

# FACTORS INFLUENCING THE UTILISATION OF MATERNAL AND CHILD HEALTH CARE SERVICES IN BALAKA DISTRICT OF MALAWI

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## ABSTRACT

Underutilisation of mother and child health care services in Malawi may contribute to maternal and child deaths. The purpose of the study was to describe the utilisation of Maternal and Child Health (MCH) care services by mothers from four selected health facilities in the Balaka District of Malawi. Non-experimental quantitative descriptive research was conducted based on Andersen's Behavioral Model of Health Services Utilization. A combination of proportionate stratified sampling and convenience sampling was used and data was collected by means of self-administered questionnaires. Computer program SPSS 16.0 version for Windows was used to analyse data and compile descriptive statistics. In this study the regular



attendance of MCH care services was investigated by cross tabulation with different factors, including: level of formal education; knowledge of the available services; health beliefs and values; place of residence; employment and satisfaction with service delivery. It was concluded that women must first appreciate the significance of the available health services in order for them to utilise the health services. Irregular attendance of health services does not necessarily refer to a negative attitude of clients toward health but can be attributed to factors such as family responsibilities and distance from the health facilities. The recommendations included that Balaka District health management team should consider developing strategies to improve mobile MCH care services in the district. Women in the district must be assisted to improve their financial and social status, which might positively influence their utilisation of health care services.

**Keywords:** child health services, enabling characteristics, maternal health services, needs characteristics, predisposing characteristics, utilisation of health services

## INTRODUCTION AND BACKGROUND INFORMATION

The utilisation of health services is globally influenced by a number of factors such as personal characteristics, socio-cultural factors and health beliefs of the users, as well as the availability, accessibility, acceptability, quality and cost of the health services (Phoya, Mavalankar, Raman & Hussein, 2012:127; Simkhada, Teijlingen, Porter & Simkhada, 2007:244; United Nations, 2010:1; Wamala & Ehiri, 2009:135).

Maternal mortality in Malawi as described by the World Bank (2011) was estimated at 510 maternal deaths per 100 000 live births. This is high compared with the global maternal mortality ratio of 210 maternal deaths per 100 000 live births (United Nations Population Fund, UNFPA, 2012:1). At the time of the study, in the Balaka district, the reported maternal mortality rate was 140 per 100 000 live births, the infant mortality rate was 106 per 1 000 live births and the child mortality rate was 176 per 1 000 live births (Balaka District Maternal and Child Health Information, 2008:1).

## STATEMENT OF THE RESEARCH PROBLEM

Mothers in Malawi experience maternal health problems such as anaemia, obstructed labour and postpartum haemorrhage due to lack of adequate obstetrical care (MaiMwana Project, 2006:1180). The report on the Balaka District Maternal and Child Health (2008:1) included 7 maternal deaths, 26 preterm labour cases, 29 neonatal sepsis cases, 13 fresh stillbirths, 12 macerated stillbirths, 12 neonatal deaths, 12 cases of antepartum haemorrhage, 11 cases of postpartum haemorrhage, and 11 cases of anaemia in pregnancy between May and August 2008. The reasons for these conditions may be many-fold,

including the utilisation of health services. This study was conducted to investigate the factors that affect the utilisation of MCH services in the Balaka district.

## PURPOSE

The purpose of this study was to investigate the factors influencing the utilisation of MCH care services by mothers at four selected health facilities in the Balaka district of Malawi.

## OBJECTIVES OF THE STUDY

The objectives were as follows:

- to determine the knowledge of mothers regarding MCH services, and
- to describe the factors influencing the utilisation of MCH services in the Balaka district.

## DEFINITION OF KEY CONCEPTS IN THIS STUDY

**Child health services** refer to the promotion of wellbeing through screening, nutrition and immunisation against diseases of the person younger than five years of age.

**Enabling characteristics** refer to personal, family and community resources that facilitate the individual's use of health services.

**Maternal health refers** to the health services that focus on the state of wellbeing of the mother during pregnancy, labour and after pregnancy.

**Need characteristics** refer to the status of health or illness and are the most immediate and important reason for the utilisation of health service.

