Original Article

Health Care Factors Influencing Teen Mothers' Use Of Contraceptives in Malawi

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SUMMARY

Objective: The study seeks to examine factors associated with teen mothers' use of modern contraceptives after giving birth.

Methods: The 2010 Malawi Demographic and Health Survey data was used to test the study objective. A sample of 12, 911 teen mothers aged between 10 and 18 years were extracted from 23, 020 women and were asked of contraceptive usage after first birth experiences, in which, a logistic regression model was employed to estimate correlates of contraceptive usage.

Results: The study found that 54.8% of the teen mothers are still at a risk of having a repeat teenage pregnancy due to their non-use of contraceptives. This implies that less than 50% of teen mothers use contraceptives after experiencing teen birth. It is noted that health care factors such as use of antenatal care, awareness of pregnancy complications, attainment of primary education and exposure to media predict teen mothers' use of modern contraceptives.

Conclusion: Despite endeavours made by government to improve access to family planning, health care challenges still exist affecting women's use of contraceptives in Malawi. Ameliorating these health encounters call for wide-range approaches aimed at addressing teen birth comprehensively in order to prevent early motherhood and subsequently high fertility.

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INTRODUCTION

In the 21th century, family planning is one of the top 10 public health achievements around the world.[1] Despite this centurion achievement, little gain has been gradually reaped in reducing the average number of birth per woman, especially, in developing countries.[2] Such development continues to challenge women, particularly, young mothers below the age of 19 years.[3] Some studies indicate that the state of teen birth experiences is aggravated by challenges in socio-economic differences.[4, 5]

In developing countries such as Malawi, teenage marriage is still prevalent and substantial proportions of teen births are recurrent.[6, 7] Yet, Article 1 of the Convention on the 1989 Rights of the Child stipulates that child marriage, in which a child is any person below the age of 18, harm the health of these younger women and their babies. It also increases their risk of experiencing childbirth related mortality or else subsequent morbidity compared to their counterparts aged over twenty years.[8] Nevertheless, even though these young married women intentionally fall pregnant due to their assumed socio-cultural marital status, in low resource settings, this development, translates into policy and public health relevance as the younger women become susceptible to risk related to reproductive experiences.[9] In another context, a study in India also found that younger women are more vulnerable to maternal mortality and morbidity due to early motherhood compared to their counterparts aged 20 years or higher.[10]

The Malawi Demographic and Health Survey 2010 report reiterates that teen births in the country are on the gradually increase.[11] For instance, in that year alone, about 71.6 % of the women of reproductive ages had teen birth experiences from as young as 10 to 18 years.

This situation does not only expose the younger women to maternal health challenges resulting in teen maternal mortality but also exposes them to experience other birth related disorders. As such, they fall prey to social stigma to remarriage and relationship instability, compromise in education and participation in the labour force in subsequent years, factors which exacerbate poverty.[12] Such teen births experiences can be avoided if the majority of the women embark on use of contraceptives at an early reproductive stage using health care facilities as the distribution and information centres.[10]

For instance, despite a remarkable achievement in increased contraceptive prevalence rate among women from 13.0 % in 1992 to 46.1 % in 2010, the proportion of teen-motherhood remains over 50% compared to their counterparts aged between 20 and 49 years.[11] In another national study, it attributed this improvement to socio-economic and demographic factors which increase modern contraceptive uptake among women in the country.[13]

Therefore, despite scholars reported to have conducted national studies on women's use of contraceptive's in developing countries, [5,6,10] Malawi included,[13] little has been discussed on the influence of health care factors on women's use of contraceptives, more especially, teen mothers. This study, therefore, seeks to examine the health care factors influencing teen mothers' use of contraceptives in Malawi. The study hypothesized that teen mothers' use of health care services positively increase contraceptives uptake and subsequently improve their reproductive health and socio-economic statuses.

METHODS

Data and study sample

The study employed data from 2010 Malawi Demographic and Health Survey that was obtained from ICF Macro International. Out of a total of 23,020 women that participated in the survey, 12, 911 (56.08%) were teenagers. Therefore, from this teen population, those that had given birth before their 19th birthday were classified and defined as a study population. Further to this, the women that reported to have given birth during their teen years and used contraceptives, thereafter, were identified.

As such, from a sample of 12,911 teen mothers, 5,829 (45.2%) were using contraceptives after childbirth whereas 7,082 (54.8 %) were still experiencing unmet needs for modern contraceptives use even after their teen motherhood experiences. The study used both user and non-users teen mothers to test the study hypothesis.

