies for radio use:

1. open broadcast
2. campaigns
3. listening groups also called radio forums ⁹

We can add to this list as the fourth point, audio-cassettes.

There is no single best strategy, each has their place and has been demonstrated to be effective. A project could combine different strategies in the course of its operation to meet varied objectives.

Within radio, open broadcasts refer to the transmission of audio-signals that are picked up by receivers within range. This strategy is commonly used by education, health, nutrition and family planning projects. Primary health care projects with their extensive network of community health workers have the infrastructure to support broadcasts with personal follow-up.

Campaigns refer to a type of open broadcast that usually extends over a short period of time and that covers a specific topic. The messages are normally inserted into popular radio programmes and broadcast frequently - the latter being greatest advantage of this strategy.

Listening groups are small groups that meet regularly to listen, discuss and act on radio messages. The significance of radio forums is described by Rogers as follows:

"A radio forum is a small listening and discussion group that meets regularly in order to receive a special radio programme, which the members then discuss. On the basis of the programme and discussion, they decide what types of relevant action to take. This sequence of activities is expressed in the motto of the Canadian forums: "Listen, discuss, act". Emphasis in radio forums is usually placed not only on creating knowledge of new ideas, but also on putting them into practice."¹⁰

This format can be used very well in primary health care where most of the work is community based and where community health workers can organize and lead listening groups.

Tape recorders can be an effective teaching medium in listening groups. Information played on tape recorders in

community situations can result in high information recall. Community members can use tape recorders to participate in programme production which allows the development of messages in the local language using familiar names, events, places and local people. In this way the credibility of the message is promoted.

5. What can Radio do for Primary Health Care and Community Development?

The role that radio has played in community development in Africa, Latin America and Asia these past four decades has been phenomenal, and demonstrates the power of radio to influence development. Although the types of programmes transmitted varied considerably due to the different political and ideological complexions of the programmes, the prominence given to radio has been consistent.

Radio has been used to support social change, land reform, community development and even commercial enterprises. It has been used to promote literacy, family spacing, better nutrition and health in general.

The field of radio has amassed a considerable body of experience derived from projects that have used radio to support health objectives. Projects have used radio to create awareness about health issues, nutrition and family

planning, and to teach new information, promote changes in behaviour and train and support health workers.

From a literature review of fifty nine radio projects in thirty seven developing countries (see Appendix A), radio is amply demonstrated to have the following seven strengths:

1. Radio is an effective mass communication tool in primary health care.
2. Radio can empower communities and individuals.
3. Radio primary health care education programmes facilitate knowledge gains.
4. Radio is an effective medium for informing about health facilities.
5. Radio can change attitudes and behaviour.
6. Radio can be used very effectively with audiotapes. Audiotapes by themselves can be successfully used in primary health care.
7. Radio is a cost effective tool in primary health education.

Despite these very clear strengths, the use of radio within the projects reviewed is not unproblematic. Their greatest weaknesses lie within the area of evaluation, cost analysis and the absence of longitudinal studies to assess behaviour modification. I will return to these points later. However, having stated this, I must reassert that there are

very clear advantages to the use of radio in health education as I believe the following review will indicate.

5.1 Radio, an Effective Mass Communication Tool for Primary Health Care

Of all the strengths related to the benefits of radio, the one that emerges most potently is its ability to impact on target populations more effectively than any other single mass communication medium. Its ability to reach the greatest number of people in the shortest time outweighs other forms of mass communication, and it is reported to bring results.

In a review of 15 projects - five in Asia, four in Latin America, five in Africa and one in the Pacific Island - radio was shown to be the most frequently used mass communication medium.¹¹

In Indonesia, during the feasibility study stage of the project, 'A Radio Script for Health', it was found that there were four hundred private radio stations as opposed to two TV stations.¹² This shows that, in many third world countries radio is the most common form of mass communication.

The following projects exemplify the point that it is not only a preponderant medium but that it does have importance and is listened to.

In a project using radio aimed at marketing iodized salt to prevent goitre in Pakistan, a survey revealed that 70% of the population had heard the radio message, and even more impressively, and 80% of this population were able to recall the essence of the messages. But the most encouraging aspect of this drive was the fact 60% of the radio listeners reported discussion of the contents after listening.¹³ The latter is significant because it suggests that the messages were being further explored fostering their assimilation into peoples frames of knowledge.

The listenership increases dramatically when radio is community based. This is demonstrated in a project in Ecuador, aimed at rural Indians in remote region of the country. It was found that 94% of the target audience (total population: 10 000) were keen listeners of radio Baha'i - the community radio station. This figure is impressive when considering the fact that there are more than thirty radio stations competing for listenership in that region (Otavalo)¹⁴ - Its virtue? It represented the community: its concerns, its culture, its issues. They owned it.

In Sri Lanka, radio was selected for a health education programme targeted at mothers to convey family planning information, because 72% of the target

population - the Sinhala and Tamil speaking population - had access to radios. It was found that 33-50% of the mothers attending health clinics in randomly selected areas listened to the programme and could recall health messages.¹⁵

In Honduras where 71% of the population own functioning radios, communication proved to be highly effective in conveying information on diarrhea - The under fives infant mortality rate attributed to diarrhea dropped from 47.5% in 1981 to 25% in 1982.¹⁶

Similar results were obtained in Egypt. The research results of the "National Control of Diarrheal Diseases Project: Oral Rehydration Campaign", aimed at increasing knowledge about the disease, reflect that as a result of the campaign, the mortality rate of children with diarrhea decreased by 50%. Here radio once again played the dominant role.¹⁷ In Colombia radio proved a most effective tool in the campaign to propagate the value of breastfeeding.¹⁸

Of all the thirty projects reviewed, only two reported failures - the Nutrition Mass Communication project in India, and the Maadid Study in Morocco. In the India project, the availability of radio transistors in the target rural population was a severe problem.¹⁹ In Morocco, although most households did have radios,

radios were not listened to because programmes provided very little useful information to the target audience - mothers. Mothers complained that they did not address women's needs and the language of communication was incomprehensible. ³

It can be concluded then, that although largely dependable, the use of radio is not unproblematic. Results clearly suggest the importance of thorough feasibility studies before selection of a mass communication medium, and the importance of community needs to be taken into account. Both are vital to the success of any programme.

5.2 Radio Can Empower Communities and Individuals

When radio is community based its effectiveness at empowering individuals and communities is most enhanced. Because it is strongly identified with and accepted by the community, it becomes a viable tool for bringing about community development. 'Ownership' is achieved in many projects by allowing community members to participate in all stages of the project, and in this way equip them with radio production skills. It has also facilitated the formation of community listening groups or forums, a characteristic important for deeper level processing of information, and understanding and acceptance.

These points are clearly depicted in the community based radio project, Hill Tribe Radio, Chiangmai - Thailand - aimed at community development.²⁰ The project involved the community at all levels of its development, provided training in the skills needed to run the radio station, and facilitated the development of listening groups. **The cumulative effect was community action.**

The importance of broadcasting in indigenous languages, another crucial point, is shown in two community based radio stations: Radio Onda Azul, Puno, Peru ²¹, and Radio Baha'i in Ecuador.²² In both these projects the station is owned by the community, and programming is done by the villagers in their own local languages. This was shown to be effective in empowering the community and facilitating community development.

The long term effect of participatory radio on its audience is also demonstrated in the "Man is Health Project", Tanzania, by the radio study groups that were formed to listen and discuss the broadcasts and that continued to meet for months after the campaign had ended.²³

In the "Project for Equality of Access to Education for Women and Young Girls" in Upper Volta, radio forums became one of the major ways of instruction.²⁴

The same was shown to be true in two other primary health education projects: "Radio Mam: Let's Guard Our Health" in Guatemala,²⁵ and "The Wonsum Rural Communication Project" in Ghana.²⁶

5.3 Radio, Primary Health Care Education and Knowledge Gain

It is clear from experiences all over the world that radio as an educational tool is useful for effecting knowledge gains in the listeners. Of the projects surveyed, twenty nine radio projects concerned with primary health care in developing countries reported definitive increases in knowledge with respect to health. I will mention some of the relevant findings.

In 1976, in Mexico, a project was implemented to compare the efficacy of mass media (specifically radio) with direct education at transmitting information on health and nutrition to rural mothers with children under five years of age.²⁷ Traditionally, it has been thought that impersonal mass media like radio, could not compete with interpersonal communication in effecting gain of knowledge, and change of attitudes and behaviour. However, the results of this study show that the direct personal education programme groups and the radio listening groups involved in the project, learnt

health and nutrition concepts equally well - 53% and 54% respectively.

In Kenya, the programme "Giving Birth and Caring for Young Children" was very effective at increasing health knowledge in the audience. Surveys showed general recognition of the major themes broadcast and high recall of the topics covered.²⁸

During the radio campaign "Health Education Radio Dramas" in Sri Lanka, 26 000 postcards were received answering health related questions put to the audience through the radio. Moreover, 95% of the replies received were correct and 33% - 50% of the mothers attending clinics in randomly selected areas could recall health messages.¹⁵

Similarly, in Swaziland²⁹, using interactive radio to teach children about immunizations, the evaluation showed a definite gain in children's knowledge about immunizations. A post-test, administering a questionnaire to the students of the experimental schools, showed a significant increase in knowledge with an average score of 20.05 out of 26, while the control schools averaged only 5.80 out of 26.

Radio has proved effective at increasing knowledge and family planning practice in Guatemala.³⁰ In the

Spanish speaking population, a survey found that the use of contraceptives was higher among those who had been exposed to the family planning messages, and informal communication about family planning increased. It was interesting to note on the other hand that the project was not as successful among the indigenous population. Amongst them only 60% of the total population (approximately 3.5 million), approved of radio broadcasts on family planning. While 81.4% of the Spanish speaking audience wanted more information on family planning, this was true of only 37.4% of the Indian audience. Their primary objection was based on religion. Furthermore there was no gain in knowledge on specific family planning methods in the Indian audience, and use of contraceptives remained close to zero. However, there was a marked decrease in strong resistance to family planning. These results have some obvious but important implications:

- the need for understanding indigenous needs and resistances
- the need to incorporate this understanding in the programming of the messages.

In Egypt, a remarkable 50% drop in the nationwide infant mortality rate due to diarrhoea was attributed to "The National Control of Diarrhoeal Disease Project Oral Rehydration Communication Campaign". 17

Proof of knowledge gain induced through radio education has been shown in Sri Lanka as a result of "The Mahaweli Community Radio Project" directed at farmers. As a result of the programme, farmers are reported to be applying the new knowledge they have acquired in their every day life.³¹

Finally in a study involving 15 projects, using mass media in health education,¹¹ it was found that between 10% to 50% of the listeners could recall and remember messages immediately after the campaigns.

All these studies support the effectiveness of radio at inducing gain in knowledge when used correctly. However, in most of them only short term retention of knowledge gained has been evaluated. They provide no evidence on long term retention of knowledge, and this undoubtedly is a crucial research question deserving of attention - but one that poses many difficulties.

5.4 Radio is an Effective Medium to Inform Listeners about Health Facilities.

Radio has been important for disseminating information related to health services. For instance, it has been crucial for informing on the existence of specific health services, for indicating their location, the times at which services are available, for informing

on how frequently or under what circumstances should they be used, for clarifying misconceptions, and for providing general information and support to new primary health care programmes.

In Colombia, radio was found to be very successful in communicating to the audience the locations of the family planning clinics through "The Family Planning Radio Campaign".³²

Through a health education campaign using radio to promote oral rehydration and immunization, the numbers of visitors to clinics in Liberia was found to triple.³³

Using pop music and songs to reach teenagers in a multi-media campaign on family planning education proved to be a successful strategy in eleven Latin American countries during 1985-1986. Despite its multi-media approach, radio was strongly relied upon, for example, for playing these songs. The campaign reported that there was a substantial increase in demands for family planning services.³⁴

5.5 Radio Plays a Catalytic Role in Attitude and Behaviour Modification

Attitude and behaviour changes induced by radio are generally difficult to evaluate, and particularly so

in the evaluation of its long term effects. As McAnany explains, this is so because it involves complex methodologies for evaluation of complex areas, for instance, modernization, and the social-psychological such as attitude change and value formation.³⁵ Nevertheless many, projects argue that radio by itself or as part of a multimedia approach can bring about attitude and behaviour change.

In Tanzania, after "The Man is Health " campaign, it is reported that concrete evidence of the campaign's effects on the quality of village life was everywhere. More than 700 000 latrines were built by those who heard the radio programme, mosquito net sales soared in many areas, and villagers filled many of the swamp holes that proliferated to prevent disease-carrying insects from breeding.²³

The evaluation of "The Mass Media and Health Practices" campaign in Honduras, run by Stanford University, demonstrates the success of the campaign in conveying health information and facilitating behaviour changes related to infant diarrhea. Evaluation results of the 750 families randomly chosen from twenty communities show that within a year, 93% of the mothers involved in the evaluation knew that the radio campaign was promoting Litrosol - an oral rehydration solution. 42% knew that Litrosol prevented

dehydration; and 49% had used it. Of those who had used Litrosol, 94% knew the correct mixing volume and 96% knew that they had to use the entire package. As a result of this knowledge gain, the mortality rate attributed to diarrhea of the children under five years of age in the sampled communities fell from 47.5% (1981) to 25% (1982).³⁶

In the Phillipines the "Radio Nutrition-Advertising Campaign" was mounted to test the effectiveness of modern marketing and advertising techniques in changing behaviour, attitudes and knowledge related to nutrition and child health. Since only the ability of radio messages to change food patterns was being assessed, no other education activities were undertaken during the period in an attempt to exclude extraneous variables. The survey conducted during the evaluation, revealed that the percentage of mothers who added oil to lugaw, increased from 0 to 23% in eight months. The number adding vegetables increased from 5% to 17%, and those adding fish rose from 17% to 27%. In the post project interviews, it was very interesting to note radio's role as a source of nutrition information as evidenced in the target audience reports of adding oil to diets. This point is important because despite the presence of other nutrition and health programmes, none of them had mentioned the benefits of oil in diets. The "Radio

Nutrition-Advertising Campaign" was the only one recommending oil in diets. This suggests that the innovation of adding oil may be attributed to the radio messages.³⁷

The evaluation of the "Profamilia Radio Campaign" in Colombia clearly indicates the substantial impact of radio on the number of women accepting family planning methods in 16 clinics. Radio announcements were associated with a net increase of between 5 500 and 8 100 new acceptors. Other probable benefits of the radio campaign (and one that is particularly difficult to quantify) included a clearly discernible shift in attitude related to discussion of family planning from previously closed to greater openness to discuss family planning. When the radio campaign started the government did not have an official population policy (including family planning). Now it does. It is difficult to document the extent to which radio affected policy change, yet by the act of its legitimization of family planning it is probable that its contribution was considerable.³⁸

The community based radio projects namely, Mahaweli Community Radio in Sri Lanka³¹, Hill Tribe Radio in Chiang Mai, Thailand²⁰ and Radio Onda Azul in Puno, Peru²¹, all indicated substantial modifications in attitudes and behaviour in relation to health

practices, sanitation and environmental issues in their respective target populations. The knowledge gained about these topics has been incorporated into the daily lives of the communities.

Evident in all these projects is the absence of information on the permanence of attitude and behaviour change. It appears that if radio is used in conjunction with other media and with reinforcing interpersonal communication of health workers, radio can be effective in facilitating these changes.

5.6 Audiotapes, an Exciting and Effective Tool for Primary Care Education Through Community Participation.

Tape recorders have been successfully used in primary health care education, and with very good results when the community participates in developing the contents of the messages. Moreover, the messages prepared and taped by the community can later be sent to the radio station for broadcasting. Audiotapes are a very flexible medium and programmes can be replayed as often as desired and at different places. For instance, a health worker can tape a programme in the morning and play it at a clinic during the afternoon. Because it is easy and inexpensive to copy onto other cassettes, the same programme can reach vast numbers of people making it a cost effective tool for mass

communication in developing countries. Also, tape recorders can serve as a basis for establishing listening groups in communities.

