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Women's Reproductive Health Seeking Behavior in Four Districts in Sana'a, Yemen: Quantitative and Qualitative Analysis

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Abstract

Background: In Yemen, inappropriate reproductive health seeking behaviour coupled with perceived low services quality and cultural barriers are contributing factors to inadequate services utilization and high maternal deaths. However, there are limited data in this regard. This study aimed to investigate the sociodemographic and services factors associated with reproductive health seeking behaviour and to explore respondents' perception with regards to services' utilization, accessibility and quality.

Method: The quantitative study used a cross–sectional design and complex multistage probability sampling of 1678 women during January–March 2010 in Sana'a. The questionnaire addressed reproductive history, antenatal, obstetric, and post natal care. In the qualitative phase, eleven focus group discussions among 29 males and 75 females had been conducted. The informants had been approached through an interview guide. Inductive content analysis was used to explain and inform an alongside quantitative analysis.

Results: The mean age at marriage was 17.6 (SD 3.5) years. The majority of women had professional antenatal care (97.7%). Home delivery was reported by half of the respondents. Eighty percent did not receive postnatal care. Family planning was encountered among 60.3%. The major reason for not using family planning was husband's refusal. The qualitative inquiry explored: "consensus about the need for antenatal care with inconsistent views about such needs"; "different views about the effectiveness of the labor services"; "inconsistencies about the side effects of family planning methods;" "women and men differently view the family planning decision maker"; "distance from the health facility determines its use"; and "health education: from not existing to good services".

Conclusion: Women's reproductive health seeking behaviour appears far from optimum. Future intention for home delivery and unskilled childbirth was highly indicated. Inadequate awareness and decision making were obvious. Effective measures need to be considered at the community and health sector level.

Keywords: Reproductive health; Seeking behaviour; Decision making; Quantitative; Qualitative; Yemen

Introduction

Throughout human history, reproductive health (RH) problems have been major contributors to death and disability among women and a central feature of human development. Maternal mortality is a key indicator of women's health and status. More than 500,000 maternal deaths occur every year, 99% happen in developing countries [1].

Yemen is one of the least developed countries with poor socioeconomic status and challenging health services [2] Yemen's Human Development Index (2011) ranks 133 out of 169 [3]. There are indications of poor health services utilization. Public antenatal services coverage is 41% with only 27% of deliveries attended by skilled personnel [4] and 77% of all deliveries taking place at home [5]. With high fertility rate (6.2 children/woman) and 365 maternal deaths per 100,000 live births reported in the 2003 Yemeni Survey for Family Health (YSFH), Yemen has the highest maternal mortality ratio in the Middle East and North Africa [6]. Such figures are linked to economic, social, cultural and religious factors compounded by poor services access and limited health infrastructure [7].

Lack of confidence in the healthcare providers, inaffordability of care and cultural barriers are contributing factors to the high maternal deaths [6]. There is increasing attention about women's RH seeking behaviour associated [8]. However, there is limited quantitative and qualitative evidence about services provision and its community utilization. This study aimed to investigate sociodemographic and services–related factors in connection to the ***Queen of Sheba Safe Motherhood Project.*** This project is the first of its kind, in Yemen, in which the private health sector represented by the University of Science and Technology Teaching Hospital and Saudi German Hospital play a role as primary health service providers in coordination with local non governmental organization, SOUL. The project is a four–year community based project which supported the provision of a defined quality services as defined by the WHO such as antenatal care, birth attendance by skilled birth attendants, postnatal care, complicated care services and family planning [7]. Services were provided to eligible women of reproductive age (15–49 years) in selected districts in Sana'a. This study aimed to investigate the sociodemographic and services factors associated with RH seeking behavior. It also aimed at deeply exploring respondents' perception with regards to utilization, accessibility and quality of RH services targeting them to help designing appropriate interventions and setting–up measurable indicators.