Variables and measures

The study defined the contraceptive use status among teen-age mothers as the outcome variable. This was defined as 1 where teen mothers used the contraceptives and 0 for otherwise.

On the same note, health care factors that were employed and hypothesised in order to examine contribution of health care factors to teen mothers' use of modern contraceptives after their first pregnancy experience were as follows: antenatal care (ANC) frequency, defined as 0 if ANC frequency was < 4 times and 1 if ANC > = 4 times; availability of health care services, a proxy variable, that was defined using an indicator that was used to report availability of health care providers within the health care facilities and was measured as 1 to mean "no problem" to the health care availability and 0 if " a problem" exists.

Availability of female providers defined as 1 if "no problem" to availability of female health care providers within the health facilities, 0 if "problem" exists. Availability of drugs within the health facilities, defined as 1 if "No problem" and 0 "for otherwise. Distance to access a health care facility which was coded as 1 if "Not a problem" and 0 for otherwise. Further, women's knowledge about pregnancy complications, that was defined as "yes" if a teen mother knew about pregnancy complications and "No" for otherwise.

Education attainment, which was categorised as "no education", "incomplete primary education", complete primary education", "complete secondary education or higher'' and exposure to media, defined as "neither radio nor television", "either radio or television" and "radio and television".

Analytical procedures

The study used bivariate analysis to demonstrate the association between each explanatory variable and the dependent variable. In this case, total frequencies and percentages for each factor category were represented.

Additionally, the measure of association between each independent variable and dependent variable, in turn was estimated using Pearson's chi-square test of association.

Further to this, a binary logistic regression reporting odds ratios was used to estimate the multivariate association between health care factors and women's use of modern contraceptives after teen-motherhood experiences.

RESULTS

Background characteristic of the respondents

The study found that a total of 12, 911 of women were teenagers aged between 10 and 18 years and had given birth within this period.

Table 1 Distribution of health care factors associated with teen mothers and contraceptive use status

Variables	**Contraceptive Usage status among Teen mothers**				
	Non-users		**Users**		
	N = 7082(100 %)		N = 5829(100 %)		chi-square
ANC frequency					
< 4 times	608	(8.6)	647	(11.1)	23.03**
>=4 times	6,474	(91.4)	5,182	(88.9)	
Availability of health care facilities					
Problem	2,830	(40.0)	2,391	(41.0)	1.49
Not a problem	4,252	(60.0)	3,438	(59.0)	
Availability of female providers					
Problem	5,533	(78.3)	4,669	(80.1)	7.4*
Not a problem	1,549	(21.9)	1,160	(19.9)	
Access to drugs					
Problem	3,793	(53.6)	3,183	(54.6)	1.41
Not a problem	3,289	(46.4)	2,646	(45.4)	
Knowledge about pregnancy complications					
No	3,095	(43.7)	2,103	(36.1)	77.3**
Yes	3,987	(56.3)	3,726	(63.9)	
Education attainment					
No education	1,390	(19.6)	2,000	(12.6)	
Incomplete primary	4,387	(62.0)	8,769	(55.0)	663**
Complete primary	1,171	(16.5)	3,810	(23.9)	
Complete secondary or higher	134	(1.9)	1,359	(8.5)	
Exposure to media					
Neither radio nor television	3,412	(48.2)	2,264	(38.8)	114.8**
Either radio or television	3,200	(45.2)	3,072	(52.7)	
Radio and television	470	(6.6)	493	(8.5)	
Hint: ** p < 0.001; * p <0.05					

Out of these teen mothers, about 44.1% (5,829) were using contraceptives after childbirth whereas 54.8% (7,082) were not. Therefore, among the women who used the contraceptives after childbirth, as presented in Table 1, the study further found that about 88.9% of the teen mothers had visited ANC services for at least 4 times compared to their counterparts who had less than 4 ANC visits during their pregnancy period. In terms of availability of female health providers in relation to contraceptive use status, about 80.1% of the teen mothers reported using contraceptive had problems to access the services of female health providers with the health facilities corresponding to 78.3% of their counterparts who were indifferent to use of contraceptives after giving birth.

In as far as women's knowledge related to pregnancy complications and use of contraceptives after giving birth, the study found that 63.9 % of teen mothers who were knowledgeable of their pregnancy complications were using contraceptives in Malawi. Considering teen mothers' educational attainment among contraceptive users, about 55.0% of them did not complete primary education.