One of the advantages of using tape recorders is that they are simple to use. This is well demonstrated in the "Audio-cassette Listening Forums" project, in Tanzania, where most of the users were illiterate.³⁹ Again, because of its simplicity, tape recorders were the most popular medium used in the field by health workers, participating in the "Integrated Rural Project in Education, Health and Family Planning, in Honduras."⁴⁰

In "The Pila Project", Guatemala, audiotapes were used as a medium to reach working women on a Guatemalan plantation. The aim of the project was to teach basic ways of improving health and nutrition at home. Audio-cassettes were chosen as the communication medium because they cost little, are simple to operate and can be played at any time. The programme demonstrated that the audio-cassette medium was not only flexible enough to reach large numbers of women, but that it could competently reach them at the Pilas (community laundry centers) where women could learn informally without disrupting their work. Women enjoyed the tapes and found the information useful. The survey that followed detected behavioural changes:

58% of the women interviewed had tried a special recipe that the tapes had described, and the Maria de Lourdes plantation registered a 92% rate for second vaccination against polio and diphtheria, compared to 60% in the control group.⁴¹

A successful combination of radio and audio-cassettes is shown in "Radio Mensaje", Ecuador. In this project, programming is done by the villagers using tape recorders and then sent for broadcasting through the community radio.⁴² Exactly the same process is followed by "Hill Tribe Radio Station", a community based radio in Thailand²⁰. Because the communities are involved in the programming, the credibility and listenership of these two projects is excellent.

It is interesting to note that the development of audiotape listening forums has been a common feature of many projects.

In Mali, the "Audiotheques Rurales" project was administered by the villagers. The villagers started listening groups and after some time these groups were viewed as schools that foster social unity by the community.⁴³ In Tanzania, through the "Audio-cassette Listening Forums" audiotapes were listened to and followed up by group discussions. As a result of this, audiotapes concerned with Maternal and Child

Health were developed for use in the clinic waiting rooms.³⁹

5.7 Is Radio a Cost Effective Tool in Primary Health Care?

Everybody tends to agree that radio is a cost effective tool for education. However, information about cost is scant and when available either dated or provides little solid information.³ Most of the projects reviewed have very little to say about programme costs.

Those that do comment about the financial aspects of their projects, identify five main sources of funding and are usually maintained by a combination of more than one of these:

- government sources,
- international agencies,
- advertising sales,
- private local support and
- self support.⁴⁴

Even though somewhat dated (1978), the following cost information provided in some projects gives some guideline of the relative costs of radio communication.¹¹

TABLE 1

Costs of Projects Using Radio in US Dollars

Name	Outreach	Cost
1. Nutrition Ed. Campaign - Phillipines	30 000 mothers heard and recalled message	\$1.50-2.50 per mother reached.
2. Nutrition Ed Campaign - Nicaragua	70 000 mothers heard and recalled message	\$0.65-2.75 per mother reached.
3. Maharashtra Mass Media Ed. Campaign - India	2.7 million adults	\$0.04 per contact.
4. Giving Birth and Caring for your Children - Kenya	3 million listeners	\$0.0001 per listener.
5. Man is Health - Tanzania	1-2 million particip.	\$0.50 per villager reached.
6. Pila Communication Project - Guatemala (Audiotapes)	300 families	\$0.02 per household reached.

In comparison to the cost of other mass communication media, like TV, video and written media, radio is the cheapest. According to Wilbur Schramm, the unit cost of radio is one fifth that of television.⁵ A data base cost study by Jamison and Klees, confirms that costs are approximately 1 to 4 for production and transmission in favour of radio.⁴⁵ But radio can be very expensive too: Elaborate hardware can be costly both to acquire and to maintain, complex programme structures can require considerable personnel and other resources, extensive field based programming can require travel, personnel and movement of equipment.

On the other hand radio can be inexpensive. A project can use single spots, use donated airtime or broadcast on local stations. In my experiences, I have always been successful in obtaining donated airtime for programmes.

5.8 Conclusion

From this review of projects it is evident that there are clear advantages to using radio. For instance:

- Radio can reach an enormous number of people and logistical problems posed by geographical location become less of a problem. Electricity is not necessary. Through radio it becomes possible to reach isolated communities more frequently and consistently than health workers are able to achieve.
- Radio offers easy accessibility. The listener is required to simply turn on the receiver and understand the language of the broadcast.
- Radio offers relative simplicity in the production of programmes. It is easy to train community members in the necessary production skills. It also offers the possibility of direct community participation in the process of programme production. Through portable radio equipment or the much simpler audiotape, it is

possible for isolated communities to become active in programming.

- Radio can be cost effective.

Having said this, and as general critique of most of the projects surveyed, it is important to bear in mind that, for many of the projects, there is little empirically tight evidence about impact (effectiveness) and much less about cost effectiveness of the projects. **The greatest weakness of radio is inadequate evaluation.** There seems to be little concern on the part of projects to undertake a critical analysis of results and process and costs analyses. This poses inherent dangers and makes it vulnerable to the replication of errors in projects around the world.

Another important issue relates to the impact of mass media on social change. In theoretical discussions of the media, and in the presentation of project results, it often seems to be assumed that the media creates social change. From a historical point of view, the most significant social change in rural areas seems to have begun because of certain socio-political conditions, and that the change sought out the media to continue the process.³⁵ In this sense project reports are weak at presenting the socio-political contexts in which they operate.

Finally it is also important to mention that it was quite evident that many of these projects lacked both carefully thought out planning and careful administrative follow through. It is not always clear what the definition of aims and objectives are, and many times it appears that the main concern of the people involved is getting the project operational. Through this they are prone to underemphasizing the importance of formative evaluation, and lose sight of the need to change and adapt according to the needs and priorities of the target audiences.

Despite these drawbacks, I strongly believe that even if only by virtue of the fact that it can and does reach and influence millions, it has a critical role to play. Moreover, I wish to argue that when radio is used properly it is effective and has a fundamental role to play in establishing Primary Health Care in developing countries.

The following chapters in which I describe my own experience in using radio and audiotapes as a medium for health education, will explore many of the issues as they apply to Argentina and South Africa.

CHAPTER TWO

RADIO AND HEALTH EDUCATION: EXPERIENCES IN ARGENTINA

1. Introduction

During December of 1986, in the province of Rio Negro, Argentina, I commenced a radio programme together with a journalist friend, Miguel Cavanne, that was directed at the families of rural communities. The programme was titled "Crece en Familia" or "Growth Within the Family" and was broadcast every Sunday from 9.30 am to noon on the LRA 30 National Radio station.

The aim of the programme was to improve the general well-being of families by informing and educating them in an entertaining and creative way. As is well known, developing countries carry a heavy burden of disease and death. The province of Rio Negro is no exception. As Ebrahim explains, the burdens are "most evident in vulnerable groups such as children and women in the reproductive phase of life; in these groups inadequate nutrition, physiologic demands, and lack of resistance make the effect of disease more serious".⁴⁶ In Rio Negro, most of the rural families were living in deprived and isolated communities that were very cut-off from the rest of the country. For them, radio came to be an essential part of their communication network.

I was responsible for the health section of the programme. The goal of the programme was to have an holistic approach to family life and development. Because of this, family health in the broad meaning of the term played an essential role in the production of the programme. I wanted to inform and educate the family in primary health care issues, so that they could take as much care as possible of their own health. Community participation allowed me to discover the needs and priorities with respect to health issues, so that we could address them. The following is an account of the radio programme with specific emphasis on the health dimension.

2. Geographical Location

The province of Rio Negro is one of the largest provinces of Argentina. It covers a surface area of 203.013 square kilometers, which represents 7% of the total surface area of the country. It is located in the south of the country and is situated between the Andes mountains on its western border and the Atlantic ocean on its East.

The province is divided into 5 regions. One of the regions, the Andes region with its lake district, includes one of the most densely populated cities of the province: San Carlos de Bariloche on the shore of the Nahuel Huapi Lake. Bariloche has a population of approximately 90 000 inhabitants, and it is from this city that I started broadcasting the health radio programme from 1986 to 1988.

3. Social Context of the Region

Rio Negro is a rural province, where the population comprises a large component of the original Indian inhabitants, the Mapuches, integrated into the general population. Like most rural areas in developing countries, it is confronted with very serious problems that affect the development of the entire province. Here, health and education are crucial issues. It is a common phenomenon to find remote and isolated communities scattered across the region. The lack of roads, transport, and the extreme weather conditions that prevail makes accessibility to and from these villages almost impossible especially during the winter months. The provision of health resources to these communities, therefore, is a tremendous problem.

In addition, the public health services of the province are inefficient and the resources they have, very limited. Professional health workers are scarce. There is an absence of incentive for doctors and nurses to work in the rural areas. Conditions for work are bad and lack the possibilities for further training or academic development. As a result most of the health workers, opt for positions in the city where better salaries and training opportunities are to be found.

Most communities do not have health workers or any health facilities. Sometimes a doctor or sister may visit a community once a month on horse back, as this is the only

viable means of transport for those conditions. The possibilities of referring patients to health centres is at best remote, and telephone or radio communication is also not available. At times a community may have the privilege of having a lay person trained as a health worker by the Bariloche Regional Hospital, but such good fortune is rare.

It is because of these social conditions that the idea of utilizing the radio as a tool for providing support and essential primary health education to remote and inaccessible communities was born. The idea was reinforced by the fact that the communities were generally small, comprising about 15 to 20 families. During my contact with them, I realized that all communities possessed radios. For many, listening to the radio was the only way of being in contact with the outside world. This did not mean that every family had a radio, but rather that some families did and that group listening was common practice, particularly on Sundays. People got together to listen to the news, to sports, to debates, etc.

4. The Radio Programme

4.1 Target Population

The programme was targeted at families living in the rural and peri-urban areas of the South. At that time, the rural population was estimated to be approximately 20 000 inhabitants distributed over 98 000 square kilometres, and the peri-urban population,

25 000. (Data provided by the LRA 30 Radio Nacional, San Carlos de Bariloche, Province of Rio Negro, Argentina, April 1991) The health slot of the programme attempted to give simple and clear messages about how to deal with family health and diseases. It tried to create an awareness within the family that each individual is responsible for his or her own health and for the health of their children. Prevention and promotion was a central focus of the programme.

4.2 Format

The program was broadcast live every Sunday from 9.30 to 12 noon. It was long but, judging from our listeners' responses, by no means boring. The programme was dynamic. It incorporated the spontaneous participation of the public who dropped in, invited guests, and phone-ins. Live broadcasting has many advantages and one of them is that it allows direct and immediate feedback from listeners and this makes it possible to change and adapt the programme according to people's needs.

We encouraged people to come to the radio station and to participate in the programme and many people did. The idea behind this open format was to have a community based radio programme that allowed people to feel free to put across their views and also their

needs and complaints. People felt that the radio was their open forum. At first it was difficult for people to get used to the idea that radio was not only for politicians, artists, and the news, but that anybody could have access to it.

The programme began with a signature tune which was played several times during the broadcast. Listeners after a while came to associate the music with the programme. Music and humour were essential components of the broadcast. On the programme we interviewed members of the communities, discussed their issues, told stories, broadcast news - all of which were interspersed with popular music.

Besides these functions, an important role of the programme was to communicate messages to individual listeners or particular communities. The radio programme was open to anybody who needed to transmit a message. For instance, its function in this respect could be as diverse as relaying a message to a relative enquiring about a particular situation, arranging a rendezvous, or calling a doctor. Messages like the following were very common:

"Please tell Juan that we will be arriving in Bariloche by the... train at 17h 00. He must wait for

us with two horses at the intersection between Farm "A" and Farm "B"."

"Please tell Mr. Lopez that we arrived safely. His son has been admitted to hospital. Doctors are waiting for his test results. We will inform you of any further news as soon as possible."

The hospital too used the radio programme to communicate messages to patients in isolated communities, and to inform them when a particular clinic was to be held. Reports on road conditions and accessibility to different villages were broadcast on the programme especially during the winter months. News of festivals and fairs were also broadcast to listeners. Thus, in a very real sense radio became an immediate and very real tool of communication for rural communities and individuals. Furthermore, because of the practical significance of the radio in people's everyday lives, the radio was transformed into an excellent tool for health education.

Having a community radio was not always easy. State radio stations are usually not happy with such open arrangements. We had problems in this respect and had to be careful about how messages were put across. We did not compromise the truth but had to be careful in our criticism of the status quo. Because of such

difficulties, the radio programme was suspended twice. The monopoly of state broadcasting corporations over radio in many developing countries is a reality that always has to be taken into account. The constraints of the state on independent initiatives often result in the argument that it is better to do nothing than be compromised. However, I believe that this standpoint is too easy in many ways and does nothing to meet community needs.

4.3 Contents of the Health Slot

The Health Slot was approximately 30 minutes long every Sunday, and began usually at 11 a.m. The length of the slot was a flexible arrangement and depended on the need for the coverage of specific topics and on visitors. When I planned the slot, I approached the issue of health from the perspective of "within the family", and with specific reference to the question, "How do we try to have a healthy family?" I wanted to begin with the roots or foundation of what being a family means, with reference to relationships, how families deal with the issue of sexuality, family planning, pregnancy, ante-natal care, what to do if a baby is born at home, parents and their first baby, nutrition, common problems of the new born baby, child health issues, environmental hazards, hygiene, customs and traditions that relate to the concept of health and disease, etc.

However, it must be emphasized that the contents of the health slot was decided upon and workshopped together with communities, at those times when I was able to make contact with them. Many times during the programme I had to denounce situations that were responsible for the ill-health status of a particular community like, for instance, the lack of sanitation to specific communities, and the generally poor state of the hospital and its inadequate services. This created many problems with the status quo but at the same time this gave credibility to the programme.

With the programme in full swing we were approached by more and more people wanting to voice their views and needs. This was the beginning of a very enriching experience which helped us to understand one of the most important principles of community based radio: the open forum, where ordinary people are given voice and where people can express their views and needs. It is very difficult to describe this sort of process. What is important to say, is that there is no ownership of the programme, but that the producers suddenly come to realize that they are part of an on-going process. The programme was not ours but the community's.

During my two year involvement with the programme, we talked about family health and not always about family

diseases. Promotion and prevention were the main thrust of our approach. We could not divorce health issues from environmental, social, political and economic realities. We knew that it was no good talking about only gastroenteritis or TB for instance, when these diseases were a consequence of the living conditions of families. We knew that the health services were not providing for the needs of the community. We knew there were not enough doctors, nurses and community health workers to look after the health needs of the population. Their reality was poverty, injustice, and isolation.

Traditional healers, as in most rural areas in developing countries, play a very important role in the health of the communities where they practice. A few of our programmes were devoted to listening to what they have to say. Inviting them onto the programme was not easy. They were not very keen to expose themselves on the radio. They were scared that punitive measures were going to be taken against them because they practiced "illegal medicine ". Despite this we did manage to persuade some of them onto the programme. This proved to be an amazingly interesting and invaluable encounter, which served to demonstrate the great potential of the open forum to act as a catalyst in bridging cultural barriers and misunderstandings.

As a result of their participation, a precedent was set for greater engagement between western medicine and traditional healing. A door was opened for some of us to work together in trying to achieve health which took more fully into account the multi-cultural contexts of the families we treat. This experience made it clear that healing was not in the hands of one particular group of people, but rather the result of a much more profound process. It brought home the fact that the goal of traditional and western healers is the same: the well-being of the individual and the community.

There is a difference in approach towards the etiology and treatment of diseases, but this does not mean that openness, understanding, tolerance and cooperation between the practitioners of the different approaches cannot be achieved. On the contrary, my personal experience in working closely with traditional healers was a very enriching one and revealed to me that the full meaning of recovery or healing in its cultural context, must embody the diversity of traditions and beliefs that that particular community embraces. Because of this realization my approach to primary health education on the radio was holistic.

5. Evaluation

During that time the radio programme was not formally evaluated because of a lack of financial resources. We did not have any money to run surveys in the different communities. The radio programme was not funded. It was done in our free time. Of course this situation presented many difficulties to us. However, I did evaluate the health section of the programme in an informal way.

The informal evaluation of the project took the form of interviews with communities when access permitted. This was done during my clinical visits. To measure the impact of a radio health education programme is at best, very difficult even with ample resources. But to do it single-handedly is an incredible task. My situation in this respect was far from unique. Unfortunately it is a common reality that in developing countries most health workers involved in primary health care and education, are left alone without the support of the health system. This situation is sad. It is very difficult to reach or satisfy those rigorous scientific or academic standards that usually bring recognition and support. (For such reasons one can argue that the area of primary health care is caught in a vicious cycle and will continue to suffer neglect until government agencies take up their responsibilities.) We want "Health for All" in the year 2 000 yet there is little tangible government support for this objective.

Despite these circumstances, it is my belief that it is absolutely necessary for all attempts to be made at undertaking evaluation. Evaluation has to be built into any programme from its inception. This is the only way by which we will know whether we are meeting the needs of people. It is remarkable, therefore, that despite all odds and in the absence of academic recognition and support, important work is still being done.

The findings that my investigation generated were interesting:

1. Every one of the communities that I contacted had at least one radio set or more.
2. Approximately 65% of the people could not read or write.
3. People got together on Sundays to listen to the programme.
4. People would informally discuss the contents of the programme.
5. People were able to recall many of the topics presented.
6. People found the health information useful and would apply the advice given in the programme.
7. In all the communities we visited people looked forward to listening to the programme and wanted more.
8. Because the programme was directed at the family, the age of the listeners varied from children to elders.