**Predisposing characteristics** include three dimensions: demographic characteristics, social structure and health belief. Demographic characteristics include age, gender, marital status and family. Social structure includes education, religion, occupation, social roles and cultural aspects. Health beliefs include personal attitudes towards health and health professionals, knowledge of diseases and prior experience with illness (Chakraborty, Islam, Chowdhury, Bari & Akhiter, 2003:329).

**Utilisation of health services** refers to the use of available MCH services offered in the Balaka district of Malawi as experienced by the mothers who attend the identified health services.

## RESEARCH METHODOLOGY

A non-experimental, descriptive quantitative design was used to identify and describe the factors that influence the utilisation of MCH services in the Balaka district. Data was gathered through a structured questionnaire and was analysed using the SPSS 16.0 Windows program and presented statistically.

### Context of the study

The Balaka District Hospital and Chiyendausiku Health Centre offer public MCH care services. Utale 2 Mission Hospital and Chifundo Maternity Clinic provide private MCH care services. These are the health facilities offering MCH services where the researcher was able to locate mothers using the services and thus collect relevant data to meet the research objectives.

### Population and sampling

The total population included all mothers who have at least one child younger than five years in the Balaka district. The accessible population included mothers who had at least one child younger than five years of age and who had visited one of the four selected MCH clinics in the Balaka district in the two weeks of data collection, namely, 9th to 23rd March 2009.

A combination of proportionate stratified sampling and convenience sampling was done to obtain 100 respondents (Polit & Beck, 2004: 292, 297). Proportionate stratified sampling was used to determine the number of respondents from each of the four health facilities, according to the attendance records for the period of January and February 2009 (Table 1). A convenience sample was selected at each health facility during the two weeks of data collection to meet the sample size.

**Table 1:** Proportionate stratified sampling in the Balaka district

Health Facility	Target Population (n)	Proportion	Sample size
Balaka District Hospital	2 261	0.6489	65
Chifundo Maternity Clinic	212	0.0608	6

Utale 2 Mission Health centre	407	0.1171	12
Chiyendausiku Health centre	604	0.1734	17
Total	(N) 3 484	1	100

## Research instrument

A structured questionnaire was developed, using an adapted Andersen's Behavioral Model of Health Services Utilization as described by Chakraborty *et al.* (2003:327). The statistician and the co-author were consulted with regard to content, relevance and data analysis methods in order to ensure consistency, minimise bias and promote validity of the questionnaire. The questionnaire included sections related to demographic data, availability, the affordability and accessibility of MCH services, the need for MCH services, and the quality of MCH services. The questionnaire was pretested with 10 respondents.

## Data collection

Data were collected at the four health facilities. Respondents signed an informed consent form and the self-administered questionnaires were completed by the respondents after they had seen the health professionals in order to ensure that respondents did not miss their health service. The mothers who could not speak or write English were assisted by the researcher and fieldworkers. The fieldworkers had experience in data collection and the researcher briefed them on the content of the questionnaire and the importance of confidentiality and not fabricating information.

## Data analysis

A computer program for data analysis and management, Statistical Package for Social Sciences (SPSS) version 16.0, was used to analyse the data. Completed questionnaires were given to the statistician who cleaned, coded and analysed the data. The statistical procedures included descriptive statistics, frequency analysis, and further analysis of data by means of cross-tabulations (Burns & Grove, 2003:326, 227; Polit & Beck, 2004:457, 462, 735)

## Reliability and validity

Reliability is the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure (Polit & Beck, 2004:730; Burns & Grove, 2003:35). The internal consistency was ensured by a carefully developed questionnaire. Sections and questions were directly related to the topic and context of the study. The questionnaire was clearly worded and simple language was used

to ensure that respondents understood the questions. An SPSS program was used for analysis to promote statistical reliability and to reduce threats to reliability. Validity is the degree to which an instrument measures what it is intended to measure (Burns & Grove, 2003:275). The literature review was done to ensure validity of the instrument and the adapted Andersen's Behavioural Model of Health Services Utilization guided the content of the questionnaire, analysis of data, and the description of the findings.

