Original Research Article

Knowledge, attitude, and practices: assessing community based health care interventions in urban setting

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ABSTRACT

Background: The urban community based Maternal, and Child Health-MCH interventions were implemented in district one of Kabul city from 2013 to 2016. The study intended to assess the changes in mothers' knowledge, behaviors and practices toward proportions of birth spacing, Ante Natal Care-ANC visits, vaccinations and health care utilization to estimate interventions success.

Methods: To measure the success of implemented interventions, the data were collected from the intervention and the control districts. The district two was selected as control as it had similar demographic characteristics to district one. Semi structured interviews were conducted with randomly selected 341 mothers in district one and 341 mothers from district two.

Results: The proportions of mothers who ever wished to utilize a contraceptive method, practiced birth spacing, knowledge about the date that the baby was expected to arrive, preference to give birth in a health facility and completion of all ANC visits were significantly higher in intervention district.

Additionally, the proportions of under five children who did not complete all scheduled routine vaccinations were lower in intervention district. It is likely, that implemented interventions have contributed to improve MCH knowledge, attitude and practices in intervention district.

Conclusions: The result of study imply that interventions contributed to the increase in mothers' knowledge and attitude about birth spacing. The interventions have also improved the level of knowledge about expected date of delivery and attitude to prefer giving birth in health facility. While, there is still room for improvement as almost half eligible children in intervention district did not complete all scheduled vaccinations.

Keywords: Attitude and practices, Knowledge, Maternal and child health, Urban community based health care

INTRODUCTION

Health services in Afghanistan focus on maternal and child health, the shortage of female workers is a major problem. Current BPHS focus in rural areas.¹

Kabul, the capital city of the country with three million people has faced particularly huge difficulties. The continuing influx of migrants has generated numerous

illegal residents, which is estimated to account for 80 percent of the entire city's population. Most of them are so-called "urban poor," and they have no access to health care except for public health facilities where the services are provided for free.

Public health care in Kabul is very poor due to the limited capacity and lack of health care providers, chronic shortage of medicines, insufficient and out-of-date

equipment, disorganized and inefficient management, and frequent relocation of facilities due to lack of funds for rent. Under these circumstances, access to decent health care is hard to come by for the urban poor.²

Maternal and newborn deaths occur predominantly in urban areas. Community-based packages of evidence-based interventions and skilled birth attendance can reduce these deaths.³

To address the lack of quality health care available to people in Kabul city, establishing community based urban health interventions were deemed essential.

Thirteen Community Health Workers-CHWs and four community midwives were trained from 23 target communities in district one of Kabul city in 2013. The CHWs and midwives raised awareness about mothers and children's health and implemented basic health interventions. The set of urban community based health interventions comprised: 1) Undertaking community based surveillance of mothers of reproductive age. 2) Organizing health education sessions on safe motherhood, child care, and birth planning for mothers enrolled in surveillance. 3) Establishing community support groups to facilitate peer to peer education on pregnancy danger signs, pregnancy complications, and accessing quality care 4. Establishing Community Health Centers-CHCs, where basic uncomplicated cases were received by community midwives. The community midwives are stationed in CHCs.

Urban community based health care interventions for mothers and children have increasingly drawn international attention. These interventions are perceived essential to improve awareness and education of mothers so they are empowered as agent at family and community level to effectively influence health outcomes.⁴

In Afghanistan, socioeconomic indicators show a mixed picture of progress and challenges. Under 5 mortality rate is 97 and maternal mortality ratio is 327. These indicate a significant progress throughout last decade while chronic malnutrition is very high as its accounts for 39 % of all under 5 children.⁵ The indicated gains can be doubled if the attention is also paid to urban health.⁶ The urban BPHS is not implemented thoroughly and doesn't have a community focus.

This study aims to measure changes in mothers' knowledge, behaviors, and practices after implementation of urban community based health interventions.

METHODS

KAP survey is a quantitative method (predefined questions formatted in standardized questionnaires) that provides access to quantitative and qualitative information. MNCH KAP surveys reveal misconceptions or misunderstandings that represent obstacles to the

activities. KAP survey essentially records an "opinion" and is based on the "declarative" (i.e., statements).⁷

We used a KAP survey methods. In survey, the changes in mothers' knowledge, behavior, and practices toward birth spacing, ANC visits, labor, delivery, and vaccinations through urban community based health interventions were assessed by comparing the findings from intervention and control districts.

A cross sectional face to face survey was conducted. The respondents comprised 341 mothers from intervention district and 341 mothers from control district. The sample was calculated based on 95 % confidence interval.

The study utilized a semi structured questionnaire. The questionnaire captured information on mothers' age at first pregnancy, mothers' education level, health situation of their children, their current pregnancy, ANCs, assisted delivery, and children vaccination coverage.⁸

District two was selected as control as it had similar public health profile and socioeconomic characteristics with districts one (Table 1). There were no urban community health interventions implemented in district two so far.

Table 1: Respondents characteristics.