This information was obtained through open group forums. As a facilitator I would guide the discussion and record the findings. I do not have exact numbers of the people I interviewed. Again, because of a lack of funds this evaluation was done in my working time while we visited the different communities for health purposes. It would have been much easier to have hired people to do the interviews, but this was out of the question.

6. CONCLUSION

At the end of 1987, the programme "Crece en Familia" was presented with the "Santa Clara de Asis" award. This is an annual award for the best social and educational programme in Argentina given by The Argentinean Catholic Association. It is an important and recognized award in the area of mass communication.

I personally believe that the programme achieved its goals, by meeting the real needs and priorities in the areas of family health and development in the different rural communities of the south of Argentina:

- * It helped to increase the awareness of health and environmental issues within the family. In many instances it also helped to change behaviour in relation to particular health and environmental

issues. Communities began to lobby for the provision of health services and sanitation to their areas.

- * It approached health in a holistic way.
- * It helped to achieve a better understanding and openness between traditional and western medicine.
- * It was an open forum which allowed community participation, and gave voice to deprived and isolated individuals and communities. It provided a rare opportunity for them to put their needs and points of view across directly.
- * It showed that even with no funds, health communication is possible with a lot of work, goodwill, and community participation.
- * It corroborates the findings of other projects (as those in Chapter I), that community radio can be a powerful tool for development and education in developing countries.

CHAPTER THREE

RADIO AND HEALTH EDUCATION: EXPERIENCES IN SOUTH AFRICA

1. The Widespread Need for Health Education

I returned to South Africa at the end of 1988 with the experience of the radio programme still very strong in my mind, to take up a post at Red Cross Children's Hospital in Cape Town. The success and excitement of the programme had made it clear to me just how powerful a tool of education the radio could be, and also how under-explored its potential is in South Africa. Despite the many differences between the Argentinean and South African situations, I could not help being struck by the similarity of the issues and by the number of common parallels.

Take for instance, the issue of accessibility. For particular sectors of the community accessibility to health services is a severe problem both here and in Argentina. This is true in the sense of simple geographical location as well as when accessibility is examined in terms of more qualitative dimensions like:

- * accessibility of the medical model in relation to the cultures of the peoples that are served,
- * the problems of accessibility seen in relation to socio-economic conditions and
- * the accessibility of the language of communication.⁴⁷

One can ask: Even if people do have good access to medical services, how understandable and acceptable are the paradigms that these services function in to the people who use them? And if not, what is the impact of these services on its target population, and how does it differ from its intended or desired impact? In other words, just how effective are the medical paradigms that prevail?

Dr. Charles Morrow, the Director of Public Information for the World Health Organization, argues that the chief characteristic of modern medicine is its preoccupation with "cure". And yet, this paradigm has time and again proved itself inadequate in especially developing contexts. The weaknesses of the curative approach are clearly demonstrated in Cape Town. David Harrison⁴⁸ explains that much of the disease of children in the Western Cape is related to environmental factors. According to his analysis, nutritional surveys point to significant chronic under-nutrition throughout the Western Cape. Tuberculosis is a major health problem in the Western Cape, where incidence of the disease is higher than anywhere else in the country. Moreover, diarrheal disease and acute respiratory infections, together with prematurity are the commonest causes of infant death in the Western Cape. African children in this region have the highest perinatal mortality. Even though Cape Town is not a rural area, the health needs of some communities are far from being met.

There is a widespread need for health education and awareness of health issues.

It is precisely in redressing this imbalance of modern medicine that radio becomes an invaluable asset. As my experiences in Argentina demonstrated, radio is very amenable to being incorporated into a holistic approach to health care integrating prevention, promotion, cure and rehabilitation. It is also well suited to bridging cultural gaps and is an ideal tool for simple communication styles. In other words it can be put to good use in primary health care.

Radio has shown itself to be a cost effective health education tool, and has a crucial role to play in heightening awareness and informing on health education. As the Director of Public Information for the World Health Organization explained as long ago as 1980,

"any redress of this imbalance involves redistributing the responsibility for health care from the medical elite to the individual and community. In this respect ...broadcasting has a major role to play, (it is) the missing link in the chain of health education."⁴⁹

Through my own experience and that of other health workers as broadcasters, I have come to believe that the health worker as broadcaster is in an excellent position to make a wide audience aware of health education issues. With this awareness I became increasingly convinced that a health programme on Radio Xhosa would be an appropriate health education strategy to explore. At that time, one of the areas that needed to be addressed, and which remains today, is the area of Maternal and Child Health. A few examples will demonstrate this point:

1. Teenage pregnancies are a major and growing problem. It is difficult to find accurate data on the problem.⁴⁸ However, a study by Rip, Woods, Keen and de Groot in 1986 on births in the Peninsula Maternity and Neonatal Service on women resident in Khayelitsha, showed that teenage mothers accounted for 15.1% of the births. The number of children born to girls still at school is a source of great concern.⁵⁰
2. Statistics relating to infant mortality in South Africa are notoriously inaccurate. No information about death of African children was published between 1979 and 1989.⁵¹ According to Rip et al, the neonatal, perinatal and infant mortalities of children living in Khayelitsha in 1986 were as follows:
Neonatal Death Rate: 17.4/1000 live births.
Perinatal Mortality: 32.9/1000 live births.
Infant Mortality Rate: 50.3/1000.⁵⁰

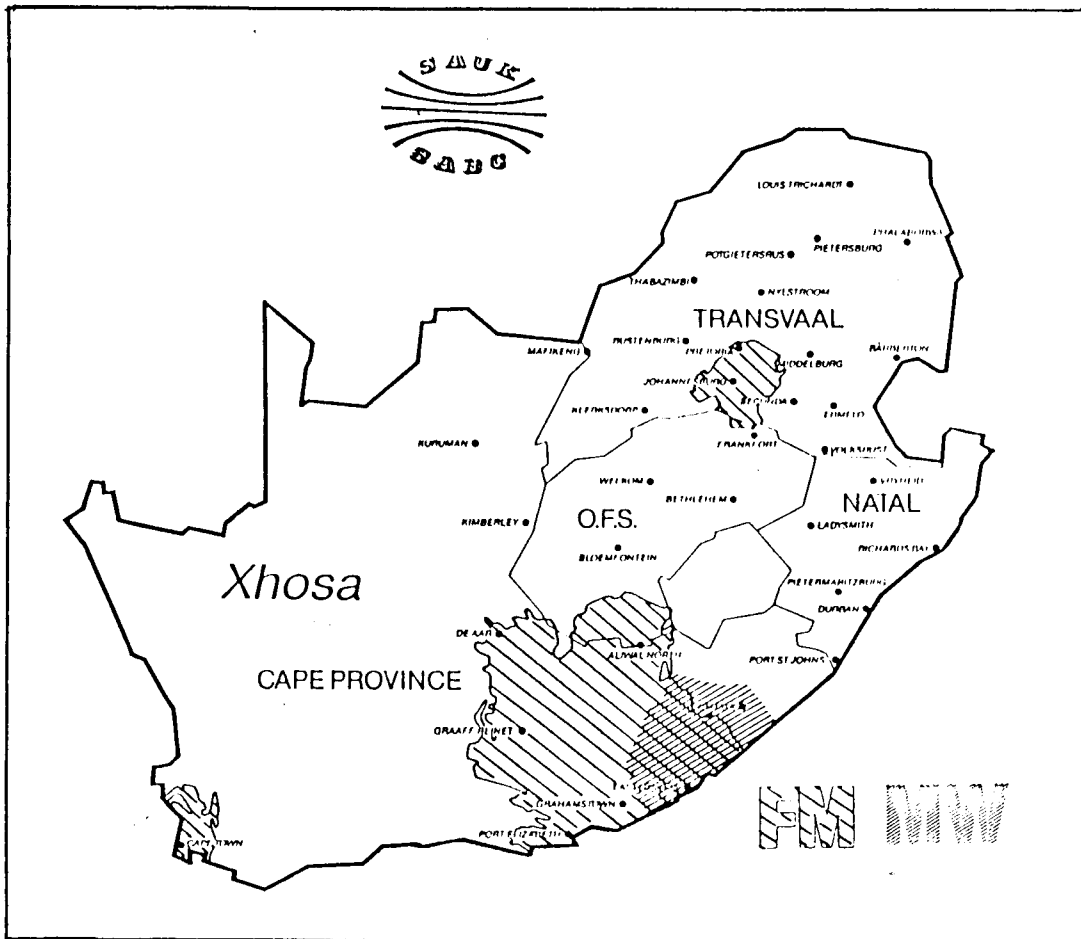
3. Diarrheal disease and acute respiratory infections are the major causes of infant mortality and morbidity in the Western Cape.

Thus, I decided to begin a radio programme targeted at the mothers of the Xhosa speaking community. I chose this particular target population because of its needs and because very little has been done in the area of health education in Xhosa. Traditionally, communication in Xhosa culture has been orally based, hence radio communication could fill an important gap in health education. In addition, access to western health is restricted because of a lack of adequate resources, the geographical inaccessibility to services in many instances and because of cultural barriers. Therefore, the idea of utilizing a mass medium like radio, as a tool for health education, seemed very promising.

2. The Target Population

The size of my target audience is not small, and comprises communities living in rural, peri-urban, and urban areas. According to the All Media and Products Survey 1988-1989, the Radio Xhosa listenership on any weekday is 1.317 million. The survey is based on data collected through home interviews. The sample size is 16 426 persons aged sixteen and over in South Africa including the so call "Homelands".⁵² The majority of these listeners are located in the Cape Province including Ciskei and Transkei. This is reflected in the following map.

Distribution of Radio Xhosa Listenership



The mixed nature of the audience is problematic because styles of communication differ between the urban and rural communities and the same language conventions and styles of communication are not always appropriate.

I also realized that the varied nature of the audience would pose serious challenges in terms of meeting the mixed needs I anticipated from such a diverse population. I knew that the writing of the radio scripts was the least of my problems. The real problem would be knowing if the scripts were addressing and meeting the needs of these communities.

In attempting to arrive at a needs analysis, it became very evident that though everybody talks about community participation, very few mention how to achieve it. The problems of community participation become tremendous when one's target population is marked by varying levels of socio-economic realities and needs, and when it is dispersed across such wide areas and the rural-urban spectrum. Nevertheless, I realized that it was essential to the success of the project to understand the needs of the community I was targeting, in order for them to be addressed in the programme.

3. The Sample

I chose to use Khayelitsha as the area in which to do all preparatory work and to pilot the idea of a radio programme on health. At that time (1989), I had been working at the Community Neonatology Service of the Department of Paediatrics and Child Health, UCT. Much of my time was spent in Khayelitsha.

Khayelitsha, is a very particular township and represents a good mixture of rural and urban communities. It is growing at an alarming rate and every day new settlers from the rural areas move in. Consequently, it is experiencing an explosion in population growth. The township has not been planned to absorb a rapid population growth and as a result, the poor living conditions and the available resources of the area are greatly overstretched. Living conditions for a great many are hopelessly inadequate. The Community Health Department of The University of Cape Town, conducted a survey during 1989, which showed that 89% of the employees in the formal sector and 80% of those working in the informal sector earned less than R400 per month.⁵³

As Harrison mentions in his report, the bucket system stills exists in Khayelitsha, Site C, where there is one toilet for every two shacks. The strain imposed on the sewage system in this overcrowded area, even when flush toilets have been installed, becomes obvious in winter, where sewage puddles from overflowing toilets form in the

roads of Site B. Overcrowding is a major problem. A survey conducted by Yach in 1986, revealed a median of five people per room in Khayelitsha.⁵⁴

Being in Cape Town, I decided that Khayelitsha as the largest and fastest growing Xhosa speaking area (and therefore a sociologically very mixed area) in Cape Town, would be the best place to start consulting. Khayelitsha was to be used as the sample of my target audience in the preparatory work for the radio project.

4. Feasibility Study

My five years of experience as a doctor at Red Cross Children's Hospital and the close contact with the mothers that the job allowed me, had prepared me well for the feasibility study. The informal conversations with mothers during my clinical activities taught me about the needs and the difficulties in the provision of health education and the constraints of language, time, understaffing, and the overworking of health workers.

Several things emerged clearly about mother's attitudes and preferences regarding health education:

1. Mothers were eager to get information on health issues but the need for this education could not be met.
2. They were unhappy to communicate with doctors and nurses in a foreign language (English and Afrikaans)

and had great difficulty understanding what was wrong with their children and about what they could do to help them recover.

3. Most mothers preferred verbal to written communication.
4. Almost every mother had a radio or access to one and most were keen radio listeners. They always responded positively to the prospect of listening to health talks on the radio.

I concluded that these responses spoke strongly in favour of the value of a health radio programme in Xhosa for these mothers.

Consultations in earnest for the feasibility study on the radio health project involved a wide range of individuals and organizations both from within and outside the health field. As I did not have funding for this project, the time and resources available for consulting broadly was almost impossible to manage. A total of 14 organizations and structures together with community members, were consulted that either lived or worked in the area, or that could constructively contribute in the area of health, mass communication, language usage, or provide a first hand sociological understanding of the Khayelitsha community and its social structures like teachers or groups of mothers, etc.

They were the:

- * South African Broadcasting Corporation. (SABC)
- * Department of Social Anthropology, University of Cape Town.
- * Department of National Health and Development.

- * National Language Project.
- * Regional Services Council.
- * Department of Paediatrics and Child Health. University of Cape Town.
- * South African Council for Higher Education.
- * SACLA Health Project.
- * Community Health Workers From Regional Services Council and SACLA Project, working in Khayelitsha.
- * Sisters of Charity in Khayelitsha.
- * Staff and patients from the Khayelitsha Midwife and Obstetric Unit.
- * School teachers from Khayelitsha.
- * Mothers from two community creches in Site B, Khayelitsha.
- * Philani Nutrition Center. Khayelitsha.
- * Families living in Site B, Site C and Green Point, Khayelitsha.

The findings from my conversations with mothers while performing my clinical activities were corroborated by my wider consultations:

- * The community desperately needed education in health matters and maternal and child health were cited as top priority.
- * The community had high rates of illiteracy and preferred oral to written communication.
- * People in the community were avid radio listeners and most people either possessed radios or had access to one.

The consultations yielded other vital information and these points have been used as working principles to guide the project. The most significant of these for the operationalization of the radio programme have been:

- * The predominance of oral communication versus written communication in the Xhosa speaking community.
- * The use of Xhosa as the language of communication. (There is no accurate data on language preference in the Western Cape. The most recent data is the 1980 Census, provided by The Central Statistical Service, Cape Town, that showed a total African population of 182 882 in the Cape Peninsula. For 171 538 of this population, Xhosa was the language of preference. Obviously this data is too old, and underreflects the real size of the African population.)
- * The use of a direct and informal style of communication that is rooted in the conventions of its listeners and that would talk to its listeners.
- * The need for health issues to be approached in a manner that would be understandable to listeners and for the avoidance of medical terminology as much as possible.

4. Constraints in Planning the Programme: Issues of control.

4.1 Getting Radio Time

Wanting to start a radio programme is easy but getting radio time to do it is a different ball game. As I wanted to broadcast in Xhosa, the obvious thing to do was to

approach Radio Xhosa, SABC. In real terms there were no other avenues open to me, as a result of state broadcasting monopoly over national broadcasting resources. Decisions about the length of the time slot available for the programme or the timing of the slot are largely out of one's hands.

After much negotiation with the manager of Radio Xhosa in Cape Town and with the head office in Port Elizabeth, I was given a ten minute slot every Tuesday on the Woman and Youth programme that was broadcast on a weekly basis between 13.30 and 14.30 hrs. The arrangement was for the health talks to be recorded in the SABC Cape Town studio and sent to Port Elizabeth for broadcast.

This was not what I wanted. I wanted live time on the radio. I wanted the possibility of a participatory programme where mothers could phone in and be part of the broadcast. Most importantly live time was important to get because it allows one an understanding of the impact of the programme on the target audience. Clearly what I got and what I wanted were not the same. Despite this, I was pleased at the opportunity of getting radio time.

4.2 Getting the Programme Taped

I was also informed by SABC that I was to write the scripts in English which were then to be handed over to radio Xhosa for translation and broadcasting by a broadcaster of their

choice. These requirements did not suit my ends. I had spent a great amount of time consulting with the community and organizations and knew that I had to be responsible for the end product. I needed to know exactly how the translations were being done, how they would be broadcast and who would broadcast them. I was also much too aware of the need to workshop the scripts on an on-going basis to ensure that the programme met the needs of its target population.