## Ethical considerations

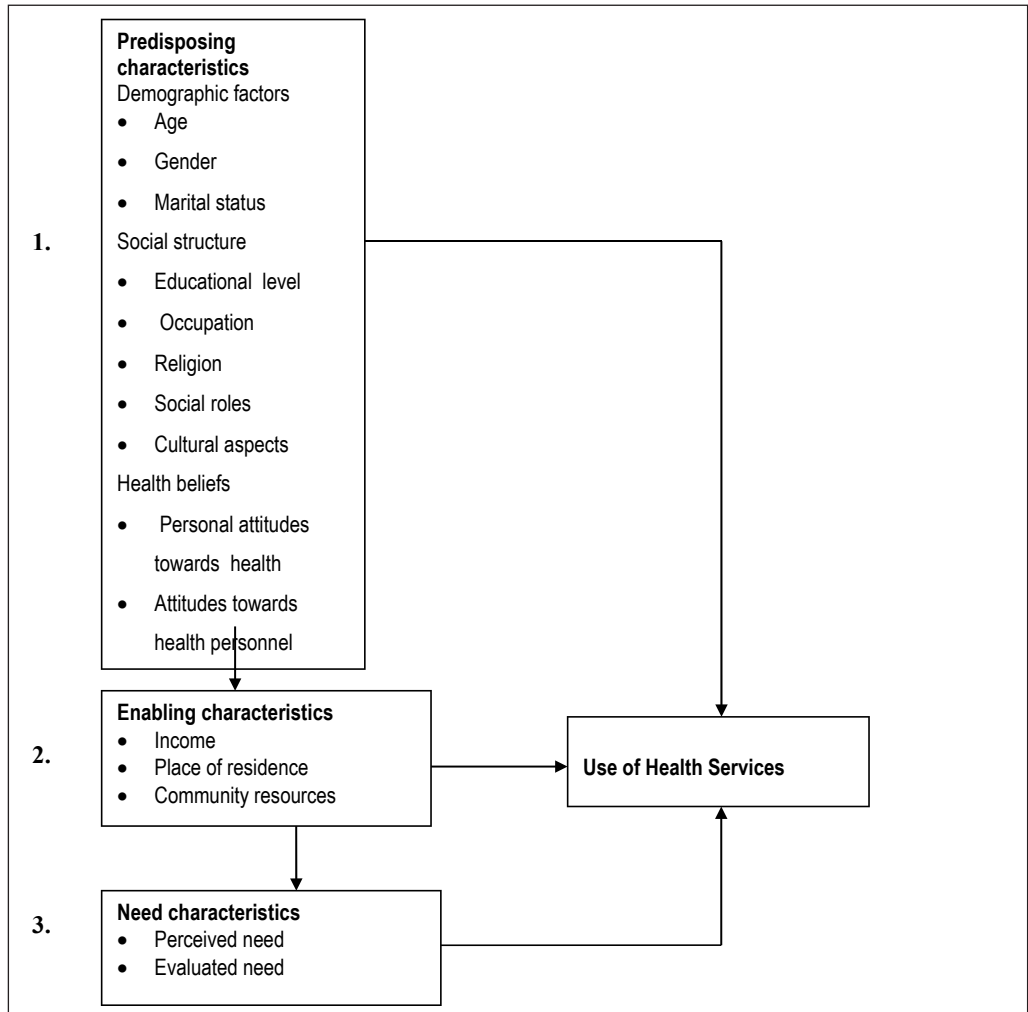
Ethical clearance to conduct the study was given by the University of South Africa. In Malawi, permission was obtained from the District Medical Officer of Balaka District, the Chief Clinical Officer of Utale 2 Mission Hospital and the Director of Chifundo Maternity Clinic. The principles of autonomy, beneficence, anonymity and confidentiality were considered in the study. The respondents signed an informed consent form, which is an agreement by prospective respondents to participate voluntarily in a study after they had assimilated essential information about the study (Burns & Grove, 2003:165). Respondents were not subjected to physical harm. Questionnaires were numbered to facilitate the data analysis and interpretation of findings, and completed questionnaires were in safe-keeping and not available for any other purpose than this research.

