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Integrating adolescent-friendly health services into the public health system: an experience from rural India

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ABSTRACT

Background: Although India's health policy is directed toward improving adolescent reproductive health, adolescent-friendly health services are scarce. The intervention for "integrating adolescent-friendly health services into the public health system" is an effort to improve the health status of adolescents in rural areas of the Varanasi (Arajiline) and Bangalore (Hosakote) districts in India. The purpose of this article is to describe the features of the intervention and investigate the impact on improving awareness and utilization of services by adolescent, as well as quality of ARSH services in the intervention districts.

Methods: Data from project monitoring, community survey (737 adolescents), exit interviews (120 adolescents), assessment of adolescent sexual and reproductive health clinics (n = 4), and health service statistics were used. Descriptive analyses and paired t-tests were used to compare the two intervention districts.

Results: Overall, the percentage of adolescents who were aware of the services being offered at a health-care facility was higher in Hosakote (range: 56.2% to 74.7%) as compared to Arajiline (range: 67.3% to 96.9); 23.3% and 42.6% of adolescents in Arajiline and Hosakote typically sought multiple services at any one visit. A large percentage of clients (Arajiline: 81.7%; Hosakote: 95.0%) were satisfied with the services they received from the facility. The relative change in uptake of services from the first quarter (January to March 2009) to the last quarter (October to December 2010) was significantly higher in Arajiline (7.93, P = 0.020) than in Hosakote (0.78, P = 0.007).

Conclusion: The intervention had positive results for the public health system and the services are being scaled up to different blocks of the districts, under a public–private partnership.

Key words: Adolescent, India, reproductive sexual health.

INTRODUCTION

Adolescence is a critical phase in young people's development. Their health situation in this phase is central in determining scenarios of health, mortality, morbidity and population growth.[1,2] India's National Family Health Survey-III (2005–2006) showed that 44.5% of women aged 20–24 years are married by the age of 18 years, and 16% of women aged 15–19 years are already mothers or pregnant. Among women who are currently married, the unmet needs for methods of family planning are highest in the age group 15–19 years (27%).[3] Data from India's National AIDS Control Organization show that among all cases of new HIV infection, almost 50% are young people, especially adolescent girls.[4] Three out of four men know that the risk of HIV/AIDS can be reduced by condom use and by limiting sexual intercourse to one uninfected partner; however, fewer than half of women know about these means of HIV/AIDS prevention.[3] Experiences from different countries have shown that investments in adolescent health will yield dividends in terms of delaying the age of marriage, reducing the incidence of teenage pregnancies, meeting unmet needs for contraception, reducing the number of maternal deaths, reducing the incidence of sexually transmitted infections (STIs), and reducing the proportion of HIV-positive cases in the age group 10–19 years.[5–7] Thus, there is a broad public health rationale for making such investments.

Given that young people tend not to use existing reproductive health services, some of the specific concerns expressed by young people are a belief that the services are not intended for them, concern that the staff will be hostile or judgemental, fear of medical procedures and contraceptive methods, concern over lack of privacy and confidentiality, fear that their parents might learn of their visits, embarrassment at needing or wanting reproductive health services, and shame, especially if the visit follows coercion or abuse.[8–14] After the World Health Organization (WHO) global consultation in 2001, and subsequent discussions, it was agreed to establish specialized approaches to attract, serve, and retain young clients and that these should have a greater emphasis on information, psychosocial support, and promotional and preventative health services.[15] The provision of youth-friendly health services is one such strategy to influence the health-care-seeking behaviour of adolescents/youths and, in turn, impact their health indicators positively. The term "youth-friendly health services" generally refers to programmes that seek to improve the access to and quality of existing health services, specifically by making them more acceptable to adolescents.[8–10] Among the efforts being made to improve the health status of adolescents in India, one is the inclusion of appropriate strategies under the National Rural Health Mission of the Government of India, to emphasize the establishment of adolescent-friendly health services within the existing public health system.[6,11,12] The main features of the services are: competent health-care provider; accessibility and affordability; privacy and confidentiality; community involvement; outreach; and peer-to-peer activities to improve coverage and sensitivity to gender issues.[6]