It is worth noting that, a small proportion of these teen mothers, which was an equivalence of 8.5 %, had completed their secondary education level. In terms of exposure to media, it was found that 52.7% of teen-mothers with access to either a radio or a television within their households used contraceptives after childbirth compared to 45.2% of their counterpart not using contraceptives after childbirth.

In terms of exposure to media, slightly over a third (38.8%) of teen mothers who were using contraceptives after childbirth had neither radio nor television within their households whereas 52.7% which represented the majority had either the radio or the television.

Considering bivariate association of the teen mothers characteristics in association with contraceptive use, it was found that frequency of ANC utilization, teen mothers knowledge about their pregnancy complications, education attainment and exposure to media were statistically and significantly associated with teen mother's use of contraceptives after child birth in Malawi, all highly at $p < 0.001$.

Availability of female health providers within the health facilities influenced moderately yet significantly towards women use of modern contraceptives after teen birth experience. The Table 1 above illustrates details of health care factors in relation to women status in use of contraceptives in Malawi.

In a binary logistic regression, the study found that use of contraceptives among teen mothers was associated with their primary school attainment (OR = 1.14, 95% CI [1.02 - 1.28], p < 0.001), exposure to either radio or television (OR = 1.35, 95% CI [1.26 - 1.45], p < 0.05) and their exposure to both radio and television (OR = 1.47, 95 CI [1.28 - 170], p< 0.001).

On the contrary, it was established that teen mothers use of ANC service facilities after childbirth (OR = 0.59, 95% CI [0.54-0.64], p < 0.001) was associated with insignificant reduction of the teen mothers' use of contraceptives after giving birth. It is worthy to note that absence of female health providers, unattainability of drugs and inability to access health care facilities due to distance barrier insignificantly decrease their likelihood to use contraceptives after giving birth. Table 2 provides the multivariate binary logistic regression results.

Table 2 Logistic regression model results of health facility factors association with contraceptives among teen mothers in Malawi

Variables	**Contraceptive use among teen- mothers**	
	Adjusted Odds Ratio	**95% CI**
ANC frequency		
< 4 times	1	
>=4 times	0.59**	[0.54 -0.64]
Availability of health care facilities		
Not a problem	1	
Problem	0.94	[0.86 -1.04]
Availability of female providers		
Not a problem	1	
Problem	0.91	[0.83 -1.00]
Access to drugs		
Not a problem	1	
Problem	0.99	[0.89 -1.09]
Distance		
Not a problem	1	
Problem	0.99	[0.96 -1.11]
Knowledge about pregnancy complication		
No	1	
Yes	1.04**	[1.15 -1.32]
Education attainment		
No education	1	
Incomplete primary	1.05	[0.96 -1.14]
Complete primary	1.14*	[1.02 -1.28]
complete secondary or higher	1.05	[0.81 -1.36]
Exposure to media		
neither radio nor television	1	
either radio or television	1.35**	[1.26 -1.45]
Radio and television	1.47**	[1.28 -1.70]
Hint: ** p < 0.001; *p < 0.05; CI implies Confidence Interval.		

DISCUSSION

Using 2010 Malawi Demographic and Health Survey data, the study examined health care factors influencing teen mothers' use of contraceptives in the country.

The study found that variations in health care factors exist and influence women's decision on use of modern contraceptives after teen birth experience.

The study found that teen mothers' utilization of ANC facilities for prenatal care attention indicates that those teen mothers who had more than 4 times ANC visits were less likely to use modern contraceptives.

A previous study attributed such unexpected tenet to quality of service challenges which oftentimes discourages women or do not provide a requisite information in order to motivate them on the knowledge and utilization of existent diverse contraceptive method mix among women, let alone, the teen-mothers.[14]

From another perspective, a study in Guatemala found that improved primary health care service delivery was associated with an increased proportionate number of women using maternal health service facilities, family planning services included.[15]

The present study found that problems associated with access to health care facilities were less likely to influence teen mothers' use of modern contraceptives after giving birth. It is worth to point out that such development increased the likelihood risks to early maternal morbidity and mortality experiences among teen mothers, a situation that can be circumvented if they can have access to contraceptives after teen birth.