## ANALYSIS OF RESEARCH FINDINGS

The findings are presented under the following sections: predisposing characteristics, enabling characteristics and need characteristics according to the adapted model of the Andersen's Behavioral Model of Health Services Utilization (Chakraborty *et al*, 2003:329; Nankwanga, 2004:11) (Figure 1). In this report, (N) refers to responses from the total number of respondents, namely 100, and (n) refers to responses from a subsection of the total number of respondents, for example, the respondents at each of the health facilities.

### Three sets of individual characteristics and the use of health services

The model in Figure 1 describes three sets of individual characteristics, namely: predisposing characteristics, enabling characteristics and need characteristics as each one influences the use of health services. This model serves as a basis for the development of the questionnaire and guides the data analysis, summary and recommendations of the study. This article follows the same framework.



**Figure 1:** Health Services Utilization Model. (As adapted from: Chakraborty *et al.*, 2003:329; Nankwanga, 2004:11)

## Predisposing characteristics

Predisposing characteristics were investigated in terms of different demographic, social and health belief factors.

## Demographic factors

All respondents were female and the majority of women (81%) (N=100) fell in the age range below 34 years, which is within the child bearing age. A significant number of the respondents younger than 35 years (47.6%) (n=81) did not attend MCH care services regularly. About 85% (N=100) of the women who participated in the study were married.

## Social structure

About 9% (N=100) of the women had no formal education, 65% (N=100) had primary school education and only 26% (N=100) of the women had secondary school education. Of the women who had primary school education, 42.1% (n=65) utilised the MCH care services regularly whereas only 33.3% (n=26) of women with secondary education utilised the MCH care services regularly. Despite the low level of education, the majority of women (99%) (N=100) were aware of the available MCH care services in their areas and 74% (N=100) rated their knowledge of services from good to excellent.

About 58% (N=100) of the women were not employed while only 21% (N=100) of the respondents were formally employed. The rest of the respondents were self-employed, such as in farming on a small scale or running local small-scale businesses. Unemployment was particularly high in the catchment areas of Balaka District Hospital (47.6%), (n=65) and Chiyendausiku (47.8%) (n=17). However, respondents in these two health facilities reported that health services were affordable. The reason for this is that services are offered free of charge. In all the four health centres, 61.3% (N=100) of the women, who stated that the MCH care services were comfortably affordable, did not use the health services regularly. Figure 2 shows the reasons for not utilising the MCH care services

Almost all (92.9%) (N=100) of the respondents had meaningful religious beliefs of which 73% (N=100) belonged to Christianity. Of the latter, 63.9% (N=100) did not use MCH care services regularly. In this regard respondents reported that some churches discourage the use of contraceptives. Concerning cultural beliefs, 38% (N=100) of the women believed in Traditional Birth Attendants (TBAs), which means they do not utilise the MCH care services optimally.

## Health beliefs

About 58% (N=100) of respondents reported health problems during pregnancy, labour and delivery. These included malaria, anaemia, excessive blood loss and difficult labour. One would expect that women who needed health services would show a positive personal attitude towards their health. In contrast it was found that 60.2% (N=100) of respondents



did not use the MCH care services regularly. The respondents' attitude towards health services and health personnel was investigated and significant differences were reported at the four health facilities. At Chiyendausiku Health Centre, 84.3% (n=17) said their health needs were met, while only 25% (n=12) at Utale Mission Centre felt their needs were met. In total 61.7% (N=100) of respondents who agreed that their health needs were met used the services regularly. This shows that health care needs that were met, prompted regular utilisation of MCH services. Respondents perceived satisfaction with MCH care services mostly in terms of assessment or screening to identify health problems (44%) (N=100) and health education to prevent health problems (42.2%) (N=100). Availability of equipment and treatment were regarded as less important. This shows that the health care personnel had a major role to play in the women's health beliefs.