Available evidence from various interventions conducted with young people indicates that integrated services, delivered through the health-care system, constitute one of the most effective ways of delivering reproductive health services.[14–18] This is a huge challenge in low- and middle-income countries such as India, because of various cultural and social barriers. Thus, it is important that this service integration is done in a careful manner without disrupting the available system. The MAMTA Health Institute for Mother and Child (MAMTA),[19] with support from the Ministry of Foreign Affairs of Finland, began a project[1] on "integrating adolescent-friendly health services into the public health system in rural India", with the primary aim to improve the utilization of services by adolescents, which was consistent with the goal set by the Government of India and the Millennium Development Goals.[20] The project was implemented from January 2008 to December 2012 in the Arajiline block of Varanasi district (state – Uttar Pradesh, North India) and the Hoskote block of Bangalore rural district (state – Karnataka, South India). Besides the willingness of the government leadership, a composite index based on reproductive health indicators (Varanasi: 38%; Bangalore rural: 73%) was considered for selection of two different areas for intervention.[3,21]

Strategies for the project were focused to (i) create a supportive environment for sexual and reproductive health (SRH) services for adolescents; (ii) strengthen the capacity of the public health system to offer adolescent-friendly health services; (iii) increase awareness among members of the community about HIV/AIDS, STIs, contraception, and adolescent sexual and reproductive health (ASRH) services. The direct beneficiaries of the intervention were males and females in the age group 10–24 years. Indirect beneficiaries included district-level officials in the Department of Health and Family Welfare; block-level health officials; members of local government, such as village heads and members of the Village Health and Sanitation Committee; medical service providers; frontline workers, including auxiliary nurse midwives (ANMs), accredited social health activists (ASHAs), anganwadi workers, school teachers and parents; and community members.[22–24] By enhancing the capacity of existing health-care facilities to reach adolescent- and community-based processes, the project aimed to create a functional model of service provision that would lead to increased use of the services.

Under MAMTA's programme, a total of six training sessions were conducted and 308 service providers (eight doctors, 70 paramedical staff and 230 frontline functionaries) of respective ASRH clinics were trained using standard modules developed by the Government of India.[6] In addition, 26 youth information centres (YICs; Varanasi: 12; Bangalore: 14) were established in the community, with support from village gatekeepers, with an intended coverage of 5000 population per YIC. A YIC is a community-based process at the village level to raise awareness and sensitivity among adolescents with respect to ASRH services, in an engaging and entertaining manner, improving their health-seeking behaviour. Key activities conducted at YICs are: (i) counselling on the issues of adolescent health, growth and puberty, early marriage, contraception, HIV/AIDS, reproductive tract infection (RTI)/STI, nutrition and mental health; (ii) "infotainment" and entertainment activities such as indoor games, exhibitions, competitions, debates and discussions on the issues of adolescent SRH and rights. Similar to other interventions,[7,25,26] sensitization of community gatekeepers, involving young people directly in community mobilization, person to-person counselling, participatory learning, and action approaches were used in the outreach component that was found to be effective to improve service utilization.

The purpose of this article is to describe the features of MAMTA's intervention and investigate the impact on improving awareness and utilization of services by adolescent, as well as quality of ARSH services in the selected rural districts of India during the period January 2008 to December 2010.

METHODS

Data collection

Multiple sources of data were used to evaluate the implementation of the project.

- **Project monitoring data:** a monitoring information system was prepared by MAMTA to review quarterly programmatic data for feedback, and to make the project more responsive to district needs. Data were routinely collected by programme managers and outreach workers.