Method

Using quantitative and qualitative methodologies during January–March 2010, this cross–sectional study was conducted in four districts (Al–Sabeen; Al–Thawrah, Maeen and Shoub) in Sana'a. Participants

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were approached in ten health centres and two hospitals serving the targeted population in these districts. The study was conducted through multistage probability sample. Firstly; eight districts of Sana'a were grouped into four adjacent areas, from each area one district was chosen at random. Secondly; each district was divided into four geographical areas from which two were randomly selected. Thirdly, two streets from a list of random numbers in each geographical quadrant were selected. In the fourth and fifth stages: random selection of the buildings and households respectively was performed. Finally, from each household we took all the consented married females in the reproductive age. It was decided that fifty households in every street will yield 400 households per each district; 1600 household in the four districts was a suitable sample. Since the prim aim was to know the economic level distribution, and the estimated proportion of each, this considered an enough number to give the proportions with good 95% confidence limits. The Statcalc software was used to calculate the sample size. The calculated number was 552 households if the sample is a simple random one. Since the sampling technique is a complex multistage one it is usually recommended to have at least double the number to account for the design effect [9]. In our example, we set the number to almost triple the calculated size (1678) to have good sample estimate.

After taking women's oral informed consent, we distributed a questionnaire of 171 closed–opened questions addressing general information; antenatal care; obstetric care and; postnatal care after delivery of the youngest under five years child; and family planning–related knowledge and practices. Sixteen trained field workers conducted the fieldwork. The returned questionnaires were subjected to double check and entry into the Statistical Package for Social Sciences Program (SPSS 17) for analysis. The qualitative focus group discussion (FGD) was used to deeply explore the respondents' perception regarding their RH seeking behaviour. Using an interview guide, the informants had been approached through eleven FGD (four among males and seven among females) and later used to inform the quantitative findings. Content analysis was used to interpret the findings and develop themes from the information provided by the FGD. According to the content analysis and constant comparison technique, the transcripts were manually categorized to find meaningful relationship between the emerged categories and the subcategories. The categories and subcategories described were derived inductively [10].

Results

Quantitative results

The mean age of respondents was 28.6 (SD 6.5) years and that at first marriage was 17.6 (SD 3.5) years. Around one–third (38.2%) cannot read or write. Only 6.2% of the respondents had a job. The majority (80.7%) spend their salaries on the family needs. In Table 1, antenatal care characteristics of 1334 women out of 1678 who consulted someone during pregnancy of the youngest under 5 years child are demonstrated. The first time of seeking consultation was the first and the 2nd–3rd month for 36.3% and 32.8% of women respectively. The major reason for such consultation was seeking care for a health problem (61.6%). Physicians were consulted by 96.9%. With regards to those who have no professional consultations (n=63), all of them believe that they have enough experience for not having professional consultations.

Professional consultations (for physicians, nurse, midwife or health guide, n=1304) were sought three times and more by 72.1%. The most mentioned places of latest consultation were the public hospital (27.5%), followed by private clinic (24.3%). The highest percentage of women accessed health facility by foot (32.2%), waited quarter–half an hour to meet a health care professional (40.6%) and had the opinion that the cost of care was expensive (39.3%) as shown in Table 2.

In Table 3, women were exposed to different topics of health education. The most frequent topic was child immunization (81.2%) and the most mentioned source of health education was TV (69.5%).

Characteristic	No.	%
First antenatal consultation		
1st month	484	36.3
2nd–3rd month	437	32.8
4th–6th month	259	19.4
7th month +	154	11.5
Reasons for seeking antenatal care		
Seeking care for a health problem	822	61.6
Ascertain pregnancy	323	24.2
Antenatal care is crucial	107	8.0
To check fetus safety	76	5.7
Opinion of the husband/family/friends	6	0.4
Person consulted for antenatal care*		
Physician	1293	96.9
Friends/relatives	63	4.7
Nurse/midwife	11	0.8
Reasons for not having professional consultation (n=63)*		
Had enough experience	63	100
Not aware about the need of antenatal care	34	54.0
Antenatal care is far/expensive	33	52.4
Had no problem require such consultation	26	41.3
Staff rudeness	15	23.8
No qualified female professionals	6	9.5
Others	17	27.0

*Percentage cannot be added to 100% due to multiple responses.

