# The Limitations of Applying Rational Decision-Making Models to Contraceptive Use in Malawi

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**The aim of this paper is to show the limitations of rational decision-making models as applied to child spacing and more specifically to the use of modern methods of contraception. In the light of factors known to influence low uptake of child spacing services in other African countries, suggestions are made to explain the reasons for low uptake of services in Malawi and a more culturally appropriate model of decision-making as applied to contraception is put forward.**

### What is Child Spacing?

Many African countries have recognised the deleterious effects of closely spaced pregnancies on maternal and child health and have introduced child spacing programmes. These programmes aim not to explicitly or directly limit family size but to ensure that an interval of at least two years is left between each successive pregnancy [1]. The rationale for child spacing programmes includes benefits for the mother, child and the family.

### Traditional Child Spacing Methods

Anthropological evidence suggests that child spacing has existed in traditional societies for many years where its principal function has been to prevent conceptions occurring at certain times or as a result of certain sexual encounters [2]. This has usually been achieved through female abstinence.

In Malawi, traditional methods of contraception include the use of herbal medicines drunk by the woman; strings tied around the woman's waist; and the practice of sexual abstinence at specified times. Polygamy has also acted as another important traditional method of child spacing in Malawi as in other developing countries.

In a survey of child spacing knowledge, attitudes and practices carried out in Malawi the most widely known traditional method of child spacing was the use of strings tied around the woman's waist. Very few people, however, practised this method or any other of the traditional techniques [3].

The traditional practices of cultures have been broken down over the years as a result of improvements in mass communication and increased human mobility. The introduction of modern methods of contraception represents one such cultural shift. However, it is important to remember that in the developing countries contraception is used more frequently as a method of limiting family size rather than spacing the interval of pregnancies. In this respect the manner in which contraception is promoted is fundamentally different in the developed as opposed to the developing world.

### Modern Methods of Contraception

Modern methods of contraception have been introduced to developing countries comparatively recently. In Malawi, awareness of modern methods of contraception has been found to be positively associated with urban living and level of education [3]. However, levels of awareness do not equate with levels of use. Only 8% of men and 9% of women in the Malawian study cited previously had ever used a modern method of contraception thus suggesting that despite high levels of knowledge few Malawians are practising modern methods of child spacing.

This picture is a familiar one in other African countries. When child spacing by modern methods was introduced in African countries in the 1960s it was met by resistance [4] often due to a fear that it would be used as a method of limiting the population. Indeed, in Malawi, the level of public fear and suspicion was such that the original child spacing interventions were abandoned and the present programme did not begin until 1983. In societies where there is no welfare provision and people are dependent on children and the extended family system to care for them when they are no longer able to care for themselves, these reactions are perhaps understandable.

### Use of Modern Methods of Contraception in African Countries

Despite high fertility rates in developing countries that lead to inflated maternal and infant mortality rates, uptake of modern methods of contraception is low. In Kenya, studies have suggested that those who practise child spacing usually have a greater number of years of education and this association has also been found in Malawi. Another factor which influences child spacing practices is rural or urban living. In general, those living in rural areas are less likely to practise child spacing than those who live in towns or cities [3].

Figures show that the uptake of child spacing services in Malawi since the introduction of the programme has been very poor, with only 3% of women of child bearing age using the services every year. The National goal for child spacing uptake by 1992 was 10% of the child bearing population [5]. Clearly, this target is far from being reached.

### Decision Making Models for Contraception: Western Applications

Models which attempt to describe and predict the factors which influence people to adopt certain health-related behaviours have been used as the basis for planning health education campaigns with respect to a wide variety of health risks. One model, which was originally developed to explain low uptake of health prevention advice, is the Health Belief Model [6,7,8]. The model proposes that for a person to take preventive action against a disease they must perceive themselves as susceptible to it, perceive the disease as having moderately serious consequences and feel that the benefits of following preventive advice outweigh the costs. This model, as with the Theory of Reasoned Action, which derives from social psychology [9], assumes that health behaviour is carried out on the basis of rational decision making.

Boyle suggests that use of contraception may be conceptualised using the Subjective Expected Utility Model [10,11,12]. This also assumes that the individual operates as a rational decision-making organism in determining the benefits and costs of taking action to control pregnancies. The model has four elements the assignment of costs/benefits to contraceptive use; the assignment of costs/benefits to pregnancy; the assignment of probabilities of becoming pregnant and the assignment of probabilities to the termination of pregnancy.

What, then are the costs of using contraceptives as seen in developed countries? The likely benefits are obvious avoidance of unwanted pregnancy, and possibly the avoidance of sexually transmitted diseases.