1 Project details are available from the authors on request.

Monitoring indicators in the project are mainly process oriented. Some of the indicators are: the number of YICs established; the number of adolescents visiting YICs; the number training sessions for health-care providers conducted; the number of health-care providers reporting on ASRH; and the number of community gatekeepers who are sensitized to adolescents' needs.

- **Health service statistics from the ASRH clinics:** during the intervention period, health-care providers were helped to establish separate record of the uptake of services in ARSH clinics. Before the intervention period, no record was available separately for adolescents. These data were used to assess the uptake of services.
- **Data from two primary studies conducted by MAMTA**:
  - from December 2010 to April 2011, a cross-sectional study was conducted to measure the utilization of and level of satisfaction with adolescent-friendly health services. Respectively, 18 out of 217 villages and 17 out of 333 villages in Arajiline and Hosakote were selected, based on a method of probability proportional to the population size. From a list of adolescents in each village, 12 girls and 12 boys aged 10–19 years were selected, using a systematic circular sampling method. The actual sample coverage during the survey was 737 adolescents (383 males; 354 females), with a response rate of 88%. Data were collected using a close-ended quantitative questionnaire based on the WHO tool on adolescent-friendly health services.[27] In the questionnaire, information was collected on utilization of services by adolescents; reasons for visiting ASRH clinics; perception regarding the attitude of service providers; privacy and confidentiality; and satisfaction with the services;
  - from January to April, 2012, a cross-sectional study was undertaken at the intervention sites to assess the ASRH clinic from the clients' perspectives and the role of the outreach community-based approach in improving access to services;
  - an exit interview of 120 clients (equal number of males and females, aged 10–19 years) who received services at clinics was selected using a consecutive sampling technique from the four ASRH clinics (30 clients in each clinic). A semi-structured quantitative questionnaire developed for the exit interviews covered many domains, including demographic characteristics, time spent on client–provider interaction, perception about privacy and confidentiality, the role of YICs, and the level of satisfaction;
  - four ASRH clinics (two clinics in each district) were selected purposively to obtain information on staffing, training, infrastructure, supplies, and the package of services offered, using a structured questionnaire;[28]—

Both of these studies were designed and conducted by the Research Unit of MAMTA head office, Delhi, in partnership with the programme-management teams. Trained research investigators were deployed for data collection, and analysis was performed by the senior researchers. The senior management team was involved throughout, to ensure the quality of the data generated. Institutional Review Board approval was obtained on the use of data for the research purpose only.

Data analysis

Programme-monitoring data were analysed to compare the planned intervention activities with the achievements. A descriptive analysis of data collected through community survey, exit interviews and facility assessment was done to assess the awareness and quality of the services. Service statistics of ASRH clinics were used to present the quarterly uptake of services by adolescents, in terms of the relative change from January 2009 to December 2010. As baseline data on intervention are not available, data from the first few months at the start of the intervention were compared with those from later in the intervention. The paired *t*-test was used for comparison and *P*-values of less than 0.05 were considered to be significant.

RESULTS

Table 1 shows the main activities and outputs of the intervention during the implementation phase (year 2008–2010) in the two intervention districts. Overall, it appears that most targets were met, and some were surpassed in both districts (e.g. establishment of ASRH clinics and YICs and sensitization meetings). However, some activities, such as the number of health-care providers trained and the number of gatekeepers sensitized, did not meet the targets set.

Awareness

Table 2 indicates that 82.3% of the adolescents in Arajiline and 97.2% of those in Hosakote had ever heard of the ASRH clinic. Out of these, a majority of the adolescents in both districts were aware of the site of clinic. Overall, the percentage of adolescents who were aware of the services being offered at a health-care facility was higher in Hosakote (range: 56.2 to 74.7%) as compared to Arajiline (range: 67.3% to 96.9%). Further, in Arajiline, outreach workers of YICs played a key role in spreading information on adolescent-friendly health services (86.4%), while in Hosakote, in addition to outreach workers of the YIC (78.3%), doctors (66.2%), ANMs (60.4%) and ASHAs (53.2%) also played a noteworthy role in spreading information.