4.3 Striking a Compromise

The importance of maintaining control over the contents and presentation of the scripts were put forward to SABC and it was agreed that I was to find somebody to work with me who had a good voice and experience in broadcasting. My requirements were also that the person had to be Xhosa speaking, fluent in English, and experienced and knowledgeable in Maternal and Child Health. A tall order! Finally, the person had to be prepared to work on a "ad honorum" basis for the project. A difficult task lay ahead of me.

However, despite the odds I had the good fortune of finding Mrs. Beauty Jwambi, a senior nursing sister at Red Cross Children's Hospital who had tremendous experience in child health, previous broadcasting experience and a deep understanding of the community. She was very excited at the idea of the radio programme. We began working together

as a team in September 1989. The next challenge was producing the programme.

5. The Programme

My idea was to cover the area of primary health care in Maternal and Child Health (antenatal care, neonatal care and child health). The approach was to be holistic. I didn't want to talk only about disease. Health instead was a crucial issue.

5.1 Aims

The aims of programme were multiple:

- * to promote the importance of health amongst families
- * to help families take care of their own health as well as the health of their children
- * to guide parents with respect to what they can do for their ill children and when to seek professional help and advice
- * to begin to implement community based radio in South Africa.

5.2 Contents of the Programme

The first seven months of the programme focussed on the neonatal period and dealt with:

- the care of the newborn,
- common problems of the newborn and

- illness of the new born.

Since May 1990, however, we have extended the programme to cover the older child and antenatal care.

(For an exhaustive list of the topics consult Appendix B)

5.3 Style and Method of Developing the Scripts

The process of developing the scripts was a long one and it is important to describe it. In writing the scripts there were several important short term objectives that I had:

I wanted the scripts to have a style that was appealing to its listeners and that was immediately accessible to them. The listening mother had to feel that we were speaking to her so that the communicated message could be personalized and owned by the listener. She had to be able to identify with the speaker. I did not want a lecture on a particular topic but wanted a style that was informal and that was able to talk to its listeners. Medical language had to be demystified. Listeners had to believe that nobody needed to be a health professional in order to understand what is going on with the body. Anyone can understand it if the language used to explain it is simple. As Ivan Illich argues, "As soon as medical effectiveness is assessed in ordinary language, it immediately appears that most effective diagnosis and

treatment do not go beyond the understanding that any layman can develop." 47

To meet these objectives it was essential to workshop the scripts before they were broadcast. This was not easy and was very time consuming. Many people participated in this process. First the script was written in English and given to various people/selected group of people for critique. These comprised of mothers, nurses, doctors and others and finally, their recommendations were incorporated into the script. The script was now ready for translation.

Sister Jwambi was responsible for the translation process. On translation it was once again workshopped with the Community Health Workers of the SACLA project, school teachers in Khayelitsha, the National Language Project, and others. The final product would be one arrived at by consensual agreement by these different groups. Only after this process was the script ready for recording in the SABC studio. Then it was broadcast by Sister Jwambi.

This drawn out process was important for us. It gave us the security of knowing that:

- what was said on the radio had been scrutinized by the community

- one of the biggest obstacles of communication in medicine - the use of complicated language - had been thoroughly dealt with
- we had made a great effort in making the tools and knowledge of health care available to people.

5.4 Format of Presentation

The messages were simple and clear and enabled listeners to decide about what they could do about their health and when to seek professional help and advice. We were also aware of the importance of remaining flexible enough in order to adapt to changing community needs and priorities. Stories and accounts of personal experiences are script styles that we found very useful.

The broadcaster plays a vital role in the transmission of the message. The stress, tone and rhythm of speech all help understanding. Radio is a personal way of communicating, people tend to relate more to a voice even if only a disembodied one, than to word on a piece of paper.

6. Evaluation

Because of the complexities and the difficulties of evaluating educational radio programme, I will deal with this topic as a separate chapter.

CHAPTER FOUR

EVALUATION OF THE RADIO XHOSA PROGRAMME

1. Introduction

We have already discussed the difficulties of evaluating communication projects in Chapter Three. We have not succeeded in being an exception to the rule for several reasons:

- the numbers involved in our target audience are vast, and geographically speaking are widely distributed - the Cape Province, parts of Transvaal, parts of Natal, Ciskei and Transkei.
- The absence of funding for the evaluation of the project is a tremendous setback.
- The radio time given to us by SABC Radio Xhosa is not live time. We had to pre-record the health talks, this became a very serious constraint.
- Xhosa culture is based on an oral tradition and written forms of communication are not very common. Written feedback is difficult to obtain from the audience.

However, we were well aware of these constraints and intent on overcoming some of these problems from the beginning. What follows is a description of the our attempts to evaluate the radio project. Evaluation is an on-going process and, therefore, it is not finished. Many exciting possibilities and resources lie ahead of us in the near future so that we can improve the work that we have done until now.

2. A Brief Experiment with Live Time

Feeling very compromised by the denial of my request for a live programme I resolved to promote the merits of live broadcasting with the SABC aggressively: the importance of developing strong community links through a radio programme where we could share experiences and different points of view with listeners and also the possibilities for evaluating impact of a programme. I was eventually granted one hour of live broadcasting time during October 1989 which I decided to accept to demonstrate the power of this format. This hour was dedicated to breastfeeding and was broadcast between 12.00 and 13.00 hrs on a Tuesday.

The broadcaster interviewed Sister Jwambi for ten minutes on the topic. He questioned her about the advantages, disadvantages and problems of breastfeeding to which Sister Jwambi gave direct answers using simple language. Mothers were then invited to phone in to question Sister Jwambi directly.

What happened next was remarkable. For the next forty five minutes the phone rang non-stop and not all phone calls could be dealt with. Mothers phoned in from Cape Town, Natal, and Johannesburg. The questions they asked were very relevant. For instance the questions covered topics such as how to continue breastfeeding when returning to work, whether one could breastfeed if one had tuberculosis, or what to do about sore nipples. They also told her how valuable the health talks were and of how they wished that we continued with the live format. Many of the mothers who phoned in were working in factories while listening to the radio. Others were at home without a phone but with quick access to one.

Conclusion

This hour proved to me once again that radio is an excellent medium of communication and that the target population was listening to our programme. This particular programme had not been advertised in advance. This experience also bears out some of the advantages of radio as communication medium: mothers can listen to it while performing other activities. Unfortunately one isolated programme does not permit an evaluation of the impact of the ongoing project, but it certainly does give one a fair idea of what could happen if weekly livetime was secured for a maternal and child health programme. It also supported my argument that there is a need for health

education programmes in which the community can express itself directly.

Despite the success of the live hour, and the SABC's expressed support for primary health care programmes directed at the community, particularly in maternal and child health, to this day they still have not addressed my request for livetime.

3. Written Feedback

As I mentioned in the beginning of this chapter, Xhosa culture is based on oral tradition. Inviting listeners to write to us with their questions, comments and requests was a way of searching for feedback. We expected that this method would give us a weak response and we were not wrong. We only received a few letters. Other possible reasons for this poor response are the following:

- Many of our listeners are illiterate. (Census figures are presented in such a way that it makes it difficult to determine the extent of illiteracy or low levels of education. Up to 40% of the African population have never been to school, and up to 90% have not attained any level of secondary education).⁴⁸
- Sending a letter involves buying a stamp and envelope and having other basic stationery. It also involves

going to the post office. Writing a letter, therefore, is expensive and impractical.

- Working people lack time.
- Putting pen to paper involves feeling confident enough to ask questions and to express own opinions, let alone feel confident about ones writing ability.

We knew then for sure that we would have to find other methods and techniques to achieve two-way contact with our audience.

4. Views on the Radio Project Evaluations from other Medical and Social Scientists

I discussed the problem of evaluating the project with several organizations and individuals. They are: Market Research Africa, SABC, Epidemiologists, MRC, Sociologists and people working in primary health care. From my numerous discussions with them, a few points became clear:

1. Assessing the impact of a radio programme is at best a difficult task.
2. The resources required for this kind of evaluation are expensive.
3. Evaluating a pre-recorded programme is an added constraint.

4. There must be absolute clarity about the reasons for evaluating.
5. In radio evaluations qualitative data is as important as quantitative data and informal evaluations are of value.
6. Radio evaluations do not fit well with the rigid positivist paradigms of the medical model.

Market Research Africa particularly felt, firstly, that a formal quantitative evaluation of the radio talks would involve interviews at tremendous effort and cost. These constraints were inescapable if we were to ensure the representativeness of the sample. Decreasing the sample size to manageable proportions would greatly risk the validity of our data. Secondly, they argued that there was no real need for that type of evaluation. The sheer size of our population - Radio Xhosa listenership - would be a good enough indicator of the potential size of our audience./or of how many people the health talks reached.

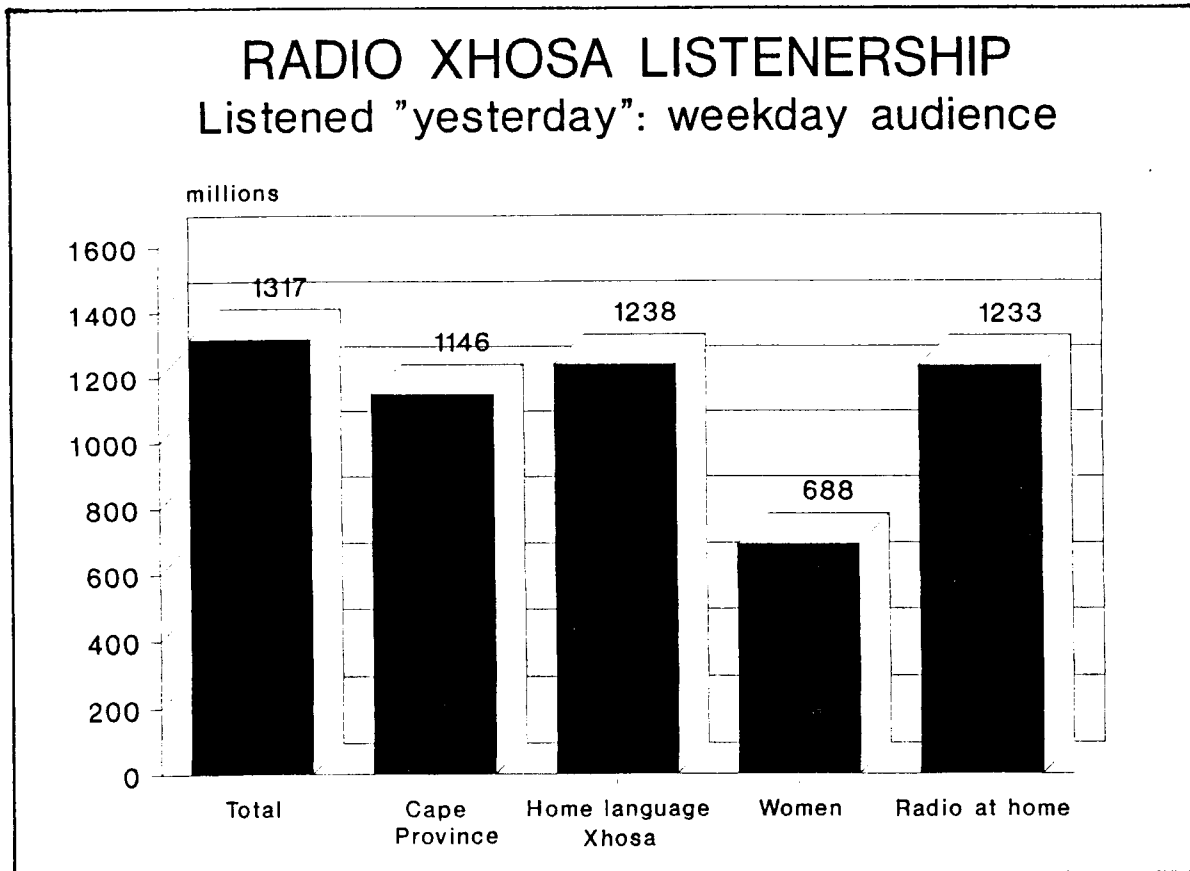
5. Potential Size of Our Audience

From data made available to me by Market Research Africa based on the All Media Survey, Radio Xhosa has an audience of 1.317 million listeners on any day of the working week. Of this number 1.146 million listeners are located in the Cape Province i.e. including the Ciskei and Transkei. Many listeners live in the rural areas and have difficult access to health services.

Other interesting statistics for our target audience are that:

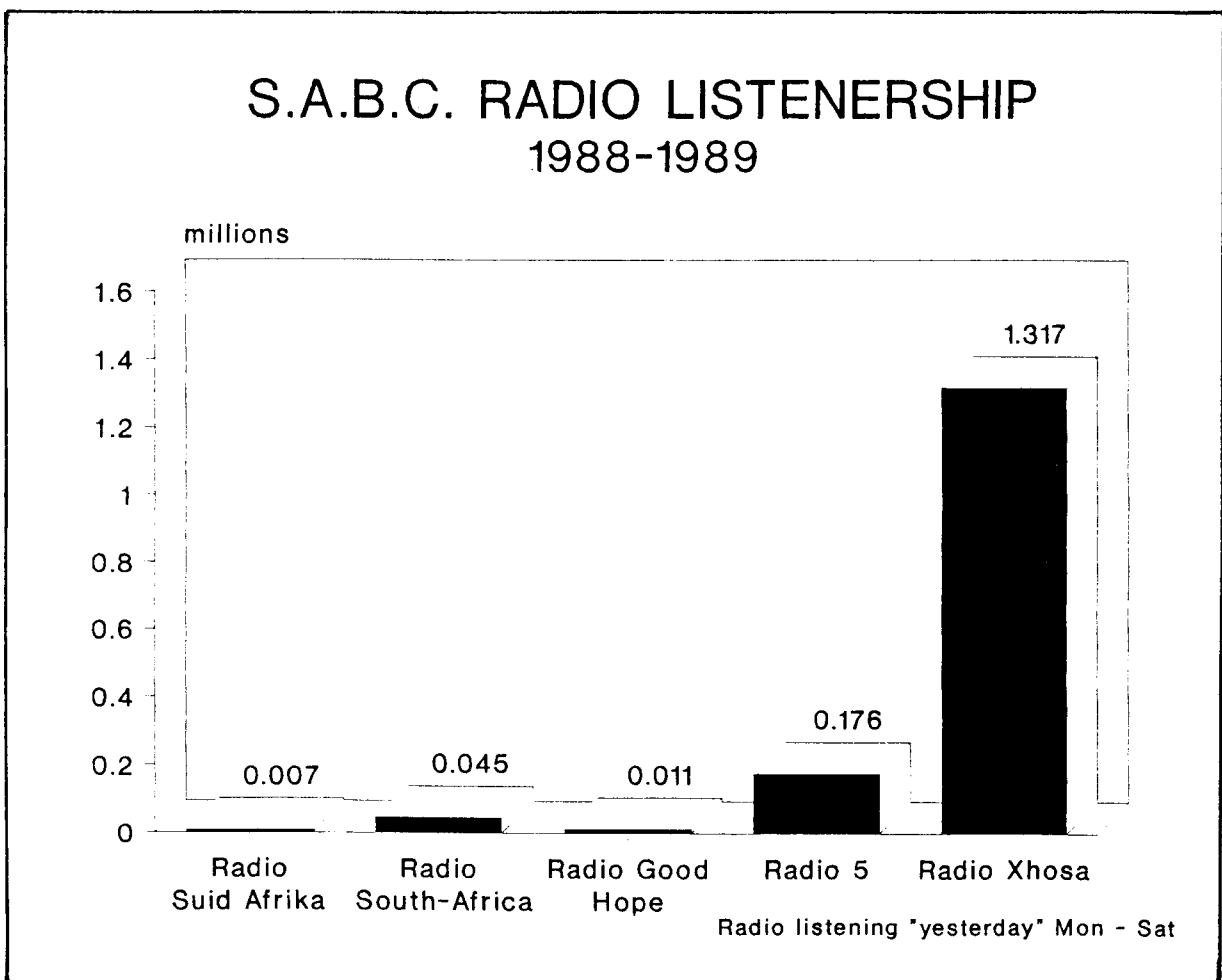
- * 582 000 listeners earn less than R400 per month.
- * 788 000 of the population fell between the ages of 16 - 34
- * 1.233 million listeners had transistor radios in their homes
- * 382 000 listeners came from communities of less than 500 persons
- * 687 000 women listened to Radio Xhosa on any weekday
- * 385 000 women had children, this figure excludes those women who may not have children but who are responsible for caring for others' children. eg. grandmothers.

GRAPH 1



While the data provided strictly speaking does not refer to our radio talks, it gives us useful insight into the listenership of the radio station, hence our potential listeners. As is evident from the graph the number of homes with radios is very high. From this data it is obvious that Radio Xhosa is reaching the mothers of the Xhosa population, the target population.