## Enabling characteristics

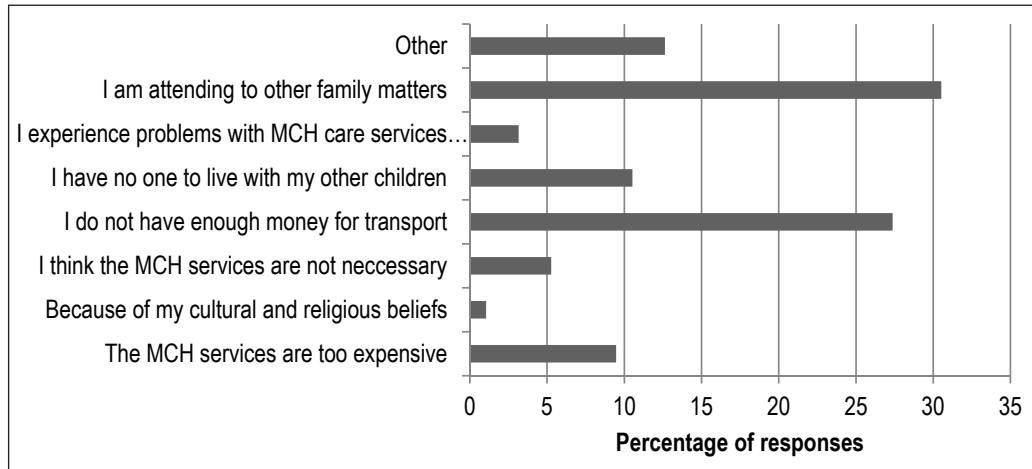
The factors that were investigated include income, place of residence and community resources. The latter was investigated in terms of availability and accessibility of health services.

### Income

The low educational level and the low level of formal employment contribute to a lack of proper and sustainable income. Where women indicated that services were not at all affordable or barely affordable, the majority, namely, 87.5% (N=100) and 47.6% (N=100), respectively, responded that they did not use services regularly. About 27% (N=100) of the respondents did not have enough money for transport to go to MCH care services (refer to Table 2). The age group that reported a lack of money for transport most (70.3 %) (n=27) was found to be those younger than 35 years, those who should be the economically active group.

### Place of residence

About 57% (N=100) of respondents lived in villages, and 65% (N= 100) of respondents lived within 5km of health services, which is within the acceptable range for primary health care services. However, 35% (N=100) lived more than 5km from available health services. Despite the fact that the MCH facilities were located close to most of the women, the majority of the women (38.2%) (n=59) did not use the MCH care services regularly due to the reasons listed in Figure 2.



**Figure 2:** Reasons for not making use of MCH services regularly (N=100)

## Community resources

MCH care services are available in the Balaka district at the four facilities that were used to collect the data for this research. Static MCH health services are provided by government and non-governmental organisations, and 6% (N=100) of respondents indicated that mobile services are available. Concerning accessibility, the majority of the women, 65% (N=100) live within 5km from the four health facilities. Despite the fact that resources are available and located close to respondents, the majority of the women, 38.2% (n=59), did not use the MCH care services regularly. Access to health services is also influenced by affordability and it seems that transport expenses are a problem for many of the respondents.

Resources addressed availability of services as well as the satisfaction with the quality of services. Of the regular users of MCH care services, 85 (4%) (N=41) were satisfied with the services provided while only 30.5% (N=59) of non-regular users were satisfied with services. The reasons for dissatisfaction with services were given as inadequate staff (34.5%) (N = 100), and inadequate equipment, supplies and treatment (30%) (N=100). Negative staff attitudes and lack of confidentiality were also mentioned. Overall, the quality of services offered at the different health facilities was rated as average (42%) (N=100), with 35% (N=100) rating it below average.

## Need characteristics

This study described the health needs as perceived by the respondents but not the evaluated needs. The limited scope of the article did not include the health professionals

in the health facilities or the health records of the respondents. The perceived need for MCH care services was reported to be mainly for antenatal care (24.5%) (N=100) and under 5-year services (24%) (N=100). Labour and delivery services were mentioned by 21% (N=100) of women. Most of the women at the Balaka District Hospital (63.1%) (n=65) and Chiyendausiku (82.4%) (n=17) indicated that their health needs were met. At Chifundo clinic, 50% (n=6) of respondents indicated that their health needs were met. In contrast, at Utale 2 Mission Health Centre, 75% (n=12) of women felt their health needs were not met. Of the respondents who felt that the MCH care services in their areas met their needs, 62.3% (N=61) used the health services regularly and 94.9% (N=39) of the respondents who felt that their MCH needs were not met, did not use the health care services regularly.