Factors which may preclude the use of certain forms of contraception particularly oral contraceptives and inter-uterine devices, include negative side-effects such as weight gain, mood changes, discomfort, risk of infection etc. Another limiting factor may be the availability of contraceptives. Following the AIDS pandemic, it has become relatively easy to obtain condoms but other methods may not be so easily obtained. The use of diaphragms and the cap, for example, may entail detailed physical examination and this has been shown to deter many women. Allen found that a substantial proportion of women were very anxious about attending Family Planning clinics [13]. Social sanctions play a large part in determining contraceptive use in most societies. The influence of the Roman Catholic Church in regarding the use of contraception is one salient example.

### What are the Limitations of Applying Rational Decision Making Models to the Malawi Situation?

Human beings are generally poor judges of the level of risk [14] and there are severe limitations in assuming that, in an area of personal functioning as sensitive as sexual behaviour, a rational decision making model may be applied. Sexual behav-

iour involves negotiation between two people, a fact that has often been overlooked in AIDS campaigns and may be similarly dismissed when thinking about child spacing. In Societies where the emphasis is not on the nuclear family, the decision to have a child may not be one that is made by an individual or a couple, rather it may be interdependent upon the wishes of elders and the extended family. In developing countries the ability to exercise control over one's life is not as obvious as that in the developed world where technological advances, equal opportunities for women and (often) a welfare system all operate to facilitate real choices over one's reproductive career. It is contended that such models are inappropriate to the African context.

Support for this view may be found in an instructive study carried out in the Namwera area of Mangochi District in Eastern Malawi [15]. This survey looked at the attitudes of rural women to child spacing using the "projective picture test" [16] to elicit responses to a series of pictures depicting typical scenes from family life.

The most frequently cited negative attitude towards child spacing was the belief that having a large family secured the future for the parents. Another objection to child spacing was the value placed on fertility in Malawian society. A woman who had less children might then lose respect and position in society.

Overall the results of this preliminary investigation showed that men often prevented women from practising child spacing and that in general, families only considered using child spacing services if they encountered a particular difficulty such as serious maternal health problems.

Perhaps of most concern was the finding that 15.4% of respondents held fatalistic attitudes, believing the number of children a couple had to be the will of God.

A similar finding was noted by Ager with respect to rural villagers' views of the degree of control they had over the likelihood of developing malaria or schistosomiasis [17].

Bandawe's study clearly illustrates the limitations of applying rational decision making models to contraceptive use, at least in the rural village setting [15]. It suggests that in societies where there is such (comparatively) little control over one's life, the ability to make decisions about health is not fully operationalised.

**What is the Way Forward for Increasing the Uptake of Child Spacing Services?**

Clearly, individualistic models which assume that decisions about contraception are made rationally are inappropriate in the Malawian context. From studies already carried out it is clear that one reason why people may be reluctant to use modern methods of contraception is that they have misconceived ideas about their safety and use. For example, with the advent of AIDS, studies have been carried out to determine the acceptability of condoms. Many reports have shown that people may be misinformed and falsely believe that condoms may become lodged in the vagina during sex or that they are dangerous [18]. Such ideas represent a serious obstacle to health educators and have led Ager and Collins to advocate a more aggressive social marketing approach to AIDS education [19]. The model they propose has four levels; awareness, inclination, intention and practice. It incorporates the social influences on decision making and does not rely solely on an implicit assumption of rationality. When applied to child spacing the model contends that an inclination to practise child spacing will be translated into a firm intention depending on the influences of peers, social norms, the emotional state of the person at the time and the degree of control the person feels they have in determining the level of health risk they are exposed to. Whether or not an intention is ever put into operation will depend on the competence of the individual to practise child spacing methods (e.g. put on a condom correctly, remember to take oral contraceptives); the accessibility of contraceptives and their price and the opportunity to receive professional advice. There will also be an influence from others, particularly the sexual partner. This latter point is important to emphasise. Whereas in the developing world women have often been the focus of contraceptive advice, in Malawi as in other developing countries, the man is the decision maker in the household and any attempts to change sexual habits must surely fail if the men folk are not involved. How to involve reluctant husbands/partners is, however, a problem in itself.

**Conclusion**

A model has been suggested to help to conceptualise reasons for practising/not practising modern methods of child spacing in Malawi. As previously stated, these methods are new to the culture and traditional methods of contraception bear little resemblance to them. In the West, however, pre-cursors of the condom e.g. leather sheaths were prevalent hundreds of years ago and so some modern methods are merely more effective versions of long established practises. Perhaps then it should not come as a surprise that these methods are still viewed by some in developing countries with suspicion and are not widely used. When any "alien" ideas are introduced to a culture their sustainability depends on a number of factors the most salient being the degree of "fit" between the new concept and traditional practices. Ager has suggested a checklist to determine the sustainability of a new service [20]. Applying this to a child spacing service a number of points emerge that should be considered by service planners and deliverers.

1. Does the community have the resources to support the service and how are local people involved in its control and decision making?
2. Is the target of the service (i.e. reduced child and maternal mortality) valued by the community?
3. How will people benefit/lose as a result of the service?
4. How prompt will the benefits be?