GRAPH 2



According to the graph Radio Xhosa listenership far exceeds any of other radio listenerships in the Western Cape.

6. Informal Evaluations of the Project

A few months after starting the programme we began receiving feedback from different areas. The feedback was verbally given and was received from the Western Cape, Transkei and Ciskei. Health workers (doctors, nurses, sisters, community health workers) would tell us about the programme and reported to us how mothers were listening to it. Many women approached Sister Jwambi to thank her for the programme and to encourage her to keep on the good work. Because of her extra-mural commitments, Sister Jwambi is often required to travel to the Transkei where she is in contact with religious women's groups. These have provided forums for constant feedback on the programme. The health talks are being listened to. People enjoy them and find them useful.

Sister Peteni and other sisters working for the local authorities in Gugulethu have done an informal survey of the programme while performing their duties in the Gugulethu. According to them, most of the mothers that work listen to the programme and many can recall the topics broadcast, remembering valuable information.

While performing her clinical duties In Ward A9 - the gastro unit - of Red Cross Children's Hospital, Sister

Jwambi enquired from mothers whether they listened to the programme and if they could recall the health topics. She also wanted to know whether they enjoyed the health talks. From these conversations she reported that more than half of the mothers spoken to listen to the programme and are able to recall the topics that were broadcast.

From this information the following conclusions can be drawn:

- * the target population is listening to the health programme
- * mothers do recall information from the talks
- * mothers find the health talks valuable
- * listeners of the programme want the programme and urge us to continue.

7. The Pilot Survey

Despite the positive feedback and the odds against us in evaluating the project, I increasingly felt the urgency to evaluate whether what we were doing was really effective. Responses that had been gathered so far had focussed on qualitative information using more qualitative methods like community observations, informal interviewing and group discussions. Although these methods are less formal and

less structured than surveys their benefits are that they produce more in depth knowledge of small groups of people, but they do not have to exclude quantitative assessment.^{55 56}

As Horacio Walker, Director of the Latin American Information and Documentation Network for Education so aptly states, " Without qualitative data the evaluation does not know what it is counting. Without quantitative data evaluation doesn't know the size of the change." ⁵⁷

In this spirit I embarked on a pilot survey using the experiences of the informal evaluations as the point of departure. I decided to formally interview mothers.

5.1 The Survey

Aim

To assess whether mothers listened to the radio programme and if they could recall information on specific topics broadcast.

Sample

The sample comprised of 20 Xhosa Speaking mothers attending one of the child municipal clinics in Hermanus.

Method

The following questions were used to guide focussed discussion within a face-to-face interview with individual mothers:

1. Have you listened to Sister Jwambi on Radio Xhosa talking about the health of mothers and babies?
2. If yes, how often do you listen?
3. Can you recall any of the things that she talked about recently?
4. If yes, what was the topic that was discussed?

Each interview was approximately 15 minutes long.

Results

The results of the interviews are as follows:

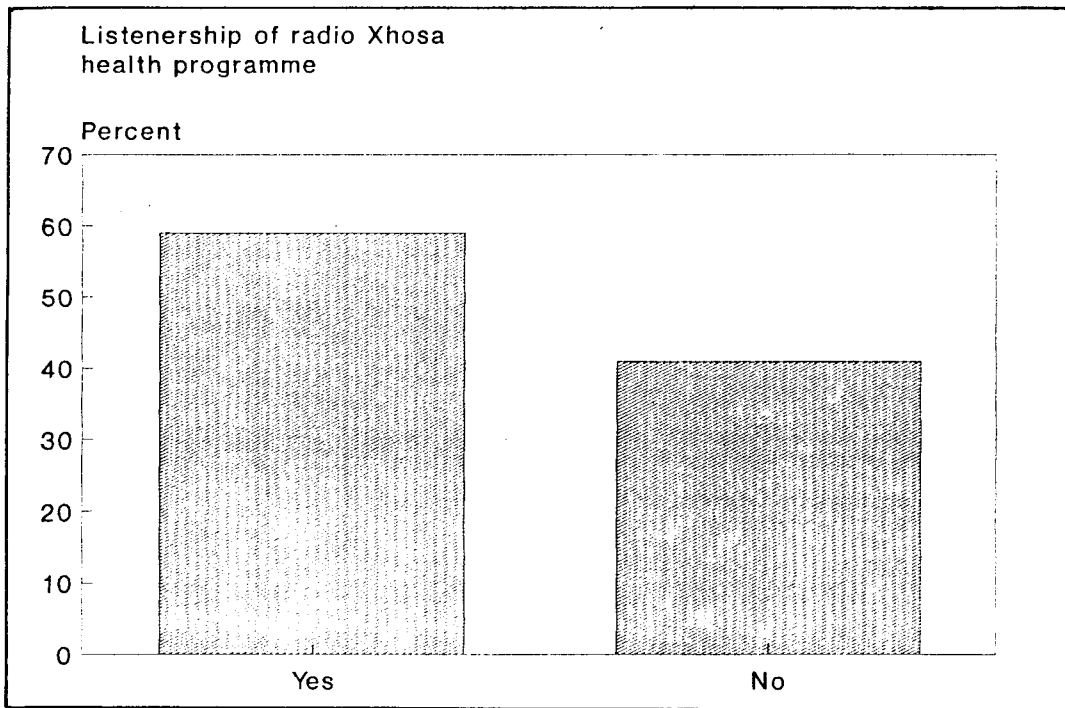
- * 12 (60%) mothers listened regularly to the programme and were able to recall the contents of the programmes including advice given
- * 2 (10%) mothers knew about the programme but couldn't recall any information
- * 6 (30%) mothers did not listen to the programme nor had they ever heard of it.

8. A Wider Survey

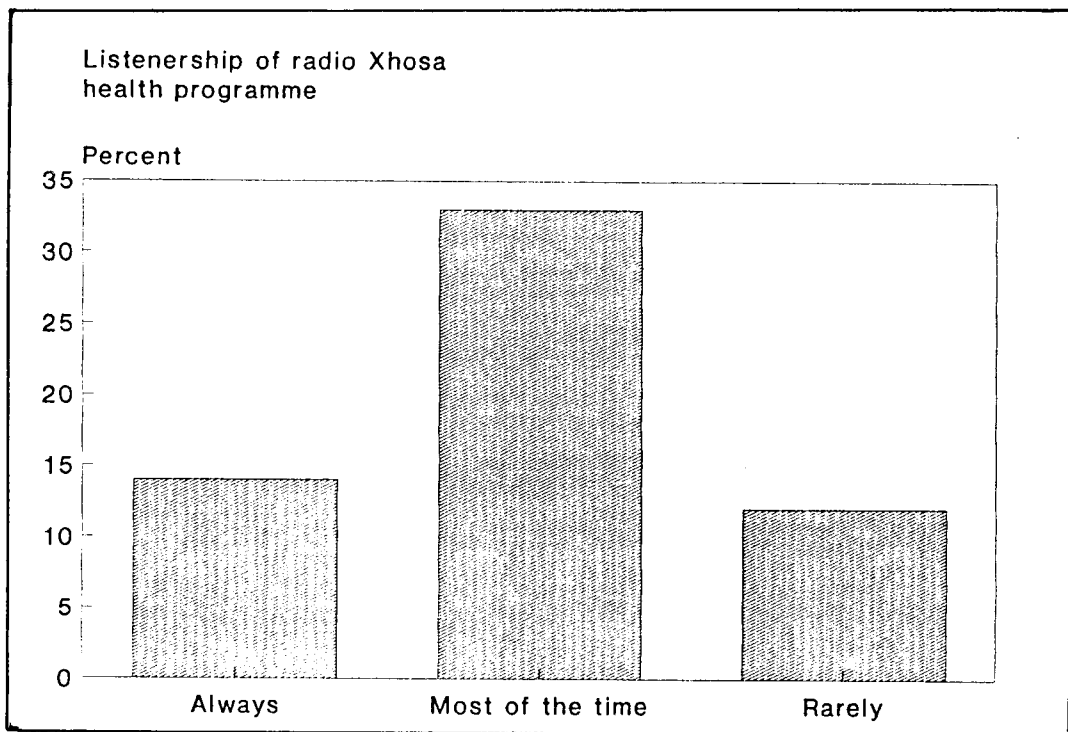
Using the same format and questions of the pilot study, a sample of 100 mothers from the Khayelitsha Maternal and Obstetric Unit were interviewed over a two week period. The aim of the survey was to assess how many mothers listened to the programme, how often they listened and whether listeners were able to recall one of the topics that was broadcast recently. The questionnaire was administered by two field workers to a random sample of those attending the antenatal clinic and mothers' returning to the unit for follow-up treatment with their newborn babies.

The results from these surveys are reflected in the following graphs:

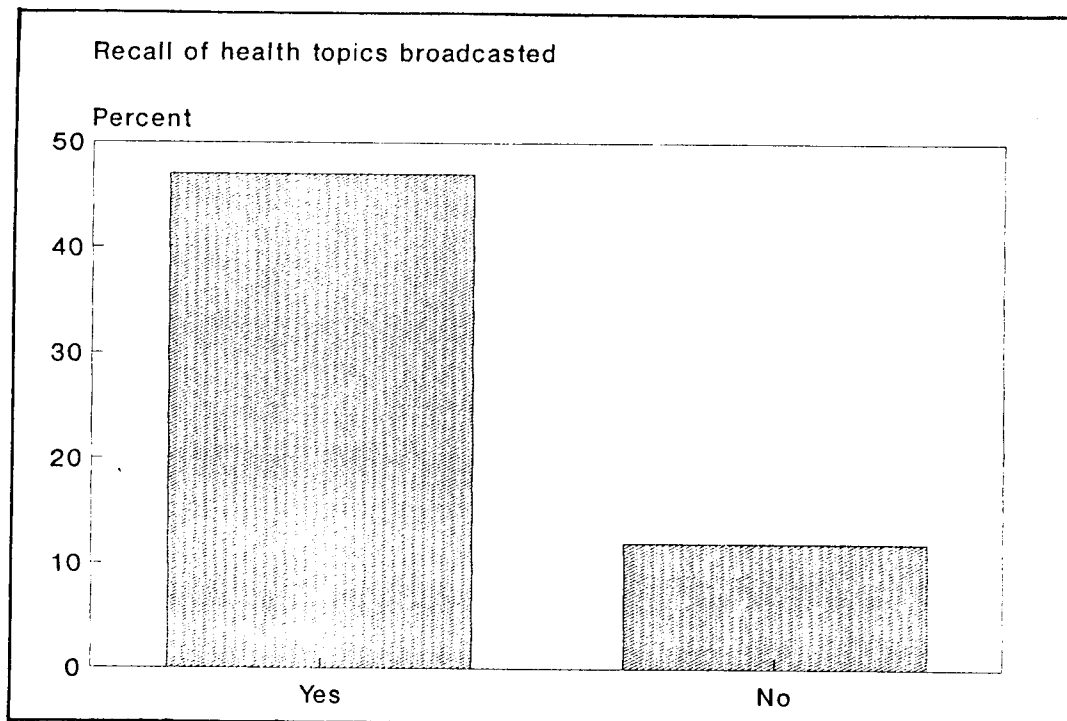
GRAPH 3



GRAPH 4



GRAPH 5



8.1 Discussion

It can be argued justifiably, that the sample size in relation to the target audience is too small to extrapolate to the target population. A sample of 100 was as much as we could manage within our constraints.

Despite this limitation it is interesting to note the considerable overlap between the pilot study findings and Sister Jwambi's informal assessments - all agree that the listenership is approximately 60% (See Graph 3). Of the mothers that listened as many as 79,6% reported that they listened frequently to the

programme. (i.e. a combination of "Always" and "Most of the time" on Graph 4) Of those who did not listen 21% explained that the programme clashed with their work schedules. 79.6% of the mothers who listened to the programme were able recall at least one topic that was recently discussed. In fact this group was able to recall a total of 32 topics. (See Appendix C for list of topics recalled)

In my view these findings begin to suggest a positive picture or impact. For instance, the high percentage of those listening frequently suggests that there is value in what they hear. This also concurs with the reportage not sought by field workers but voluntarily offered by mothers that they enjoyed listening to the talks and that they found them useful.

But it must be reiterated that the study did not set out to evaluate mothers' understanding of the health issues discussed nor did it attempt to evaluate gain in knowledge let alone attitude and behaviour changes. These are essential dimensions and will be evaluated in a future longitudinal study.

8.2 Conclusion

In the absence of funding for an extensive evaluation, the lack of access to live time is without a doubt the most important handicap for the project, especially

when wanting to inculcate the ethos of community radio. I deeply believe that if we had the possibilities of live time the benefits to the radio project would be much greater. For instance, the active participation of the audience in the programme would have placed us further on the road towards establishing community radio. Furthermore, the active participation of the audience would have made evaluation of the programme much easier and would have been excellent particularly for process evaluation during project implementation.

I decided to explore the idea of supplementing the talks with an audiotape programme which I will discuss in the next chapter.

9. Overall Assessment of my South African Experiences

To date I have been involved in the radio project for a period of two years and consider the experience as largely positive. But what has been done is not sufficient. There certainly is room for much more work especially with the real possibilities of an end to state monopoly of radio in South Africa close at hand. It would be wise for the public health sector to be ready for such an opportunity.

Despite my general satisfaction with what was achieved within such rigid constraints, the state's stranglehold over

public broadcasting did prove to be a serious threat. At times it was even difficult to keep our radio time. In this respect my experience is far from unique. At this point, it is easy and even opportune to blame state monopoly over public broadcasting apparatus. But in developing countries there are other lurking dangers which threaten utilization of the radio for health education even in situations of greater laissezfaire. These threats are clearly depicted in the following excerpt from Jack Ling's article "Public Health Broadcasts: Who pays?":

"Since broadcasting stations in developing countries are mostly government owned or run by public corporations it is generally assumed that there are more inclined to air programmes that have educational rather than commercial value. However, the economic basis of many broadcasting stations is changing fast, with serious implications for public health communication. A trend is becoming evident in which more and more public broadcasting corporations, like their commercial counterparts are demanding fees for their time. In an increasing number of countries, government radio and television stations no longer receive adequate government funding. They are now required to be self-supporting by generating an independent income. Consequently programmes directors are busy soliciting funds from institutions and corporations who often have commercial messages to convey. Through commercials, many stations are now engaged in selling services and products.

Furthermore, there may be no legal restraints on commercial advertising. Whereas broadcasting media in many parts of the western world are banned from advertising such products as cigarettes and liquor, there is no such ban in many developing countries and stations cannot resist the income from advertising these products. More important, the practice of charging a fee for air time has put the health sector at a very severe disadvantage."⁵⁸

It is very difficult to draw simple conclusions from such a complex situation. But from my experience and the above statement, it seems that there are some important lessons to be learnt to safeguard the work of the public health worker in general and particularly those in public broadcasting:

1. It is crucial that radio health projects be located within some policy framework - at the very least within the broadcasting corporation.
2. As health problems are deeply embedded in the social and economic context of society, governments would have to be tackled to lobby for the introduction of national policies within which specific projects can be located and mounted. For instance, the issue of primary health care requires greater lobbying in South Africa for the development of strong national primary health care policies. It is within this policy

framework that maternal and child health radio programmes should be mounted. Moreover, the time to lobby for these in South Africa is now so that they are placed timeously on the health planning agenda of the government's health sector during this time of transition.

3. Safeguarding the health of the population should be part of any national development strategy. Money for economical health education strategies such as the radio is worthy of state funding.

Finally, if we are to optimally utilize the lessons of other countries and the opportunities of this transition period in South Africa, then it is important that the health sector moves quickly. Access to the mass media should not be allowed to become the exclusive tool of those with money and resources at the expense of the health education sector.

CHAPTER FIVE

AUDIOTAPES AND HEALTH EDUCATION

1. Background to the Audiotape Project

Because of the constraints of using radio as a medium for health education in the present circumstances in South Africa, I decided to explore the possibilities of using a comparable medium, **audiotapes**, for disseminating community health messages. As experience had already shown us, evaluating the impact of radio was no easy task. My move in this direction lay in my belief that when the two media are put to the same use, (i.e. prerecorded health education programme for radio broadcast and prerecorded audiotapes for health education), the similarities and common parallels between them facilitate the evaluation of the impact of the radio programme, through the evaluation of the impact of audiotaped health messages. Besides the benefits for evaluation, the introduction of audiotapes brings many advantages which augment the objectives of the radio project. For my purposes the most important benefits are the following:

1. Using audiotapes makes it possible to have a well defined and manageable audience, which in turn eases the choice of a well defined and accessible sample. For my purposes, an accessible sample would greatly facilitate evaluating the project, assessing gains in

knowledge, changes in attitudes and acceptance of the medium.