Table 1: Characteristics of antenatal care for the youngest under 5 child (n=1334).

Characteristic	No.	%
Number of professional consultation		
Once	168	12.9
Twice	196	15.0
Three times	940	72.1
Place of latest consultation		
Public hospital	358	27.5
Private clinic	317	24.3
Private hospital	272	20.9
Public health centre	239	18.3
Private health centre	118	9.0
Mean of transportation		
By foot	420	32.2
Taxi	366	28.1
Bus	282	21.6
Private car	236	18.1
Time of transportation		
Less than quarter hour	500	38.4
Between quarter–half hour	530	40.6
Between half–three quarter hour	162	12.4
One hour+	112	8.6
Affordability of the cost		
Expensive	512	39.3
Suitable	448	34.3
Not suitable	344	26.4

Table 2: Characteristics of the latest antenatal visit (n=1304).

Characteristic	No.	%
Health education topics received*		
Child immunization	1371	81.2
Postnatal care	1355	80.8
Mother immunization	1313	78.2
Family planning	1300	77.5
Qat/smoking risks	1262	75.2
Infant care	1233	73.5
Breastfeeding	1189	70.9
Nutrition	1286	67.6
Pregnancy warning signals	1080	64.4
Date of next visit	1079	64.3
No health education	281	16.7
Source of health education*		
TV	1166	69.5
Health setting	666	39.7
Radio	187	11.1
Others	259	15.4

* Percentage cannot be added to 100% due to multiple responses.

Table 3: Health education during the pregnancy of the youngest under 5 years child (n=1678).

The necessity of antenatal care was perceived by 94.2% of respondents. In Table 4, the commonest reasons were to treat any health problem (33.9%) and to ensure safe pregnancy (29.9%). The decision makers were mostly both spouses (44.2%) and the respondent herself (36.2%). With regards to future intention for antenatal care, 73.2% intended to seek antenatal care in the next pregnancy, and physician was mentioned by 94.2% as the person who will be consulted. The major reason for choosing health care professionals was "they have more knowledge and experience" (87.8%).

Normal delivery was the most common type of delivery (83.5%) and home was the place of delivery for 46.7%. In Table 5, 47.4% of the respondents themselves made the decision for the delivery place and 41% considered the delivery cost as expensive.

The most mentioned reason for home delivery was "home delivery is better" (60.2%). Assistance during home delivery was provided in the first place by mother/mother–in–law (29.3%) followed by relative/friend (23.7%) whereas nurse/midwife and physicians attended 19.8% and 16.2% of deliveries respectively. The opinion that home delivery is better was explored by 48.2% who also said that they will deliver at home in the future. In Table 6, such preference is mostly related to their belief that home delivery has more privacy (53.2%). However, 47.8% of those preferring home delivery said that they will ask relatives/friends to assist them. The majority of those who prefer health facility delivery (77.2%) attributed their preference to better health care. Favoring public health facility delivery was primarily attributed to its low cost (72%). The corresponding reason for favoring private health facility delivery was having better services in such facilities (59.1%).

Only 19.3% declared having postnatal care. In Table 7, physicians provided the care to 75.6% and nurse/midwife to 20.1%. The most received care was different types of health education with education on nutrition of lactating mother (48.7%) on the top. Such care was mostly delivered at public hospitals (28.1%). Among those who didn't receive postnatal care, the major reported reason was not having problem require such consultation.

The majority (80.5%) had ever used family planning. In Table 8, pills were the mostly reported method (64.5%) followed by IUD (41.8%). The reason given for usage was mostly: she needs a break before next pregnancy (64.6%) whereas the most frequent reasons for non usage was lack of professional female staff (42%).