Characteristics			
Age percentage	District 1	District 2	Grand total
1-10	0.28%	0.53%	0.41%
11-20	3.36%	7.11%	5.29%
21-30	46.50%	37.37%	41.79%
31-40	41.18%	40.79%	40.98%
41-50	8.68%	14.21%	11.53%
Age Std Dev	6.89	8.19	7.59
Education			
Never attended school	65.82%	61.83%	63.77%
Pre-primary /Nursery	9.60%	11.02%	10.33%
Primary, not completed	11.02%	10.48%	10.74%
Primary, completed	6.50%	7.80%	7.16%
Secondary, not completed	2.82%	2.96%	2.89%
Secondary, completed	3.67%	4.57%	4.13%
College/University	0.28%	0.81%	0.55%
% mothers who have ever been pregnant			
Yes	98.87%	98.41%	98.63%
No	0.56%	1.33%	0.96%
Age at first pregnancy			
0-9	1.12%	1.06%	1.09%
10-19	56.30%	76.13%	66.49%
20-29	42.30%	22.81%	32.29%
30-39	0.28%	0.00%	0.14%
Mean number of living children per household			
	4.56	5.03	4.80

There is no significant difference in both districts in terms of age, education, age at first pregnancy, and mean number of living children.

Data analysis

Data obtained from cross sectional survey were analyzed, using SPSS for Windows version 22. Statistical comparisons between intervention and control districts were conducted. To assess the difference in proportion of categorical variables Chi-square test was employed.

Ethical consideration

The semi structured questionnaire included a section on respondents' consent and the data collectors were reading the consent seeking verbal consent. All necessary information to inform participants about (1) the purpose of the research, expected duration, and procedures; (2) their right to decline to participate and to withdraw from the research once participation has begun; (3) the foreseeable consequences of declining or withdrawing (5) limits of confidentiality; (6) incentives for participation; and (7) whom to contact for questions about the research and research participants' rights. They provide opportunity for the prospective participants to ask questions and receive answers.⁹

RESULTS

Birth spacing and contraceptive use

Mothers were asked if they had ever wished to use contraceptive methods to delay or avoid pregnancy. Overall, 94.37% of mothers in intervention district and 57.22% in control district reported desire of using a contraceptive method. The desire to use contraceptive methods was as twice as high in intervention district than control district.

The same pattern was shown for actual use, with 91.71% of mothers in intervention district and 51.27% in control districts used modern birth spacing methods. Table 2 provide detailed information on birth spacing and contraceptive use in both districts.

Table 2: Birth spacing and contraceptive use.

% wished to delay pregnancy or space births				
Variables	District 1 (n=355)	District 2 (n=367)	Chi- Test	P value
Yes	94.37%	57.22%	4.15	0.041
No	5.63%	42.78%		
(blank)	0.00%	0.00%		
Grand total	100.00%	100.00%		
% used any birth spacing methods				
Yes	91.71%	51.27%	2.95	0.085
No	8.29%	48.73%		

Ante natal care visits

99.47% of mothers in intervention districts and 78.65% in control district had at least one antenatal check up with a skilled provider. On average, mothers in intervention district completed 4.9 ANC visits comparing to 2.03 in control district. This suggests that number of ANC visits in intervention district is significantly higher than control one. In maternal health care, the timeliness of ANC visits is essential for mothers and child's health. 69.59% of mothers in intervention district and 30.43% in control district pursued their first ANC visit within first three months of pregnancy. The knowledge on expected date of delivery, having plan for delivery and the attitude to give birth in a health facility are also higher in the intervention district. Table 3 provides detailed information on ANC visits in both districts.

Delivery and labor

Mothers are considered to have a skilled birth attendance if a doctor, nurse, midwife attended their delivery either in health facility or their home. The study determined that 96.63% of mothers in intervention district and 59.61% in control district gave birth in a health facility. This suggests that urban community based interventions have likely contributed to increased institutional delivery in intervention district.

Appropriate planning and arrangement for transportation during pregnancy are life-saving interventions. 70.20% of mothers in intervention district and 17.22% in control district had transport arrangement during last pregnancy.

The final decision on where a woman would give birth was mostly made by mothers dissimilar to control district. In control districts the decision is mostly made by the husband or mother in laws.

At impact level, there is no much difference among both districts in terms abortion and miscarriage. Improving health outcomes require sector wide approaches. The last mentioned requires improvement in economy, education, life style, good nutrition, and housing.

Under 5 vaccination coverage

Overall, 92.88% of mothers in intervention district and 65.63% in control district could show their children vaccination card. If mothers were unable to show the vaccination card, the respondents were asked to recall their children immunization history. The findings show that coverage varies by vaccines. Although, some vaccines reached majority coverage but 42.09% of eligible children in focus district and 57.91% in control district didn't complete all required routine vaccines.

Table 3: ANC.