Results from the exit interviews illustrated that 88.3% of adolescents in Arajiline and all adolescents in Hasokote had accessed the YIC at least once. In addition, out of those adolescent who had visited the YIC at least once, the majority of (Arajiline: 92.7%; Hasokote: 84.9 %) reported that the YIC staff/activities had motivated them to seek services at the ASRH clinic. Respectively, 41.7% and 56.7% of the adolescents in Arajiline and Hasokote perceived "positive change" in the attitude of adults towards their reproductive and sexual health concerns during the last 2 years (see Table 2)

Table 1: Target and achievement of main project activities conducted in Arajiline and Hosakote during 2008–2010

Main project activities	Arajiline			Hosakote		
	Target	Achievement	% Achieved	Target	Achievement	% Achieved
Number of advocacy meetings conducted with district functionary	9	8	88.9	9	9	100.0
Number of ASRH clinics established at the primary health centres	2	2	100.0	2	2	100.0
Number of health-care providers trained	179	144	80.5	193	164	84.9
Number of ASRH clinics reporting monthly on uptake of services by adolescents	2	2	100.0	2	2	100.0
Number of sensitization meetings organized with community gatekeepers	72	171	237.5	72	223	309.7
Number of community gatekeepers sensitized	397	286	72.0	436	369	84.6
Number of YICs established	6	6	100.0	6	8	133.3
Number of special events celebrated in the community (e.g. street theatre, folk art)	27	18	66.7	27	27	100.0

Source: routine monitoring data of the intervention.

ASRH: adolescent sexual and reproductive health; YIC: youth information centre.

Table 2: Awareness about the adolescent sexual and reproductive health clinic and perceived change in attitude of adults towards sexual and reproductive health concerns in Arajiline and Hosakote

	Arajiline		Hosakote	
	n	%	*n*	%
Ever heard of ASRH clinic[a]	312	82.3	348	97.2
Aware about place of ASRH clinic[a]	272	87.2	346	99.4
Awareness about services offered in ASRH clinic[a]				
Treatment for general illness	233	74.7	337	96.9
Treatment of menstrual problems/irregularities	175	56.2	234	67.3
Treatment of sexually transmitted infections	178	57.0	294	84.6
Pregnancy care and prevention	182	58.3	307	88.3
Advice/information on SRH concerns	191	61.2	286	82.1
Source of information about adolescent-friendly health services[a]				
Outreach worker of YIC	270	86.4	272	78.3
Volunteers/peer educators of YIC	40	12.9	161	46.2
Accredited social health activist	39	12.5	185	53.2
Auxiliary nurse midwife	5	1.5	210	60.4
Doctor	12	3.7	230	66.2
Counsellor	10	3.3	66	19.1
Relatives	6	1.8	7	2.0
Others	15	4.8	96	27.7
n	379		358	
Ever visited YIC[b]	53	88.3	60	100
Motivated by YIC activities to visit ASRH clinic[b]	45	84.9	51	92.7
Perceived change in the attitude of adults towards adolescent's SRH concerns[b]				
Positive change	25	41.7	34	56.7
Partially change	33	55.0	10	16.7
No change	2	3.3	16	26.7
n	60		60	

ASRH: adolescent sexual and reproductive health; SRH: sexual and reproductive health; YIC: youth information centre.

[a]Community survey. [b]Exit interview.