2. Using audiotapes makes it possible to work in a much more participatory way with the community. Any community organization or fieldworker can become involved with radio or audiotape production. But with audiotapes, one can record in the field. Recording in the field is an effective strategy which gives a localized and personal flavour to a programme making it immediately more relevant to its listeners. Issues from within their very own communities can become the focus points around which the programmes can be built. In this way programmes can be representative of current issues in communities - this also enhancing its significance to community listeners. These are advantages that are not so open to radio given the tight control of the state. Moreover, community involvement in the processes of tape production familiarizes community members with the medium of audiotapes and the skills needed.

3. It is a step to empower the community for the development of community radio for when such opportunities become available in the new South Africa and a change in broadcasting policies.

In short, because of its value in the evaluation of the radio project and due to its potential to strengthen the programme in precisely those areas in which we were compromised, we decided to embark on the audiotape project to augment our efforts.

2. The Audiotape Project

2.1 The Target Population

We decided to launch the programme by targeting it at the mothers of the Xhosa speaking communities located at health centres, schools, creches, women's groups, religious groups. We were aware of how mothers spent hours waiting to be attended because health centres are understaffed and overworked. We began by exposing the waiting mothers at health centres to our health cassettes. We felt that the use of the audiotapes would help us capture the attention and relieve this audience from the boredom of empty hours of waiting.

2.2 Type of Audiotape

We did not want to produce a taped lecture on health education. We believed that to capture the attention of the mothers we needed a cassette that was lively, informative and entertaining. We achieved this by incorporating popular music, health songs and humour with clear and simple messages. The health messages were conveyed in the form of dialogues between

different characters. The dialogues would relate to particular and real situations which addressed each of the health topics. We wanted mothers to enjoy and look forward to listening to these tapes.

2.3 Aims of the Project

- To facilitate the evaluation of the Radio Xhosa health programme, through the evaluation of the audiotape project.
- To utilize this unique opportunity for health education of mothers. (waiting mothers, admitted mothers)
- To produce audiotapes programmes for education in the area of maternal and child health directed at the community.
- To involve the community in compiling and producing the audiotapes.
- To get one step closer to the development of community based radio in South Africa.

2.4 Producing the Audiotapes

2.4.1 Compiling and Developing Material for the Contents of the Audiotapes

Planning the first audiotape was exciting and hard work. It took approximately three months to have all the material ready for the production phase of the project. This proved an important learning experience

for all involved (Sr. Jwambi, Ms. Bongiwe Jwambi, Sr. Peteni and myself), our previous experience of the radio programme was of great help for this phase.

2.4.2 Selecting Health Topics

I decided on five health topics for the first audiotape. Since we were to be at the Khayelitsha Maternal and Obstetric Unit, the topics we selected represented some of the most common neonatal problems. They were:

- Care of the Cord
- Breastfeeding
- The Yellow Baby (i.e. Neonatal Jaundice)
- Nappy Rash
- Sticky Eyes

These topics had already been workshopped and had been broadcast on the radio. For this reason we were clear about the specific messages we wanted to get across. What we still needed was to find the most effective way of doing so not for radio now but for cassette.

2.4.3 Compiling the Health Songs

It was important to the project to find people who use or who would use song as part of their health education method. It was also important for us to

find songs that had a life in the community, songs that were already in use. We found both of these in a group of thirteen community health workers employed by the Regional Services Council working in the Green Point area of Khayelitsha. We made field recordings of their songs.

2.4.4 Using Popular Music

We decided to use local popular music that mothers could recognize, music with which they were familiar and at ease with. The music was to help capture their attention.

2.4.5 Getting the Message Across: From Rehearsals to Creative Workshops

I wrote the scripts for the dialogues and had a text for rehearsals. The finished scripts were then translated into Xhosa by Sr. Jwambi. At this stage we were ready for rehearsals.

But after a few rehearsal sessions we found that we were still not satisfied with the results. The dialogues seemed unnatural and the conversation did not flow. It did not seem to be a real conversation between real people. The characters were stilted and constrained by the text. Even though we modified the dialogue several times, things did not improve.

I decided to change the approach and abandon the written scripts retaining only key words as a reminder of the important issues and messages I wanted to get across. We decided to workshop the dialogues instead. I described the situation and the role that each of the characters should play. I would provide a few details about each character such as the age, personal background, where she/he lived, how he/she was feeling. This would provide each participant with a feel for the character and allow them to "get into the character". Then they would role play the situation, feeling free to express their feelings and to communicate with each other. The key words were effective reminders of the crucial points we had to put across.

The results of this innovation were excellent. The dialogues began to flow, and became lively and humorous while remaining simple and clear. We now were happy with the end result.

2.4.6 Producing the Audiotape

The next step was the production of the audiotape. We needed to find people with the technical skills and equipment to help us produce and edit the tape. We found the right organization in CASET Project. CASET is a non-government organization working towards the implementation of community based radio in South

Africa. One of the objectives of the organization is to train people in the skills needed for the production of audiotapes and radio.

CASET assisted us with the field recordings of the health songs in Khayelitsha, and we taped and edited the audio cassettes in their Woodstock studio. The production process proved another tremendously important experience to go through.

Each of the health 'plays' was approximately four minutes long, and was preceded and followed by songs on health and by popular songs. Together they constitute a unit. The audiotape comprises of five units, each about thirteen minutes long and each separate from the next. However, in listening to the tape only one unit at a time would be dealt with. This was our first audiotape and we were satisfied with the end product.

2.5 Piloting the Audiotape

Before producing more cassettes I wanted to assess the acceptability of the medium to the target audience, and to measure knowledge gained amongst its listeners. We decided to run a pilot study amongst the mothers of at Khayelitsha Midwife and Obstetric Unit (MOU) using an experimental - control group research design. The study was carried out in two stages:

Stage One - Working with the Control Group

Stage Two - Working with the Experimental Group

2.5.1 The Sample

For the purposes of this study, all women attending the Khayelitha MOU were considered to constitute a homogenous group which met the criteria of the target audience:

- they were all women,
- they were all Xhosa speaking,
- being an antenatal clinic, they were all pregnant women,
- they all came from the same neighbourhood, Khayelitsha and
- they all had about two hours to kill before being seen by the MOU staff.

In fact, this would be the case on any day of the week at the MOU.

The **Control Group** was developed by randomly selecting every third mother in the waiting room on two days of the same week: Tuesday and Thursday. (The waiting room is arranged in rows of chairs for mothers to await their turn to be attended to) The sample size

was forty. This represents 17.85% of the mothers attending the antenatal clinic on both those days.

Two weeks later, the **Experimental Group** was developed in the exactly the same way using the same weekdays and the same venue etc. The sample size remained constant, forty - i.e. 18.86% of the mothers attending the antenatal clinic on both those days. Mothers who had been part of the control group were to be screened out of the experimental group. As it turned out, there were no such cases. The assumption in the sampling was that given the homogeneity of the Khayelitsha MOU users, the time lag between the two separate samples would not constitute cause for bias. The two samples were equal and the findings of the one could be generalized to the other.

2.5.2 Method

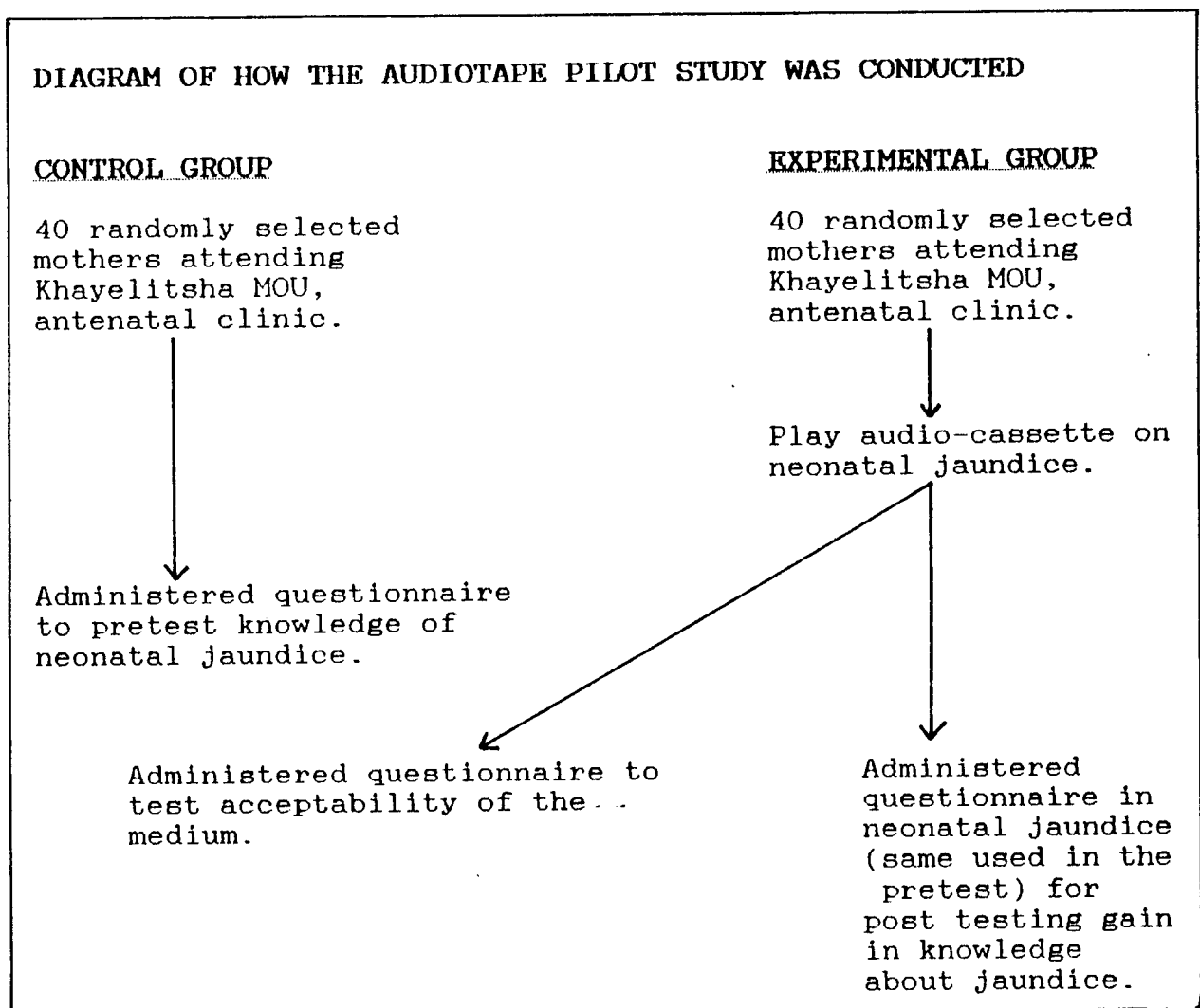
To measure acceptability of the audiotape as a medium of education we used the personal interviews. The basic idea was to first assess the control group's knowledge of neonatal jaundice, then to assess the experimental group's knowledge of the same disease after they had been exposed to the cassette on neonatal jaundice. With the experimental group, we also assessed how acceptable and how effective the audiotape as a medium of education was.

An interview schedule consisting of ten questions to assess knowledge on neo-natal jaundice was administered to both samples by the same interviewers, Sr. Jwambi and Ms. Bongiwe Jwambi to . (See Appendix D) It had been developed in consultation with the Medical and Research Council and the Social Anthropology Department of UCT, and had been test run on the mothers at the Hermanus Municipal baby clinic and the Red Cross Children's Hospital.

For the experimental group, eleven questions were added to the schedule to assess acceptability of the tape after the subjects were given the opportunity to listen to the cassette on the neo-natal jaundice. Both schedules comprised of largely closed ended questions. For both groups, twenty mothers at a time were interviewed on the Tuesday morning, and the remaining twenty on the Thursday. In all interviews, the interviewers were required to explain the purpose of the interview. Each interview lasted ten minutes in the control group and 15 minutes in the experimental group.

The format in the experimental situation differed in the following way: Before mothers arrived, the tape deck and speakers were (unobtrusively) positioned in the waiting room. The mothers arrived and their behaviour was observed by the interviewers team.

(Mothers were unaware that they were to be played a cassette and also unaware of the audiotape project) The tape was played. While listening, mothers' behaviour was once again observed by the interviewers and myself. A sample of listeners was selected using the method described above after the tape was played.



The unit that was played comprised of a dialogue between three characters who were discussing neonatal jaundice - mother, daughter and neighbour. The tape, which constituted a single unit, also included popular music and health songs at the beginning and end.

2.5.3 Results and Discussion

2.5.3.1 Knowledge of Neonatal Jaundice

TABLE 1

CONTROL AND EXPERIMENTAL GROUPS RESPONSE TO THE QUESTIONNAIRE ON NEONATAL JAUNDICE

	Control Group	Experimental Group
	%	%
1. Understood cause of jaundice	2,5	75,0
2. Jaundice is a dangerous disease	90,0	87,5
3. Understood consequences of neonatal jaundice	47,5	92,5
4. Would take jaundiced baby to clinic	97,5	100,0
5. Know how to identify jaundiced baby	62,5	97,5
6. Know how jaundiced baby will be treated at clinic	12,5	87,5
7. Mother can stay with hospitalized baby	27,5	90,0
8. Can breastfeed jaundiced baby	22,5	92,5

TABLE 2

AREAS OF GREATEST KNOWLEDGE GROWTH IN THE EXPERIMENTAL GROUP

	%
1. Know how jaundiced baby will be treated at clinic	75,0
2. Understood causes of jaundice	72,5
3. Can breastfeed jaundiced baby	70,0
4. Mother can stay with hospitalized baby	67,5
5. Understood consequences of neonatal jaundice	45,0
6. Know how to identify jaundiced baby	35,0
7. Jaundice is a dangerous disease	2,5
8. Would take jaundiced baby to the clinic	2,5

From the above tables, it is obvious that there is a marked difference in the responses of the experimental group after listening to the audiotape.

The areas in which greatest growth in knowledge occurred relate to greater understanding of the treatment that babies receive and etiology of the disease. 75% more subjects in the experimental group were able to correctly explain how jaundiced babies were treated as compared to 12,5% correct response

rate of the control group. With regard to understanding the etiology of the disease there was an impressive 72,5% increase in the rate of understanding as compared to the pitiful 2,5% of the control group.

However, when we consider these two sets of statistics in relation to the control group's correct and great awareness (90%) of the dangers of neonatal jaundice, and the need to take their jaundiced babies to the clinic (97,5%), then a particular picture comes to light.

Judging by the control group's responses, it appears that while mothers will take their babies to clinic or hospital, once they arrive there all responsibility seems to be handed over. Hence, women who are perceptive enough to recognise the disease (62,5%) and act, would remain ignorant of the etiology (97,5%), treatment ((87,5%) and role they can play in helping baby recover once hospitalised. For instance, 77,5% did not know they could breastfeed their baby and 72,5% did not know they could stay with their babies while in hospital.

These findings are in keeping with the current health system's tendency to encourage dependency on hospitals and failure to educate mothers about what they can do when their babies are ill. In this sense, the medical

paradigm continues to remain inaccessible and to be a mystery to its users.

It is evident then that there is a dramatic gain in knowledge of neonatal jaundice after exposure to the tape. Listening to the tape did make a difference.

2.5.3.2 Acceptability of the Audiotape

The following are the experimental group's responses to the questions measuring acceptability of the cassette.

(For questionnaire see Appendix E)

TABLE 3

EXPERIMENTAL GROUP'S RESPONSES TO ACCEPTABILITY OF THE CASSETTE

	Frequency	%
1. Listened attentively to cassette	40	100,0
2. Enjoyed cassette very much	40	100,0
3. Learned something new	40	100,0
4. Would like to listen to more such cassettes	40	100,0
5. Liked the health dialogues most	21	52,5
6. Liked the health songs most	6	15,0
7. Liked everything equally	13	32,5
8. Disliked nothing about the cassette	36	90,0
9. Disliked the popular music	4	10,0

It is interesting to note that from the randomly constituted sample of all those present, 100% of the sample listened attentively to the cassette once it was turned on. In fact observers report that while the mothers prior to that were engaged in private conversations, once the tape began to play all

conversations ceased and their body posture changed. They listened attentively and tapped their feet to the rhythm of the music. They were obviously enjoying it. (100% reported that they enjoyed it very much) During the taped dialogue, the women were silent and all attention was directed at the cassette that was playing.