One thousand and twelve were using family planning (Table 9). Pills and IUD were the most frequently reported methods (38.7% and 31.1% respectively). Just over half (51.6%) of 827 women using modern contraceptives (pills, IUD, injectable contraceptives, condom, tube ligation, and subdermal implants) spent less than quarter hour to get the methods and considered the cost very appropriate (58%). However, 70.6% described the conduct of health workers as excellent.

Qualitative results

Eleven FGDs had been conducted with 104 participants. Seven were with females (75 participants) and four with males (29 participants). Females' age ranged 18–49 while males 28–44 years. Variable socioeconomic levels were reported ranged from poor to good with the majority having medium level

Consensus about the need for antenatal care with different views about such needs

Almost all participants agreed that pregnant women are in need for health care although they differently viewed such care. Males mentioned general needs, whereas women mentioned specific needs

Characteristic	No.	%
Reasons for seeking antenatal care (n=1580)		
To treat any health problem	536	33.9
To ensure safe pregnancy	473	29.9
To ensure fetus' safety	392	24.8
To ascertain pregnancy	179	11.4
Person decided who will be the consultant		
The respondent	607	36.2
Husband	248	14.8
Both spouses	741	44.2
Mother–in law	82	4.8
Had intention for antenatal consultation in the next pregnancy	1229	73.2
Person intended to be the next consultant (n=1229)		
Physician	1158	94.2
Husband	32	2.6
Mother/mother–in law	24	2.0
Nurse/midwife	15	1.2
Reasons for intending to consult health workers (n=1173)		
Have more experience	1030	87.8
Had previous contact with them/trusts them	133	11.3
Bad experience with TBAs	10	0.9

* Percentage cannot be added to 100% due to multiple responses.

Table 4: Perception and decision about antenatal care (n=1678).

Characteristic	No.	%
Person decided the place of last delivery		
The respondent	795	47.4
Both spouses	483	28.8
Husband	192	11.4
Wife's relative	104	6.2
Husband's relative	43	2.6
Mother/mother–in-law	39	3.4
Affordability of the cost		
Expensive	688	41.0
Suitable	503	30.0
Not suitable	467	29.0

Table 5: Characteristics of delivery of the youngest under 5 years child (n=1678).

Characteristic	No.	%
Reasons for preferring future home delivery (n=808)		
More privacy	430	53.2
Less cost	183	22.6
Bad health facility service	85	10.5
Used to deliver at home	49	6.1
Surrounded by family	38	4.7
Others	23	2.8
Whom will help in future home delivery (n=808)		
Relative/friend	386	47.8
Physician	205	25.4
Midwife/nurse	155	19.2
TBA	43	5.3
Nobody	19	2.4
Reasons for preferring future health facility delivery (n=865)		
Better health care	668	77.2
More knowledge and experience	83	12.4
Better hygiene	38	4.6
Previous good experience	31	4.4
Bad experience with TBA	24	2.8
Availability of emergency services	21	2.4
Reasons for preferring public health facility (n=508)		
Less expensive	366	72.0
Physicians are more experienced	59	11.6
Better services	48	9.5
Previous good experience	35	6.9
Reasons for preferring private health facility (n=357)		
Better services	211	59.1
More privacy	58	16.2
Experienced physicians	54	15.1
Previous good experience	24	6.7
Relative/friend/ advice	10	2.8

Table 6: Perception and decision about intra-natal care (n=1678).

including: *"particular equipments and investigation"*; *"certain vaccines" etc.* However, some participants thought that pregnant woman does not need any health care *"unless they have problem"*. Nevertheless, few women believe that: "*women need to go only in the first pregnancy*".

Health facility delivery is favoured more

All men showed their preference for health facility delivery as they thought home delivery is inappropriate due to the absence of cleanliness and qualified midwives. Half of them said: "*private hospital is the best despite its expensive cost due to carelessness in the public hospitals*".