A problem in both AIDS education and child spacing is that the benefits are long term and the gains often intangible.

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# Population and Child Spacing Information, Education and Communication Activities

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Several agencies are involved in providing Child Spacing (CS) and population information, education and communication (IEC). They use almost all communication channels available in-country. A brief description of different agencies on IEC programme is given below:

**1. Ministry of Health's Health Education Unit (HEU)**

This has been and continues to be the main actor in CS IEC. Their programmes include:-

(a) **Health Education Band/Drama:** Mobile health education bands communicate the CS and PHC messages, through songs and plays. The Health Education Band/Drama has also trained some local bands in rural areas to pass child spacing messages. The UNICEF has been very supportive in training these drama groups.

(b) **Materials Production:** The HEU has printed four types of posters on CS depicting current contraceptive methods, another explains effect of too frequent births on the mother and child, and another benefits of child spacing by comparing frequent child birth with maize planted too closely. The last one shows what services are available at clinics. A workshop in December 1991 developed 8 new posters targeted at teenagers to address dangers of early pregnancy, and benefits of child spacing. The four old posters were modified to address effects of having large families, advantages of child spacing, new contraceptive methods.

(c) **Magazines**: The HEU publishes a monthly magazine known as Moyo Magazine which features information on child spacing and population.

(d) **Audio visual:** The HEU produced a video film on child spacing with the assistance of the Department of Information and Banja La Mtsogolo.

(e) **Field guides and other pamphlets:** Four booklets and one flipchart have been printed to aid health workers in their motivational efforts. Two leaflets on benefits of CS and men's role in CS have also been produced in English and Chichewa. 3 different information flyers (on different issues) were also produced and are currently being reprinted with assistance from UNICEF.

(f) Training of Extension workers: Sensitization of DDC and over 12 ADC in the country on CS was done. About 25 extension workers from various government and NGOs each district trained to include CS messages in their work.

**2. Christian Hospitals Association of Malawi (CHAM)**

CHAM is the next largest provider of CS services. It also provides clinic based and community based IEC. Some CHAM Units produce IEC materials and procure them from sources other than from HEU. CHAM has initiated Community Based Distribution (CBD) activities at Ekwendeni and Malamulo hospitals. CBD work involves: Motivation; Counselling; Distribution of IEC materials; Distribution of condoms and pills; and referrals.

**3. Department of Information (DOI)**

The DOI is within the Ministry of Information and Tourism. It publishes a newspaper for free circulation which devotes a page to CS and health. Its circulation is 80,000.

The DOI, through funds from FAO/UNFPA, is implementing a Family Life Education project, and through the Second Family Health Project will be implementing a CS IEC component. This activity will be funded by the European Community.

The DOI development objective to these two projects is "to create critical awareness among the Malawi Public about the intricate relationship between population, available resources and family health with the hope that this understanding will change people's attitude and behaviour and ultimately improve the family well being".

These objectives will be achieved through:

- Training, Communication, Research techniques, Problem and Audience analysis, Data Analysis, message development, etc.
- Materials Development: Booklets (Mdyamakanda and Kamodzikokha on teenage pregnancies); Flipchart (advantages of child spacing); Training materials (user-guides and campaign management manuals); Animated video (effects of population on natural resources and environment); Drama and Folk/popular media (13 songs using popular artists and 5 theatre plays).
- Research studies: Before these activities DOI conducted focus group interviews (FGI) in various districts. Chiradzulu (lowest fertility rate); Mchinji (highest fertility rate); Rumphi (moderate fertility rate). The FGI guidelines included such topics as: child/parent relationships; marital stability, family size, child spacing, boy/girl relationships, vocational aspirations, publicity and teenage pregnancies. The research findings were categorised: Population and Development; Erosion of family roles; Adolescent fertility and teenage pregnancies; Family health.

Family Life Education Campaigns will initially be mounted in four districts of Mulanje, Blantyre, Mchinji and Rumphi. The idea is to deliver a multi-pronged IEC campaign. Blantyre and Mulanje have already started experiencing effects of population pressure where as Mchinji and Rumphi are vulnerable to these effects due to their high population densities.

There will be training of district staff (multisectoral) on the campaign management, implementation, and evaluation.

Because the campaign is big and to ensure that materials are used with right target audience in right manner and expected objectives are reached, the District Officers who are supervisors of extension workers will be trained in campaign management monitoring and evaluation. An impact evaluation will be done at the end of the pilot phase.

This campaign will require support from the District Health staff in the provision of services and technical assistance.

**4. Ministry of Women and Children Affairs and Community Services**

This Ministry has three projects.

(a) **Child spacing Message Project:** Through the second family health project. EC has funded this project to enable the Ministry to incorporate CS messages into Adult Literacy and Home Economics network. The Ministry employs