When asked what did they specifically like about the tape, 52,5% reported that they liked the dialogue itself most, while 32,5% indicated that they liked everything about it. 100% of the sample indicated that they wanted more such cassettes. The participants felt that the messages were clear, gave them sound advice and taught them things they had not known. 60% felt that they would change nothing at all about the cassette, 25% wanted more dialogue while the rest made very minor comments. When asked what health problems they would like covered they suggested a list of 19 different topics. (See Apendix F)

2.5.4 Concluding Comments

This small study shows that the audio cassette as a tool for health education is effective, and even more, enjoyed and accepted.

The audiotape project is still in its inception. I believe that as an educational tool it offers much

potential, and that this potential is multiplied when used in conjunction with other media, as part of a multi-media health campaign around specific issues.

The pilot study suggests that there is a definite place for this medium in the community to communicate health messages, but its real value has been largely for evaluation purposes. The production of the cassette has been on target - it has met the criteria of being informative, entertaining and engaging. The responses from the sample were simply a vote of confidence to continue in the same vein.

However, at this point the study is far from conclusive for assessing long term gains. The real test lies in retention of knowledge and in change of behaviour. For this a wider study as well as broader programme would be needed. The latter has never been an immediate objective of the programme but a desired long term end result that should be worked towards from a variety of vantage points.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

At the beginning of this work, I posed a question to myself and to you, the reader:

Why does a medical doctor decide to write about the use of radio in Primary Health Care?

I hope that this question has now been answered for you as it is for me. It is evident, from what has been said before, that there are clear advantages to using radio and audiotapes as tools in non-formal education for Primary Health Care.

At the risk of being repetitive, I wish to end this work by reiterating the critical points already discussed at length in the previous five chapters, and make a few recommendations for the future use of radio and audio-tapes in Primary Health Care.

They are that:

- * Radio can reach an enormous number of people and is excellent for reaching isolated and deprived communities, making it a suitable mass communication tool for Primary Health Care.
- * Because radio and audio-tapes are relatively simple mediums to use for the production of programmes, it is possible to train community members in these specific production skills, and in this way facilitate direct community participation in all stages of the media project.

- * When used properly, radio and audio-tapes can facilitate knowledge gain in the target audience.
- * Radio can change attitudes and behaviour related to health issues.
- * It is an effective medium for informing communities or individuals about health facilities.
- * Radio and audio-tapes can be cost effective tools for Primary Health Care.
- * Radio, especially community based community radio, can empower communities when it is used as tool for the expression of community needs and priorities.

Having made these points, it must be emphasized that radio is not the panacea for all ills. Radio or any other media cannot be effective on their own. Radio as a strategy for non-formal education cannot operate in a vacuum of institutional support.

Unless there are other agencies functioning in the area to help change take place, no radio strategy can succeed. The role of the media is simply to accelerate the path of social change, rather than begin the process. Therefore, when looking at radio projects and their influence on local change, it is essential to look at the context in which projects operate.

The more I work and research in this area, the more aware I become that communication has a critical role to play in the organization and delivery of Primary Health Care Services. This communication should not flow one-way only. It should include everybody concerned with the health and welfare of the community,

especially its own members. This becomes a key issue in a country like South Africa where for many years the majority of the population has been excluded from decision making on their own fate.

I would like to end this thesis with a number of recommendations, that could be useful for those who like me, believe that health and media should forge a partnership.

- Media based projects should define clearly their aims and objectives, and how they plan to achieve them.
- Feasibility studies should always be undertaken before starting a media project, so that it is possible to identify what medium is the best suited to fulfill the aims and objectives of the project.
- More emphasis should be put on the format and contents of the programmes, taking into account the cultural background, needs and priorities of the target audience.
- Radio projects should invest more time, money and effort in the training of field workers since they are often the key elements in the process of learning and social change.
- Better efforts to determine the costs of media projects should be undertaken. This data is essential for deciding the costs effectiveness and viability of the projects.
- Evaluation should be built into the project from its beginning, and in all its stages, so that the project

can change and adapt accordingly to meet its objectives and the needs it has set out to address.

- Media should be included in the organization of any primary health care service. It should be part of a comprehensive and organized health policy to reach the different sectors of the community. But, if there is general apathy from the government and nothing is done to develop rural and deprived urban and peri-urban areas, radio, however well planned and financed cannot change the situation in these areas.
- Health services should encourage and facilitate the training of health workers in the communication skills that are needed for the use of mass media strategies.
- Health authorities should be more concerned about the potential of the broadcasting media and should secure more broadcasting time.
- Research in the long term retention of knowledge, attitude and behaviour change induced by radio and audio-tapes should be followed-up through longitudinal studies.
- Child to Child health education through interactive radio and cassettes - a relatively new development with much promise - should be researched for possible implementation.⁵⁹
- Close links between the social and health sciences should be encouraged.

- Public communication skills should be an important part of the nursing and medical undergraduate curricula in our Faculties.
- Finally, and for me the most important, media projects should evoke as much local participation as possible. In the case of radio and audio-cassettes, we must move towards Community Based Radio or Participatory Radio, so that the media are produced and owned by the people that they simultaneously serve, in this way ensuring that their culture, needs and priorities are respected and met.

At the time of doing this work, exciting new initiatives relating to the future of radio broadcasting are occurring in South Africa. At this point the law still prohibits anyone outside the SABC, from radio broadcasting in the country. Some independent radio stations have been set up in the so called "Homelands", (Radio Bop, Radio 702, Capital Radio), but they are only able to broadcast on medium wave which limits their range, so that listenership is severely limited.

The SABC contends that it is changing to adapt to the "New South Africa". However, considering the track record of the broadcasting corporation it will be interesting to see to what degree of changes can take place to create the space for a democratic and free broadcasting system. Talks and negotiations are beginning to take place between the SABC and several organizations for cooperation in developing programmes.

There is a clear movement in the Western Cape towards establishing community based radio where several organizations involved in community development are collaborating to this end. At this point all we can do is lobby, pressure and push for change in the hope that licenses become available, while community development organizations prepare themselves for community based radio. In the meantime organizations working towards community development must take an active role in the negotiations and be prepared to step in when this changes occur.

REFERENCES

1. Declaration of Alma Ata. *British Medical Journal*, 1983; 286: 197.
2. Crisell, A. *Understanding Radio*. Methuen, London 1986.
3. Sweeney, W and Parlato, M. *Using Radio for Primary Health Care*. Primary Health Care Issues, Series 1, No.1. American Public Health Association. *International Health Programs*, Washington D.C., September 1982.
4. Ingle, H. *Communication Media and Technology: A Look at Their Role in Non-Formal Education Programs*. Information Bulletin No.5. Academy for Educational Development, Clearinghouse on Development Communication, Washington D.C., August 1974.
5. Schramm, W. *Big Media, Little Media: Tools and Technologies for Instruction*. Sage Publications, London 1977.
6. Ling, J. *Media and Health Must Forge a Partnership*. *HYGIE*, 1986/1; V: 25.
7. Ling, J. *Health and Media: A Partnership*. *HYGIE*, 1985/4; IV.
8. Paulu, B. *Television and Radio in the United Kingdom*. Macmillan, London 1981.
9. Jamison, D and McAnany, E. *Radio for Education and Development*. Sage Publications, London 1978.
10. Hall, B. *Mtu Ni Afya: Tanzania's Health Campaign*. Information Bulletin No.9. Academy for Educational Development, Clearinghouse on Development Communication, Washington D.C., June 1978, p.1.
11. Leslie, J. *The Use of Mass Media in Health Education Campaigns*. Educational Broadcasting International, September 1978.
12. Hendricks, M. *A Radio Script for Health*. IDRC Reports, July 1989, pp. 16-17.
13. Mason, D and Azhar, R. *Marketing a New Kind of Salt in Pakistan*. UNICEF News, Issue 114, 1982.

14. Hein, K. Community Radio Thriving in Ecuador. Development Communication Report, No.40, Clearinghouse on Development Communication, Washington D.C., December 1982.
15. A.E.D. (Academy for Educational Development). Health Education Radio Dramas, Sri Lanka. Project Profiles. Clearinghouse on Development Communication, Washington D.C., April 1980.
16. Meyer, A; Block, C; Ferguson, D. Teaching Mothers Oral Rehydration. Horizons, April 1983.
17. Hirschorm, N. Reaching Mothers, Saving Lives: A Communication ORT Campaign in Egypt. Development Communication Report, No.51, Clearinghouse on Development Communication, Washington D.C., Fall 1985.
18. Restrepo, S. A Multi Media Strategy for a Breastfeeding Campaign in Colombia. Educational Broadcasting International, March 1981, pp. 30-4.
19. Parlato, R. Planning for Nutrition: The Application of Mass Media and Extension to Social Action Programmes. Care India, 1973.
20. Uvais, A. Hill Tribe Radio Station. Educational Broadcasting International, June 1981.
21. Duran, J. Radio Onda Azul. Development Communication Report, No.48, Clearinghouse on Development Communication, Washington D.C., Winter 1985.
22. Hein, K. Community Radio Thriving in Ecuador: Otavalo Indians Running Their Own Show. Development Communication Report, No.40, Clearinghouse on Development Communication, Washington D.C., December 1982.
23. Hall, B and Zikambona, C. Mtu Ni Afya: An Evaluation. Institute of Adult Education, No.12. Dar es Salaam 1974.
24. A.E.D. (Academy for Educational Development). Project for Equality of Access to Education for Women and Young Girls: Upper Volta. Project Profile. Clearinghouse on Development Communication, Washington D.C., Autumn 1984.
25. A.E.D. (Academy for Educational Development). Radio Mam: Let's Guard Our Health. Project Profile. Clearinghouse on Development Communication, Washington D.C., December 1983.

26. Kwame Boafo, S. Wonsum, A Rural Communication Project in Ghana. Development Communication Report, No. 47. Clearinghouse on Development Communication, Washington D.C., Autumn 1984.
27. A Comparison of Mass Media Techniques and Direct Method for Nutrition Education in Rural Mexico. Journal of Nutrition Education, Vol.2, No.3, July-September 1979.
28. Leslie, J. Evaluation of Mass Media for Health and Nutrition Education: A Review of the Literature. A paper prepared for presentation at the joint meeting of the World Federation of Public Health Associations and the Canadian Public Health Association, Halifax, Nova Scotia, May 23-6 1978.
29. Magongo, B and Freimuth, V. Radio Boosts Immunization Campaign in Swaziland. Development Communication Report, No.58. Clearinghouse on Development Communication, Washington D.C., Fall 1985.
30. A.E.D (Academy of Educational Development). Aprofam Family Planning Program - Guatemala. Project Profiles. Clearinghouse on Development Communication, Washington D.C., September 1979.
31. Karunanayake, N. Mahaweli Community Radio. Development Communication Report, No.53. Clearinghouse on Development Communication, Washington D.C., 1987/1.
32. Schramm, W. Communication in Family Planning. Reports on Population/Family Planning, No.7, April 1971.
33. Kweekeh, F. Liberia's Radio Campaign for Oral Rehydration Therapy. Development Communication Report, No.54. Clearinghouse on Development Communication, Washington D.C., 1987/1.
34. Coleman, P. Music Carries a Message to Youths. Development Communication Report, No.53. Clearinghouse on Development Communication, Washington D.C., Spring 1986.
35. McAnany, E. Radio's Role in Development: Five Strategies for Use. Information Bulletin, No.4. Academy for Educational Development, Clearinghouse on Development Communication, Washington D.C., September 1976.
36. Meyer, B; Block, C; Ferguson, D. Teaching Mothers Oral Rehydration. Horizons, April 1983.

37. Cooke, T and Rombweber, S. Radio Nutrition Education Using the Advertising Technique to Reach Rural Families: Philippines and Nicaragua, Final Report. Manoff International, Washington D.C., December 1977.
38. Bailey, G. An Evaluative Look at a Family Planning Radio Campaign in Latin America. Studies in Family Planning, Vol.4, No.10, October 1973.
39. A.E.D. (Academy for Educational Development). Audio Cassette Listening Forums - Tanzania. Project Profiles. Clearinghouse on Development Communication, Washington D.C., September 1979.
40. A.E.D. (Academy for Educational Development). Integrated Rural Project in Education, Health and Family Planning. Project Profiles. Clearinghouse on Development Communication, Washington D.C., December 1983.
41. A.E.D. (Academy for Educational Development). The Pila Project, Guatemala. Project Profiles. Clearinghouse on Development Communication, Washington D.C., December 1983.
42. Oxeng, J. Programming by the People: An Ecuadorian Radio Experience. Education Broadcasting International, Vol.10, No.1, March 1977.
43. Amt, W. Audiotheques Rurales in Mali. Development Communication Report, No.58. Clearinghouse on Development Communication, Washington D.C., 1987/3.
44. Spain, P. The Financing of Media Projects for Development. Educational Broadcasting International, December 1978, pp.179-84.
45. Jamison, D and Klees, S. The Cost of Instructional Radio and Television for Developing Countries. Institute for Communication Research, Stanford, California, March 1973.
46. Ebrahim, E. Paediatric Practice in Developing Countries. Macmillan, London 1981.
47. Illich, I. Limits to Medicine. Medical Nemesis: The Expropriation of Health. Penguin, Harmondsworth 1976.
48. Harrison, D. An Overview of Children's Health in the Western Cape (unpublished paper). Child Health Unit, University of Cape Town, August 1991.

49. Haslam, C. Health Education by Television and Radio: A Conference Report. Educational Broadcasting International, March 1981, p.24.
50. Rip, M; Woods, D; Keen, C; Van Coeverden de Groot, H. Perinatal Health in the Peri-urban Township of Khayelitsha, Cape Town. South African Medical Journal, 1988; 74: 633-4.
51. Yach, D. Infant Mortality Rates in Urban Areas of South Africa: 1981-1985. South African Medical Journal, 1988; 73: 232-4.
52. South African Research Foundation. All Media Products Survey. Sandton, 1989.
53. Cooper, D; Pick, W; Hoffman, M; Sayed, A; Klopper, J. Urbanization and Women's Health in Khayelitsha. South African Medical Journal, 1991; 79: 423-7.
54. Yach, D. The Impact of Political Violence on Health and Health Services in Cape Town, 1986. Medical Research Council, Cape Town, 1987.
55. Scirmshaw, S and Hurtado, H. RAP: Rapid Assessment Procedures for Nutrition and Primary Health Care. Anthropological Approaches to Improving Program Effectiveness. University of California Los Angeles. Latin American Center Publications, Los Angeles, Vol.11, 1987.
56. Hursh-Cesar, G. Eight Ways to Make Communication Evaluation More Useful. Development Communication Report, No.72. Clearinghouse in Development Communication, Washington D.C., 1991/1.
57. Walker, H. Who Interprets? Who Decides? Participatory Evaluation in Chile. Development Communication Report, No.72. Clearinghouse on Development Communication, Washington D.C., 1991/1.
58. Ling, J. Public Media Broadcasts: Who Pays? Development Communication Report, No.71. Clearinghouse on Development Communication, Washington D.C., 1990/4.
59. McNulty, J. Using Interactive Radio to Teach Health Education in Bolivia. Radio Learning, Report of the Radio Learning Project, No.3. Agency for International Development, Washington D.C., March 1990.