Utilization of services

From the community survey, it was found that 43.5% of adolescent in Arajiline and 84.4% in Hosakote had visited an ASRH clinic in the last 12 months (see Table 3). Out of these, 75.0% of adolescents had multiple visits to the clinic in Arajiline, whereas in Hosakote, 53.3% of adolescents reported multiple visits. Furthermore, in Arajiline, adolescents reported three key health reasons to visit the clinic in the last 12 months, i.e. general illness (13.3%), SRH (51.7%) and STI (35.0%); however, there was little variation reported with regard to the health reasons in Hosakote. Results from exit interviews indicate that, for the majority of clients in Hosakote, the services received were counselling (96.7%) and medical examination (91.7%), whereas in Arajiline, these proportions were only 38.3% and 18.3% respectively. In addition, 23.3% and 42.6% of adolescents in Arajiline and Hosakote, respectively, typically sought multiple services at any one visit (see Table 3).

Figures 1 and 2 portray the quarterly uptake of services by adolescents in ASRH clinics from January 2009 to December 2010, based on the service statistics in both intervention sites. The results show that the relative change in uptake of services from the first to last quarter was significantly higher in Hosakote (7.93, $t = 3.76$, $P = 0.007$) than in Arajiline (0.78, $t = 2.99$, $P = 0.020$).

Quality of services

Table 4 shows various indicators of the quality of services, obtained by facility assessment, community survey and exit interviews. It was found that the sanctioned position of doctors was available in two clinics in Hosakote, whereas in Arajiline a position for one female doctor in a clinic was vacant at the time of the survey. However, at both the intervention sites, all the available doctors were trained on adolescent-friendly health services. Further, there were separate rooms available for clinical examination and counselling in both the clinics in Hosakote, but in only one clinic in Arajiline.

A wide variation was observed in the clinics pertaining to the provision of clean toilets (Arajiline: 15.2%; Hosakote: 68.9%), provision of a clean waiting area (Arajiline: 29.7%; Hosakote: 97%) and availability of drinking water (Arajiline: 42.4%; Hosakote: 88 .1%). Moreover, most of the adolescents (Arajiline: 76.7% and Hosakote: 96.7%) indicated that educational materials (books, magazines, posters, pamphlets) on reproductive and sexual health issues were available in the waiting area during their visit to the clinic (see Table 4)

A total of as 88.3% of adolescents in Arajiline and 86.7% in Hosakote stated that the timings and days of the ASRH clinic were convenient for them to seek the services. The results indicated a "welcoming" attitude of the health-care provider (Arajiline: 65.0%; Hosakote: 76.7%) and an "appropriate" amount of time spent by doctors during interactions (Arajiline: 55.0%; Hosakote: 86.7%). It was also reported that 65.0% and 91.7% adolescent clients in Arajiline and Hosakote, respectively, felt comfortable in talking about SRH-related issues with the doctor in the clinic. The majority of the adolescent clients in Hosakote (96.7%) said that no one else was present during their consultation with doctor. In contrast, 51.7% of adolescent from Arajiline spoke of the presence of support staff/other patients during their consultation with the doctor. Overall, the majority of clients (Arajiline: 81.7%; Hosakote: 95.0%) were satisfied with the services they received from the facility, and the difference was significant ($P < 0.05$; see Table 4)

Table 3: Adolescent visits and type of services availed in adolescent sexual and reproductive health clinics of Arajiline and Hosakote

	Arajiline		Hosakote	
	n	%	*n*	%
Number of adolescent visited ASRH clinic in last 12 months[a]	165	43.5	302	84.4
Number of visits by adolescent in ASRH clinic in last 12 months[b]				
Single visit	15	25.0	28	46.7
Multiple visits	45	75.0	32	53.3
Reasons for adolescent to visit ASRH clinic[b]				
General illness	8	13.3	18	30.0
SRH problems	31	51.7	20	33.3
Sexually transmitted infections	21	35.0	22	36.7
Type of services availed by adolescents in ASRH clinic[b]				
Counselling	23	38.3	58	96.7
Medical examination	11	18.3	55	91.7
Nutrition supplementation	15	25.0	33	55.0
Others (referral)	11	18.3	3	5.0
Multiple services availed by adolescents to ASRH clinic[e]	43	71.7	54	90.0
Multiple services availed by adolescents at single visit to ASRH clinic[b]	10	23.3	23	42.6
n	60		60	

ASRH: adolescent sexual and reproductive health; SRH: sexual and reproductive health.
[a]Community survey. [b]Exit interview.