The following reasons were given by 44 women for health facility preference: presence of health staff care; medicines and emergency care; cleanliness; facilities for labor induction and baby resuscitation. Whereas the remaining confirmed: *"public hospitals are more suitable due to the presence of qualified staff"*. However, 31 women clearly indicated their preference for home delivery. Among them, ten attributed such preference to the feeling of security, family accompanies and low cost. Fourteen acknowledged privacy. The remaining agreed on the above opinions. They further think: "*there is no need for hospital delivery. We hear that nurses bite women in the labor room!.*".

Women not men mostly recognized the need for post delivery care

The majority of women recognized the necessity of post delivery care. Paradoxically, still some said: "*there is no need for postnatal care in general and in normal delivery in particular.*" However, men generally believed that women don't need postnatal care.

Consensus about the beneficence of family planning

All women expressed well understanding for the role of family planning: "*very beneficial for women and child health*". Similarly, all men agreed that: "*contraception is good because it allows us to adequately raise our children and fully enjoy sex with our wives*".

Multiple sources for family planning information

Among men, radio and TV are the commonest sources of contraceptive information. However, many men mentioned press and educational materials distributed in the health centers and friends' gatherings as important source of their information. Women indicated health center as an important source. In addition, six women indicated that women's gatherings are important source for such information

Women and men differently view the decision maker about family planning

Some men and the majority of women believe in the necessity of having joint decision. However, eighteen men and eight women believe that the husband is the principal decision maker about family planning as he is the guardian of the family and the one best knows its interest. Oppositely, nine women considered the wife the principal decider as she is the one who bear the reproductive burden.

Agreement on the influential role of health staff

Men and women share the same ideas about the influential role of health staff:

Characteristic	No.	%
Person provided postnatal care (n=324)		
Physician	245	75.6
Nurse/midwife	65	20.1
Relative/friend	33	10.2
Received health care (n=310)*		
Education on nutrition of lactating mother	151	48.7
Education on exclusive breastfeeding	148	47.7
Education on breastfeeding	146	47.1
Education on immunization	142	45.8
Education on family planning	132	42.6
Education on personal hygiene	125	40.3
Education on newborn care	113	36.5
Family planning methods	120	38.7
Place of professional postnatal consultation (n=310)*		
Public hospital	87	28.1
Public health centre	80	25.8
Private hospital	63	20.3
Private clinic	37	11.9
Private health centre	33	10.6
At home	24	7.8
Reasons for not having postnatal care (n=1354)*		
No problem	1197	88.4
Enough experience	212	15.7
Expensive	125	9.2
Consulted well experienced person	53	3.9
Not aware about the need of postnatal care	31	2.3
Staff rudeness/not trust health staff	28	2.1
No time/accompanied person	18	1.3
Others	10	0.7

* Percentage cannot be added to 100% due to multiple responses.

Table 7: Characteristics of postnatal care (n=1678).

Characteristic	No.	%
Methods ever used*		
Pills	915	64.5
IUD	595	41.8
Prolonged breastfeeding	231	16.2
To treat any health problem	536	33.9
Coitus interruption	196	13.8
Injectable contraceptives	144	10.1
Safety period	132	9.3
Condom	127	8.9
Local methods	37	2.6
Tube ligation	30	2.1
Subdermal implants	44	3.1
Reasons for using family planning*		
Needs a break before next pregnancy	920	64.6
Wants no more children	425	29.8
To take care for her children	403	28.3
To take care of herself	403	28.3
Husband wants no more children	132	9.36
Family economical status	102	7.2
Poor health situation	98	6.9
Others	25	1.8
Reasons for not using family planning (n=345)		
No professional female staff	145	42.0
Wish more children	131	38.0
Husband refusal	89	25.8
Temporary break	61	17.7
No information on contraceptives	60	17.4
Got pregnant after delivery	52	15.1
Others	46	13.3

* Percentage cannot be added to 100% due to multiple responses.

Table 8: Utilization of family planning methods (n=1425).

- "*Kind conduct by health staff positively increases the utilization of health services*".
- "*Good proficiency, skills and experience of the health staff are the most important factor*".
- "*Lack of female health staff decreases the utilization of health services*".