APPENDIX A

PRIMARY HEALTH CARE RADIO AND AUDIOTAPE PROJECTS REVIEWED

<u>Name of Project</u>	<u>Country</u>
1. Breastfeeding Campaign	Colombia
2. Family Planning Radio Campaign	Colombia
3. Radio Health Project	Bolivia
4. Radio Campaign for ORT and Immunization	Liberia
5. Mahaweli Community Radio	Sri Lanka
6. 'Audiotheques Rurales'	Mali
7. Radio Immunization Campaign	Swaziland
8. Radio Nutrition Education	Phillipines
9. Radio Nutrition Education	Nicaragua
10. Radio Nutrition Education	Tunisia
11. Radio to Support Family Planning Programme in Hyderabad	West Pakistan
12. Hill Tribe Radio Station	Thailand
13. Hatemalo, a Radio Programme for Children	Nepal
14. A Radio Script for Health	Indonesia
15. Wonsum, a Rural Communication Project	Ghana
16. Radio Onda Azul	Peru
17. Marketing Iodized Salt	Pakistan
18. Radio Doctor	Haiti
19. Audio-Cassette Listening Forums	Tanzania

- | | | |
|-----|---|---------------|
| 20. | Integrated Rural Project in
Education Health and Family Planning | Honduras |
| 21. | Radio Mensaje | Ecuador |
| 22. | Radio Baha'i | Ecuador |
| 23. | Project for Equality of Access to
Education for Women and Young Girls | Upper Volta |
| 24. | Association of Radio Clubs of Niger | Niger |
| 25. | Mass Media versus Direct Education
Programme | Mexico |
| 26. | Nurition Education Programme | Jamaica |
| 27. | Nutrition Mass Communication Project | India |
| 28. | Mass Media Nutrition Advertising
Campaigns | Phillipines |
| 29. | Popular Music and Sexual
Responsibility | Latin America |
| 30. | The Model Family Planning Project
in Isfa Han | Iran |
| 31. | Radio and Family Planning | Kiribati |
| 32. | Family Planning Association | Hong Kong |
| 33. | Aprofam, Family Planning Programme | Guatemala |
| 34. | Radio Mam: Lets Guard Our Health | Guatemala |
| 35. | Health Education Radio Dramas | Sri Lanka |
| 36. | The Pila Project | Guatemala |
| 37. | Mass Media and Health Practices | Honduras |
| 38. | Zaa Na Uwatunze | Kenya |
| 39. | National Control Of Diarrheal
Disease Project: ORT Communication
Campaign | Egypt |
| 40. | Man is Health | Tanzania |

41. Happy Baby Lottery	Gambia
42. Radio Santa Maria	Dominican Rep.
43. Giving Birth and Caring for your Children	Kenya
44. The Maadid Study	Morocco
45. The Sine Salorum Rural Health Care Project	Senegal
46. Health Communication for Child Survival:	Guatemala
	Haiti
	Jordan
	Lesotho
	Malawi
	Nigeria
	Mexico
	Paraguay
47. Breastfeeding Campaign:	Trinidad
	Tobago
48. Care Mass Media Nutrition Campaign:	Korea
	India
49. Distance Teaching Centre Nutrition Campaign	Lesotho
50. Yap District Nutrition Education Campaign	Micronesia

APPENDIX B

LIST OF RADIO HEALTH SCRIPTS BROADCAST ON RADIO XHOSA FROM
NOVEMBER 1989 TO SEPTEMBER 1991

1. Trust yourself
Zithembe wena

2. Looking at your baby immediately after birth
Ukuhlola usana lwakho emva kokuba ubelekile

3. Getting to know and enjoy your baby
Ukuziqhelanisa nokuzonwabisa nosana lwakho

4. Bathing your baby
Ukuhlamba usana lwakho

5. Care of your baby's navel
Ukunonophela inkaba yosana lwakho

6. Care of the buttocks
Ukunonophela iimpundu zosana

7. The bowel movements
Ukuzithuma elusaneni

8. Sleeping patterns
Iindlela - ngeendlela zokulala kweentsana

9. Baby clinic and the "Road to health" card
Iikliniki zeentsana nekhadi lasekliniki lenkqubo yosana lwakho
10. Breastfeeding your baby
Ukwanyisa usana lwakho
11. The yellow baby
Usana olumthubi
12. Your baby has a runny tummy
Usana lwakho luyahambisa
13. Your baby has a hernia
Usana lwakho luneqhuma emphakathweni - enkabeni
14. Your baby has thrush
Usana lwakho lunolwimi olumhlophe
15. Your baby has discharging eyes
Amehlo osana lwakho ayachiza
16. Your baby is crying
Usana lwakho luyakhala
17. Your baby has been admitted to hospital
Usana lwakho lulele esibhedlele

18. If your baby is born at home
Xa uthe wabelekela ekhaya

19. Your baby is feverish
Usana lwakho lunobushushu

20. You have a preterm baby
Unosana oluvele phambi kwexesha

21. Building a programme together
Ukwakha kunye inkqubo

22. Your baby is vomiting
Usana lwakho luyagabha

23. Your baby has a skin rash
Usana lwakho lujadukile

24. Your baby is coughing
Usana lwakho luyakhohlela

25. Keeping clean
Ukuhlala ucocekile

26. When your baby starts teething
Xa usana lwakho luqala ukuphuma amazinyo

27. Taking care of your teeth
Ukulondoloza amazinyo

28. If your child has scabies
Xa umntwana wakho enokhwekhwe

29. Bottlefeeding - The second choice
Ukuncancisa ngebhotile indlela yokuncamela

30. Solid foods and your baby
Ukutya okulukhuni nosana lwakho

31. Fits and fever
Ubushushu nokuxhuzula

32. When to start worrying if baby...
Ma uzikhathaze xa kutheni ngosana lwakho

33. Foreign objects in noses, eyes and ears
Izinto ezingaqhelekanga empumlweni, emehlweni okanye ezindlebeni

34. If your child has worms
Xa umntwana wakho eneentshulube

35. If your child has TB
Xa umntwana wakho eneTB

36. Burns
Ukutsha

37. Malnutrition
Ukungondleki
38. Whooping cough
Unkonkonko
39. Measles
Imasisi
40. If your child has a ringworm
Xa umntwana wakho enesitshanguba
41. AIDS and your family
Ugawulayo
42. Eating the right foods
Yitya ukutya okukuko
43. The Ante-natal clinic
Ikliniki yabakhulelweyo
44. Part 1: Looking after yourself during pregnancy
Isiqendu 1: Ukuzigcina xa ukhulelwe
45. Part 2: Looking after yourself during pregnancy
Isiqendu 2: Ukuzigcina xa ukhulelwe

TWO EXAMPLES OF RADIO SCRIPTS BROADCAST ON RADIO XHOSA

1. TRUST YOURSELF

Something incredible has happened! How many nights have you lay in your bed, awake and unable to sleep, thinking of this moment? You have been waiting so long. Now all your expectations and fears are behind. You just gave birth to a lovely baby. You can't actually believe it. The baby is wonderful.

You can't take your eyes off his little body. You want to explore and touch every part of him. You want to make sure he is well, that everything is normal. You want to discover your baby. You are amazed at his little hands and feet. So small and so perfect. You look at his nails. Immediately you wonder how you are going to cut them? You become worried! Wait it is not difficult. You will learn. You wonder about his eyes. What colour will they be? Will they change? You try to see whom he looks like. The nose....looks like his father's, but the mouth, no doubt is just like yours!

You can look and touch him for hours.

It seems as if every moment you discover something new. You touch his little head. There is a soft spot! What is that? Is it normal? You are not sure. Suddenly you are scared. You have fears. You feel that you don't know how to handle your baby. You feel inadequate.

You start remembering all the comments and advice you have heard, and it sounds like a very complicated business.

What happens if he starts crying?

What should I do?

When do you know that he is hungry?

Maybe he is feeling pain!

How long should he sleep?

Maybe I should wake him to feed him.

You have thousands of questions you want to ask. This is your first baby. You have seen babies before, played with them for awhile, you have helped to feed them... But this is different. This is your baby. You are responsible.

You forget everything that you have experienced and seen before. You forget all the advice. You think you are not good enough. You don't trust yourself. You feel confused. Don't take all that your neighbours and relatives have said too seriously.

Don't be afraid to trust yourself your own common sense. It is not only you that feels confused and inadequate. Most of us have experienced the same feelings.

Every time you pick up your baby he gets the feeling that he belongs to you and that you belong to him. Nobody else can give that to him, no matter how skillful they might be. You will learn gradually. Don't be afraid of your baby. Don't be afraid to love him and enjoy him. He needs to be talked to and smiled at, played with and fondled just as much as he needs food.

The baby that does not get any loving will grow up cold and withdrawn and unresponsive. You are not alone. The father is with you. You are now a family. The three of you must get used to each other and learn together.

Having a baby is a wonderful experience. We would like to share this important time in your life with you. We would like to chat about

- what is best for our babies.
- what is normal.
- when to get worried.
- what to do when baby is not well.
- when to take baby to see the health worker, sister or doctor.
- how we can prevent common problems.

Every.... at this time.... we will get together. I am sure we could learn and enjoy it.

See you again next week!

2. LOOKING AT YOUR BABY IMMEDIATELY AFTER BIRTH

Immediately after birth, we must admit, that babies don't always look very beautiful.

You know that giving birth is an amazing experience, but also, that it is a big effort. You have to push hard to assist your baby to be born. It was hard work for you. It was also a big effort and hard work for your baby. That is why you can't expect her to look beautiful immediately after birth.

You look at her, and you will notice that most of the time her skin is covered with a soft white wax. It is not dirt. This is good, and protects the skin. It will go away in a few days.

Looking at her face, you will notice that it is a little swollen. Her eyes may look puffy. This will also go away in a couple of days.

If your labour was prolonged and difficult and your baby had a hard time in coming out, you sometimes notice red spots in the white of her eyes. These are small blood spots. Don't worry, it is outside the eye, not inside and it will take more or less two weeks to disappear. You look carefully at her head. Yes, there is no doubt, it definitely looks funny. It has a funny shape. This is called "moulding" and happens when baby is being squeezed out during birth. It will come right in a couple of days.

If you had a difficult birth and the baby struggled to come out, you will find a swelling on her head. It is soft when you touch it. It will go away in two or three days. If not, you must take her to the clinic for a check-up.

You are caressing her head and you come across a soft spot, more or less in the middle of the head. Don't worry. This is normal. It is a space between the growing bones of the head. It will disappear when the bones grow together. This happens at more or less the age of eighteen months. You can feel it with your hands and fingers. You can also see it moving when the baby is crying.

I am sure you will be quite surprised and also very worried. Believe it or not your baby can be born with a tooth. It is not common, but it can happen. She is normal. Eventually it will fall out or the doctor will remove it.

If you look carefully at her body, you will sometimes find that she is covered with fuzzy hair. During the first days of life he can lose small patches of skin. It is normal. On further examination of her body, you may discover a bluish-grey spot on the shoulders or buttocks. Nothing serious. It will disappear, but it takes a long time.

It may be that your baby has been born with hair, sometimes very long. This hair will fall out, and sooner or later new hair will grow.

You are looking now at her little hands and feet. They look so perfect. You notice that the nails are long. You must cut them. If you don't, your baby can scratch herself. Don't worry. It is not so difficult. You will manage. Hold carefully onto her hand or foot and gently bite them yourself.

It is not very common, but sometimes, a baby can be born with an extra finger on a hand. It can look very strange, but it is not dangerous. The sister or doctor will ask you if you want to do something about it, and if you do, they will tie it with a string, and after a few days it will fall off, and not leave any big scar behind. Don't be afraid. It is not painful for your baby.

Now you are looking at her tummy. In the middle of her tummy you will find the cord. It can be fat and bluish, or white and thin. It varies from baby to baby. Immediately after birth, the midwife will cut the cord, and tie it with a piece of clean string. Sometimes they use a plastic clamp. It is very important to keep the cord clean and to prevent infection. We will talk about the care of the navel some other time.

If your baby is a little girl, while changing her nappy you may sometimes see some discharge, even a little bit of blood coming out of her vagina. Don't worry. This is very common.

Perhaps, after a week or so, you may see that your baby's breasts are getting bigger. There may even be a little discharge coming out. Don't worry. It will go away, do not squeeze it.

Now you feel very scared. Your baby is one day old she has not passed any water or stools. This too is common. It sometimes could take two days. If during the second day there are no wet or dirty napkins you must take the baby to the clinic for a check-up.

You are looking at her while changing her napkin. Suddenly, she makes a funny movement. It looks as if she has had a fright. It could also happen when you pick her up or even when there is a loud sound or noise. These sudden movements look funny, but they are normal for the baby. When she grows up and matures they will disappear.

You have a beautiful baby in your arms. It is so nice to look at her. Every day you will discover something new. Love her and enjoy her.

See you next week.

APPENDIX C

LIST OF BROADCAST TOPICS RECALL BY MOTHERS

1. Looking at your baby immediately after birth.
2. Your baby is feverish.
3. Breastfeeding your baby.
4. Keeping clean.
5. Solid foods and your baby.
6. Aids and your family.
7. Your baby has a skin rash.
8. The yellow baby.
9. If your baby is born at home.
10. Measles.
11. Care of the buttocks.
12. Your baby has thrush.
13. If your child has worms.
14. Taking care of your teeth.
15. Your baby is coughing.
16. You have a preterm baby.
17. Care of your baby's navel.
18. Your baby is vomiting.
19. The antenatal clinic.
20. Baby clinic and the "Road to health" card.
21. Your baby has a runny tummy.
22. Bottlefeeding the second choice.
23. Fits and fever.
24. If your baby has been admitted to hospital.
25. Your baby is crying.

26. Your baby has a hernia.
27. Burns.
28. Your baby has discharging eyes.
29. Foreign objects in noses, eyes and ears.
30. Malnutrition.
31. If your child has TB.
32. Whooping cough.

APPENDIX D

QUESTIONNAIRE TO ASSESS KNOWLEDGE OF NEONATAL JAUNDICE

Good morning. I am..... and we are doing a survey to find out how much mothers know about common problems in newborn babies, and we hope you don't mind answering few questions.

- | | | | |
|-----|--|---|--------------------------|
| 1. | Do you know why a baby can become yellow? | Yes | <input type="checkbox"/> |
| | | No | <input type="checkbox"/> |
| | | Don't know | <input type="checkbox"/> |
| 2. | What do you think is the cause of it? | Bad blood | <input type="checkbox"/> |
| | | Because of what mother ate during pregnancy | <input type="checkbox"/> |
| | | Infection | <input type="checkbox"/> |
| | | Liver problems | <input type="checkbox"/> |
| | | Immaturity | <input type="checkbox"/> |
| | | Don't know | <input type="checkbox"/> |
| | | Others | <input type="checkbox"/> |
| 3. | Do you think that yellow jaundice can be dangerous for a baby? | Yes | <input type="checkbox"/> |
| | | No | <input type="checkbox"/> |
| | | Don't know | <input type="checkbox"/> |
| 14. | If yes - What can happen? | Death | <input type="checkbox"/> |
| | | Mental retardation | <input type="checkbox"/> |
| | | Fits | <input type="checkbox"/> |
| | | Don't know | <input type="checkbox"/> |
| | | Other | <input type="checkbox"/> |
| 5. | What will you do if your baby becomes yellow at home? | Go to clinic | <input type="checkbox"/> |
| | | Go to traditional healer | <input type="checkbox"/> |
| | | Put baby under sun | <input type="checkbox"/> |
| | | Nothing | <input type="checkbox"/> |
| | | Other | <input type="checkbox"/> |
| 6. | How can you tell that your baby is yellow? | White of the eyes are yellow | <input type="checkbox"/> |
| | | Urine is dark yellow | <input type="checkbox"/> |
| | | The skin looks yellowish | <input type="checkbox"/> |
| | | Don't know | <input type="checkbox"/> |
| | | Others | <input type="checkbox"/> |

- | | | | |
|-----|---|--|----------------------------|
| 7. | Do you know how they will treat a baby with yellow jaundice at a clinic? | Yes
No
Don't know | []
[]
[] |
| 8. | If yes. What will the sister or doctor do to make him better? | Put baby under special lights
Take blood from baby
Change the blood
Give medicines
Other | []
[]
[]
[]
[] |
| 9. | Can you stay with your baby while he / she is under the lights at the clinic? | Yes
No
Don't know | []
[]
[] |
| 10. | Can you breastfeed your baby while he/she is under the lights? | Yes
No
Don't know | []
[]
[] |

The questionnaire was translated into Xhosa.

APPENDIX E

QUESTIONNAIRE TO MEASURE ACCEPTABILITY OF THE CASSETTE

- | | | | |
|----|--|--|--|
| 1. | Did you listen to the music and the health talks just now? | Yes
No | <input type="checkbox"/>
<input type="checkbox"/> |
| 2. | Did you enjoy it? | Very much
More or less
No | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| 3. | Can you tell us why did you enjoy it? | | |
| 4. | Did you like the music? | Yes
No
Indifferent
Other | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| 5. | What did you like about the tape? | The music
The health songs
The health topics
Everything
Nothing
Other | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| 6. | What did you dislike about the tape? | Music
Health songs
Health topics
Nothing
Everything
Other | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |
| 7. | Did you learn something new from the cassette? | Yes
No | <input type="checkbox"/>
<input type="checkbox"/> |
| 8. | If yes. What? | | |
| 9. | Would you like to listen more to this kind of cassettes? | Yes
No
Don't know | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> |

- | | | | |
|-----|---|---|----------------------------|
| 10. | There is any special health problem that you will like to know about? | Mention the health topic
No | []
[] |
| 11. | What would you change in the cassette to make it better? | Music
Health topics
Length
Health songs
Other | []
[]
[]
[]
[] |

The questionnaire was translated into Xhosa.

APPENDIX F

TOPICS SUGGESTED BY MOTHERS

Family planning

Nappy Rash

Causes of skin Desquamation

Skin blemishes

Diarrhea

Paralysis

How to handle a newborn baby

Skin rashes

Effects of food eaten by mother on the baby

Sucking problems

Fits

Fever

Coughs

Breastfeeding

Mother's illnesses that affects the baby

Do abdominal pains affect the baby during pregnancy

Kwashiorkor