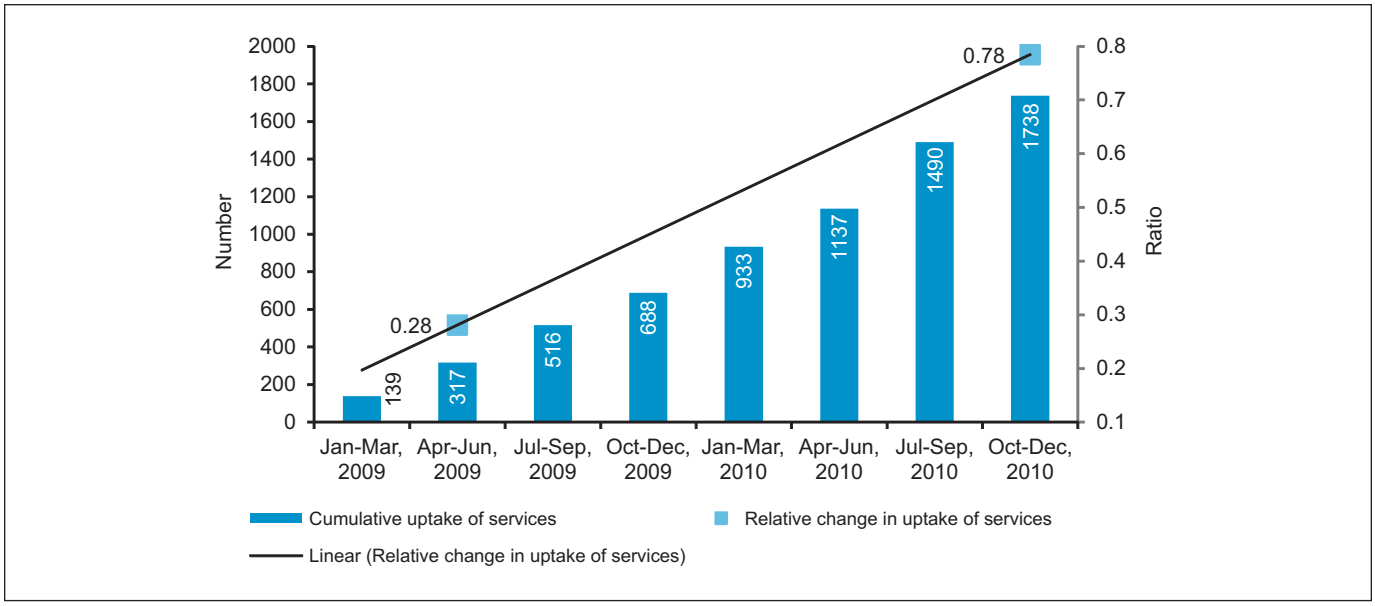

Figure 1: Quarterly uptake of adolescent-friendly health services in Arajiline during 2009–2010