## Use of health services

The utilisation of health services was described in an integrated manner, as cross tabulated with most of the pre-disposing, enabling, and needs characteristics. The most significant of these were previously discussed. Following the respondents' answers, knowledge of available services and the quality of services are described.

## Knowledge about MCH care services

About 47% (N=100) of respondents stated that they had a good knowledge of the MCH care services that were available in their area (Table 2).

**Table 2:** Knowledge of respondents on MCH care services (N=100)

	Frequency	Percentage	Cumulative percentage
Very poor	1	1.0	1.0
Poor	25	25.0	26.0
Good	47	47.0	73.0
Very good	25	25.0	98.0
Excellent	2	2.0	100
Total	100	100	100

Respondents used the health services for the following reasons, in order of priority: antenatal care, under five services, labour and delivery, family planning, postnatal services, breastfeeding and counselling, and other services. Respondents were also asked if they were encouraged to use the health facilities and who encouraged them. It was found that different categories of health professionals played an important role in this matter.

## Quality of services delivered

Quality of services provided was rated differently in the four health care facilities. Generally the quality of health care services provided ranged from average to above average. There were a number of factors reported that impaired the quality of the health care services provided. These include in order of priority: inadequate staff; inadequate equipment, supplies and treatment; staff's negative attitude towards clients; and lack of confidentiality by staff with regard to clients' confidential information.

## DISCUSSION OF RESEARCH FINDINGS

### Predisposing characteristics

#### Demographic factors

In the Balaka district MCH care services programmes should be specific to the needs of women of early child bearing age. The maternal health promotion programmes should target young mothers in order to encourage them to use the services regularly. According to literature, women's ability to seek or use health care services depends on social factors such as marital status (Chakraborty *et al.*, 2003:329). Findings of this study illustrate that women in the Balaka district found social security in marriage. Health care professionals should acknowledge the fact that marriage brings family responsibilities, making it difficult for women to utilise the MCH care services. Flexible hours of operation as well as mobile clinics may be considered.

#### Social structure

Education, occupation, religion, finances and ethnicity (or culture) are regarded as factors used to assess the social structure of an individual in the society (Andersen, 1995:1). Based on the study findings, it can be said that awareness of the available MCH care services does not depend on the level of education of the women who made use of the health services. It was found that irregular attendance of MCH care services was hindered by other factors, for example, belief in TBAs, lack of income or the distance women have to travel to health facilities. Christian beliefs of some of the churches had a negative influence regarding the use of MCH care services, for example, belief in natural family planning methods that discouraged members of the church to use modern family planning methods. Grant and Loggie (2005:9) found that varying beliefs had a strong influence on the use of modern health care services. Lack of adequate financial resources limits the access of some of the women to private health services that might be effective and beneficial to their health (Malawi Government, Ministry of Health, 2007).

## Health beliefs

Respondents provided information about their own health profile, and their attitudes towards health was further determined by exploring their knowledge about and attendance of health services. Regular attendance of health facilities can be seen as a positive attitude towards health. Regular attendance of MCH care services was hindered by factors other than attitude, for example, lack of income or the distance women have to travel to health facilities (Figure 2). An irresponsible attitude towards health is portrayed by younger respondents who tend not to visit MCH care services regularly. Ram and Singh (2005:1) state that if health beliefs of women enable them to use antenatal care services, it may lead to the utilisation of other maternal health related services such as institutional delivery and delivery assisted by trained professionals.

## Enabling characteristics

### Income

The findings of this study confirm the findings of the Malawi Ministry of Health, namely that a lack of adequate financial resources prevents some women from accessing private health services, which might be more effective and beneficial for their health (Malawi Government, Ministry of Health, 2007:1). It was found that women living near the two private health facilities, namely, Utale 2 Mission Centre and Chifundo Maternity Clinic, found the services unaffordable. The lack of public MCH care services in these areas directly impacts on the utilisation of services. An integrated household survey done in Malawi found that 65.3% of the population lives in poverty and that a lack of a proper and sustainable source of income may lead to this poverty, which may influence the utilisation of health services (Zere *et al.*, 2007:1190). Similar findings are found in this study, as only 15% (N=100) of respondents in the Balaka district were employed with a stable income. Although some health services were available for free, women still need money for transport.