This result concurs with an earlier assertion that as women have accesses to the health care facilities their willingness to use contraceptives increases.[7] Yet in Malawi, access challenges to contraceptives and inadequate promotion challenges among women affects their method choices and subsequent low modern contraceptive use among them.[14] This can be fostered by quality of care delivery, a factor that has been proved to have motivated women's use of maternal health services administered through public health care facilities.[16]

Knowledge about pregnancy complications was associated with increased use of modern contraceptives among teen mothers. Previous study argued that early knowledge of pregnancy complications not only influences women to adopt use of facilities services but also prevents early motherhood experiences and subsequently reduces maternal deaths and morbidity in the long term.[17] If such knowledge is well communicated to the women, it has the advantage of providing an effective preventive strategy among women to avoid pregnancy.[16]

Over time, studies have postulated that increased women education status has a significant effect on increasing use of contraceptives.[7,18]

The findings of the present study echo the same in that as teen mothers complete primary education, their likelihood of use of modern contraceptives increases significantly. However, as primary education level is a starting point for one's attainment of formal education,[19] it would be ideal that promotion of use of contraceptives commences at primary education level particularly with senior scholars. This is because as teen mothers completed primary education, their use of contraceptives increased significantly.

However, in the current study, despite the fact that 45.2% of women reported use of contraceptives after teen motherhood experiences, the prevalence of use is very low. Impliedly, despite Malawi's report of increased contraceptive prevalence over time, in the current study, teen mothers who completed primary school education have unmet need on use of contraceptives after childbirth.

In as far as exposure to media among teen mothers in relation to contraceptive use in Malawi is concerned, the study found that both exposure to radio or television and exposure to both radio and television significantly increases teen-mothers' use of contraceptives in Malawi. The study concurs with an earlier study's finding that postulated and attributed increased use of contraceptives to exposure to electronic audio media like radio and other forms of print media as posters and health magazines contributed positively towards women's use of contraceptives in general.[14]

This present study asserts that as teen mothers are exposed to media their likelihood to seek improved reproductive health behaviours increase compared to women with neither exposure to media. Similarly, in Nigeria, it was observed that reproductive information dissemination through engaging women at the time they are using primary health care services increased women's use of maternal health care services.[18]

In another aspect, the study found some inability to access health care facilities to negatively influence women use of contraceptives in Malawi. For instance, the study established that as teen mothers' experience problems of distance, unavailability of female health care providers and either direct or indirect cost associated with access to drugs reduced the likelihood of women's use of contraceptive in Malawi, insignificantly.

On the contrary, different studies attributed the situation to a number of factors. For instance, a study pointed out that direct or indirect cost associated with user fee not only affect women's access to the modern reproductive health services but also their rate of use of the services as well as subsequent delays in women's health improvement[20]. In another contrary situation, in Kwazulu Natal, South Africa, it was found that such access challenges can be reduced if extensive campaigns coupled with provision of community based kiosks, in order to reduce any forms of access barriers to maternal health care services and products, support in reaching out to those with access challenge and promote extensive use of health care service facilities among women's adoption and use of modern contraceptives.[21] Such situation can motivate women's use of contraceptives if and only if any health care service access barriers are reduced through health subsidy programs aimed at promoting teen mothers reproductive health outcomes.

Distance was not a determinant of women's use of contraceptives in general[18] and in Malawi an earlier assertion pointed out that close proximity within 5-10 km radius of the health care facilities has had a significant impact on promoting women's use of family planning in the country.[22]

CONCLUSION

There are a number of points that the study concludes. Firstly, ANC utilization for more than 4 times relates lowly with teen-mothers' use of modern contraceptives in Malawi. There is need therefore to have a concerted effort to promote teen-mother based family planning education at the time they are visiting prenatal care services if ANC service delivery is to act as a medium to disseminate use of contraceptives and promote subsequent use of contraceptives after teen motherhood in the long term.

Secondly, in order to improve contraceptives preference rate among the teen mothers, there is need to introduce adolescent health promotions at community levels, using either community school based awareness campaigns in which better informed community-based nurses engage young girls on the advantages of contraceptive use to their socio-economic development and provide incentives to best performers.

Such a strategy is not only going to promote teen-mother's use of contraceptives and promote awareness of the benefits and significance of contraceptive methods to their health well-being but will also ensure subsequent gain in economic dividends and support in future socio-economic development of the country.

Therefore, there is need for government and its collaborating health partners to extensively invest in and promote use of contraceptives to teen mothers using community-based interventions among women who have pregnancy complications during pregnancy in order to promote use of contraceptives and reduce the risk of ill-maternal health as a result of pregnancy condition. Furthermore, there is need to facilitate pro-teen-mother based advocacy program interventions on significance of each contraceptive and contraceptive method mix if contraceptive uptake is to increase in order to achieve low fertility and improved reproductive health dividends in Malawi.

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