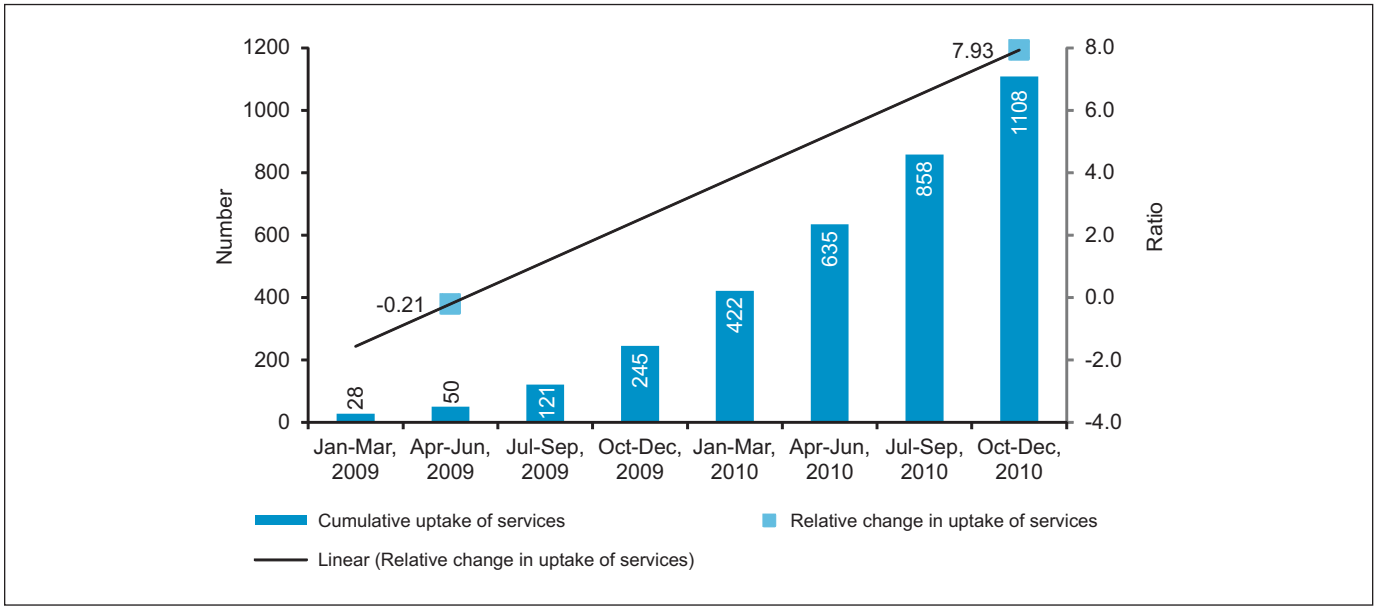

Figure 2: Quarterly uptake of adolescent-friendly health services in Hosakote during 2009–2010

DISCUSSION

The MAMTA intervention started at a time when the public health system did not have an adequate understanding of adolescent-friendly health services and was struggling to reach out to adolescents. Therefore, the intervention activities were undertaken in a very specific context, laid out by national guidelines, so that the public health system could evolve strategies to improve its reach and enhance service utilization. The present study is one of the pioneers in exploring the impact of the intervention on awareness, utilization and quality of services for adolescent in the Arajiline and Hosakote blocks of Varanasi and Bangalore rural districts of India, using multiple sources of data. With the support of the public health system in Arajiline and Hosakote, integrated adolescent-friendly health services were established within primary health care. The levels of most of the intervention activities were organized according to the targets set during the planning phase, with some variation by district and depending on the activity. This may be a result of frequent changes of community volunteers in the project and vacant positions for health-care providers.

Table 4: Quality of services in adolescent sexual and reproductive health clinics of Arajiline and Hosakote

	Arajiline		Hosakote	
	n	%	*n*	%
Facility assessment				
Availability of sanctioned staff[1]	2	100.0	2	100.0
Availability of staff trained on adolescent-friendly health services	1	50.0	2	100.0
Availability of separate room for clinic	1	50.0	2	100.0
Signage of ASRH clinic available	2	100.0	2	100.0
n	2		2	
Community survey				
Cleanliness in toilet	25	15.2	208	68.9
Cleanliness in waiting area	49	29.7	293	97.0
Availability of drinking water	70	42.4	266	88.1
Adequate light and ventilation	142	86.1	297	98.3
Availability of education materials on sexual and reproductive health in clinic	127	76.7	292	96.7
n	165		302	
Exit interviews				
Timings and days are convenient to seek services	53	88.3	52	86.7
Welcoming attitude by health-care providers	39	65.0	46	76.7
Comfortable in talking about SRH-related issues with medical doctor	39	65.0	55	91.7
Time spent with doctor was appropriate	33	55.0	52	86.7
No one else was present in the room during the consultation with doctor	29	48.3	58	96.7
Denied services by the doctor at ASRH clinic	0	0.0	3	5.0
Satisfaction with the services received at the clinic	49	81.7	57	95.0
n	60		60	

ASRH: adolescent sexual and reproductive health; SRH: sexual and reproductive health.