Health checkups (antenatal care)				
	District 1 (n=389)	District 2 (n=314)	Chi-test	p < 0.05
Yes	99.43%	78.65%	2.15	0.143
No	0.57%	20.81%		
Within the first 3 months	69.57%	30.43%	1.50	0.471
Between 3 and 6 months	45.75%	54.25%		
Within the last 3 months	40.24%	59.76%		
Average # of ANC visits during last pregnancy				
0-3	2.25	1.74		
4-7	5.13	5.13		
8-11	8.84	8.33		
Accumulative average	4.98	2.03	5.79	0.016
Knowing the date that the baby was expected to arrive				
Yes	67.24%	6.23%	4.67	0.030
No	32.48%	93.50%		
Having a plan before delivering the baby				
Yes	67.24%	6.23%	5.56	0.018
No	32.48%	93.50%		
Preference on place to delivery baby				
Health facility	96.63%	59.61%	5.14	0.023
Home	2.81%	40.39%		
Gender who provided ANC care				
Men	3.95%	1.27%		
Mothers	95.20%	95.54%		

Table 4: Place of delivery and decision making.

Variables	District 1 (n=349)	District 2 (n=360)	Chi-test	P value
Preference on place to deliver the baby				
Health facility	96.63%	59.61%	5.14	0.023
Home	2.81%	40.39%		
Transportation arrangement in case of emergency or pregnancy complications				
Yes	70.20%	17.22%	5.09	0.024
No	29.23%	81.94%		
Final decision on where to give birth				
Myself	62.50%	37.50%	1.55	0.907
My husband	53.62%	46.38%		
My mother in law	39.85%	60.15%		
Other relative	66.67%	33.33%		
Other (specify)	25.00%	75.00%		
# of mothers whose pregnancy, miscarried, aborted, or ended in a stillbirth				
Yes	49.44%	50.56%	0.69	0.405
No	47.91%	52.09%		

DISCUSSION

The study confirmed the likelihood of contribution of urban community based health interventions in making positive changes in birth spacing, ANC visits, labor, delivery, and health care utilization, there are needs to further improve vaccination coverage. Birth spacing and family planning is a global concern, particularly, in developing countries where the fertility rates are high. To

address high fertility rates, community based interventions have been evidenced as effective.¹⁰

In the study area, the community based health interventions helped significantly increase the attitude pertaining birth spacing. 94.37% of mothers in intervention district and 57.22% in control district reported a desire of using contraceptive methods ($P < 0.041$).

ANC is a preventive public health intervention to ensure healthy pregnancy outcomes and improve survival and health of newborns.¹¹

On one hand, 99.47 % of mothers in intervention districts and 78.65% in control district had at least one antenatal check up with a skilled provider. There is not sufficient evidence that the increase in intervention district is due to CHWs and community based health center efforts ($P=0.143$). On the other hand, in intervention district, pregnant mothers on average completed 4.9 visits and in control district completed 2 ANC visits. The difference in terms ANC completion in both districts is significant ($P<0.016$). This implies that the community based interventions are likely to have effectively convinced pregnant mothers in intervention district to ensure three or more ANC visits during last pregnancy.

Attended childbirth is a key component of most developing countries' primary care strategies and a core part of the essential package of health services.¹²

96.63% of mothers in intervention district and 59.61 % in control district gave birth in a health facility. This suggest that urban community based interventions have contributed to increased institutional delivery in intervention district ($P<0.023$).

An effective emergency referral transport system is the link between the home of the pregnant woman and a health facility providing basic or comprehensive emergency obstetric care. Studies have indicated the essential role of emergency transport associated with reduction of maternal deaths in many developing countries.¹³

The interventions also helped to observe a significant change in planning and arrangement of transportation during emergency in intervention districts ($P<0.024$).

The initiative to involve husband in maternal care has rightly contributed to better planning and transport arrangement in intervention district.

Childhood vaccination is a widely accepted public health intervention that is cost effective at reducing child mortality and morbidity. In 2005, the WHO and UNICEF developed the Global Immunization Vision and Strategy (GIVS) with the goal of reaching 90% completed vaccination coverage for key childhood vaccinations in all countries by 2010.¹⁴

Immunization against childhood diseases such as tuberculosis, poliomyelitis, measles, diphtheria, whooping cough and tetanus reduce childhood morbidity and mortality. Studies have shown that the cost to treat a vaccine preventable disease may be up to 30-times more than the cost of the vaccine. Children who contract these preventable diseases usually suffer from impaired

physical growth, cognitive development, emotional development, and social skills.¹⁵

42.09% of eligible children in focus district and 57.91 % in control district didn't complete all required routine vaccines. This means the interventions should have further been improved in intervention district.

CONCLUSION

The result of study imply that urban community based health interventions contributed to the improved knowledge, behavior, and practices pertaining birth spacing, contraceptive use, ANC visits, labor, delivery care and decision making. While there is room for improvement on abortion, miscarriage and completion of all required vaccination, the study confirmed that urban community based health care intervention plays an essential role improving others and children's health. It is suggested so the package of urban community based interventions are incorporated in urban BPHS.

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