### Place of residence

In the Balaka district a significant number of respondents live more than 5km from the health facilities. Findings are in line with Grant and Loggie (2005:1) who stated that 90% of the population in Malawi live in rural areas. However, in this study, distance from home to the nearby health facility was not the major influencing factor for the respondents not making use of MCH care services regularly, but the cost of transport to the facilities influenced the utilisation of health services.

## Community resources as factors in Malawi

The public health services funded by the government of Malawi obtain their sources of funding mainly from taxes on personal income and company profits, trade taxes and grants from donors. The private sector complements the public health services in Malawi by giving people the opportunity to choose where to go for health care services depending on whether they can afford to pay for the care. Hence the private sector is regarded as the major source of health care finance in Malawi (Malawi Government, Ministry of Health, 2007). In the Balaka district, with two private health facilities, public health facilities and personnel should also be available to promote utilisation of such services by the community members.

## Need characteristics

Respondents in this study were able to identify their health problems and health needs. However, due to the limited scope of the research, it was not possible to correlate the perceived needs of the women with the needs as evaluated by health professionals.

## Use of health services

### Knowledge about MCH care services

Knowledge of the available MCH care services enables women to decide on how to make use of the services. Women must be knowledgeable about the health services in order for them to use such services (Nankwanga, 2004:9). This is not a problem in the Balaka District as most of the women know the different services available.

### Quality of services delivered

Generally respondents regarded the quality of health care services provided in the four health care facilities of the Balaka District from average to above average. Despite that rating, women expressed dissatisfaction with inadequate staff; inadequate equipment, supplies and treatment; staff's negative attitude towards clients; and lack of confidentiality by staff with regard to clients' confidential information. All of the aforementioned are described in literature (Gage, 2001:1666; Lin, Brimmer, Boneva, Jones & Reeves, 2009:2). Health authorities should take note of these factors that can be addressed by good management practices.

## CONCLUSION

This study highlighted factors that impact on the utilisation of MCH care services specific to the Balaka district of Malawi based on an adapted model of Andersen's

Behavioural Model of Health Services Utilization. Age, occupation or employment, income and transport costs had a significant impact on the regular utilisation of the MCH services. It was found that the women in the study had adequate knowledge of their health needs and the services available. Dissatisfaction with services was cited, highlighting inadequate staffing and insufficient equipment and supplies as well as negative attitudes of health care staff towards clients.

## RECOMMENDATIONS

Recommendations for improving the utilisation of MCH care services in the Balaka district concern the health authorities, service providers, service users and further research.

### Health authorities

The ministry of health in Malawi should consider subsidising the fees for women whose nearest facility for MCH care services is the private and mission health facilities. Such reduced fees may enable women to afford transport to these health facilities. Collaboration with relevant ministries and communities to address employment and poverty in the catchment area of the Balaka District Hospital should take place.

### Service providers

The Balaka district health management team should consider the following: developing strategies to improve and promote mobile MCH care services particularly in the rural areas of the Balaka district; to make services more accessible for women; conducting a needs assessment in order to determine what equipment, supplies and medications are needed to meet the current maternal and child health needs; working together with the TBAs in order to understand the challenges they experience as they participate in assisting women during childbirth in the rural areas of Balaka; co-coordinating health education programmes in accordance with age and culture-related target groups at the different health facilities.

### Service users

Women in the Balaka district need to be encouraged and empowered to improve their financial and social status, which might positively influence their utilisation of MCH care services.

## LIMITATIONS OF THE STUDY

Results could not be generalised to the study population since the final sample was selected through convenience sampling. This method was employed due to time being a limiting factor and logistical problems in contacting possible participants in the Balaka district. The limited scope of this study did not allow for an exploration and verification of the perceived needs against the evaluated needs. Gathering data from health professionals and health workers could have generated useful information.

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