The responses of the exit interviews reveal a high level of satisfaction with the services among adolescents in the intervention districts, indicating effective service delivery, including "convenient" time of the clinic, "welcoming" attitude of the service providers, and an "appropriate" amount of time spent by doctors during interactions. However, some concerns were reported by adolescents, particularly relating to the physical environment at health facilities in Arajiline, for instance cleanliness in the toilet and waiting area. Another concern that emerged is privacy and confidentiality for the adolescents during their visits to the clinic. In Arajiline in particular, facilities need to provide privacy to adolescent clients during their visits, either by separating counselling and clinical spaces, or by other means. This is important, as most of the adolescent clients reported the presence of support staff or other patients during their consultation with the doctor. This experience was in disagreement with other intervention,[25,29,30] which found that efforts to make clinical services "youth friendly" have not brought increased use by adolescents. As evident from the study, the findings are in accordance with other studies[31] that identified an adequate physical environment in the facility, receipt of adequate information about the facility, and a private facility (i.e. so that other people do not know what services the client receives) as key determinants for a high level of satisfaction by adolescent.

The data from this study illustrate that adolescents typically seek multiple services at any one visit, with counselling being the most popular service, followed by medical examination in both the intervention sites. During the intervention period, less than two fifth of adolescents approached the ASRH clinic to seek treatment on SRH and STIs in the intervention sites, with significant difference by districts. Hence, there is a need to further focus on the reasons for visiting adolescent-friendly health services, keeping in mind the literacy and cultural context of the district. By comparison, the adolescent-friendly health service system is more complex, as there are many factors beyond the health system that influence utilization by adolescents. This is evident from the analysis that the community-based process (e.g. YIC) has contributed to an increased uptake of services by adolescents. The focused efforts have made a noteworthy change in the attitude of adults towards adolescents' SRH concerns, in a sociocultural environment where the term "sex" is considered "taboo" and

not to be discussed with the adolescent. Moreover, adults in the community played a proactive role, by providing a space for establishment of the YIC.

Successful linkages with the Government Health Department, locally and at the state level, supported MAMTA to upscale the project to the next level under the public–private partnership. During 2011, MAMTA increased the intervention in both states, applying the strategy of strengthening the existing programme environment on ASRH at the district level, through advocacy with the key stakeholders identified. This scaling-up phase continues to create demand for adolescent-friendly health services, through engagement of existing cadres of frontline health personnel in the public health system.

Limitations

The health service statistics for adolescents were not available prior to the intervention period. Hence, it was not possible to compare the results before and after the intervention. The sample size per health facility for exit interview was inadequate to provide analysis by sex. One limitation of the study is that confounding factors related to utilization of services by adolescents were ignored, owing to inadequate data, so the findings cannot easily be generalized to similar settings in the country. Despite the limitations, triangulation of information from various sources has provided adequate evidence on successful programmatic efforts to improve the awareness, utilization and quality of health services among young people.

CONCLUSIONS

The MAMTA intervention has improved the youth-friendliness of services in facilities, as well as their uptake. Although the majority of young people were satisfied with the services at adolescent-friendly health services, there is still a need to strengthen the privacy and confidentiality components and to improve the physical environment at the clinics. The intervention was well integrated with the public health system and the services are being scaled up to further blocks in the districts, under a public–private partnership.

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