Distance from the health facility determines its use

The majority of women and half of men spent long time explaining their idea that a nearby health facility will encourage the community to use it. However, half of men and few women have the idea that the distance from the health facility has no much influence on its utilization due to the availability of transportation means. Furthermore, they believe that the quality of health services is the most important determinant. Nevertheless, few men believe that the more the women are educated, the better her chance to access any health facility even a remote one. Some men had the idea that woman cannot attend remotely located health facilities unless her husband accompanies her.

Services' cost: a challenging matter

Both sexes almost divided equally between those who agree that the cost of family planning, antenatal care and delivery is somewhat affordable and those who have the opposite idea. They provided the following response about the influence of services cost on its utilization:

- Few women believe that: "*the influence depends on the economic status of the family*";
- The majority of both sexes find the current cost: "*expensive and negatively influencing the utilization of health services*".

Health education: from not existing to good services

Discussants were divided between those who confirmed:

- "*there is no health education, we have never heard about it*".
- "*women usually do not receive information about what is important for them*".
- "*women only sometimes receive brochures without any explanation* ".

And those who indicated receiving variable degrees of health education. Some considered such education "*excellent*" and some others: "*good and responds to our needs*".

Decision making about utilization of maternity services is a complex issue

More men compared to women said that: "*the husband is the decision maker as he is more aware compared to his wife*". In contrast, more women compared to men indicated that: "*both spouses are the decision makers*". Furthermore, around half of women believe that they cannot solely make the decision on RH issues.

Discussion

In many settings worldwide, women are disadvantaged due to social, cultural, political and economic factors that directly influence their health and impede their access to health–related information and care [11]. In the present study, women appear less privileged with regards to their educational level which limits their access to health information and utilization of health services. The qualitative study further confirmed this as some men indicated less ability of uneducated women to access health services particularly remote ones.

Characteristic	No.	%
Currently used method*		
Pills	392	38.7
IUD	315	31.1
Prolonged breastfeeding	93	9.2
Coitus interruption	73	7.2
Injectable contraceptives	45	4.4
Safety period	37	3.7
Tube ligation	30	3.0
Condom	29	2.9
Subdermal implants	19	1.9
Transportation time (n=827)		
Less than quarter hour	427	51.6
Between quarter–half hour	264	31.9
Between half–three quarters hour	82	9.9
One hour+	54	6.5
Appropriateness of the cost (n=827)		
Very appropriate	480	58.0
Somehow appropriate	145	17.5
Expensive	202	24.5
Conduct of health workers (n=827)		
Excellent	584	70.6
Good	223	27.0
Acceptable	20	2.4

* Percentage cannot be added to 100% due to multiple responses.

Table 9: Characteristics of current family planning utilization (n=1012).

Inquiring about antenatal care practices showed both positive and negative results (Table 1). Favourably, around 80% of the targeted women consulted someone during the latest pregnancy; the great majority of them sought professional health consultations. Our figures are better than that of the YSFH for urban women as 30.8% had no any consultation, and 65.7% had professional consultation. The fact that the present study comprised solely of urban women with expected better awareness and access to health services could explain our figures compared to that in the YSFH. Furthermore, seeking professional health care for health problems was reported by 61.6% of women in the present study compared to around 47% of women in the YSFH [6] which are the highest percentages for reasons seeking antenatal care in both surveys. Our quantitative findings were further corroborated by the qualitative findings. This of course needs not to be the major reason as antenatal care must be sought routinely which requires particular attention in the future health–related messages to improve such practices.

The present findings also showed some advantages over the YSFH with regards to the time of transportation to the HF for receiving antenatal care. In our settings, the majority reported less than quarter hour to half hour whereas the mean time of transportation was around one hour in the YSFH which could reflect more accessible health services in our settings. On the other hand, all health education topics were reported more in the present study compared to the YSFH [6]. This could reflect better services delivery in our settings. Alternatively, the fact that the YSFH figures represent both, urban and rural health services whereas the present figures are solely urban with higher chance of having better services access could in part explain the observed difference.

It is estimated that on average, only 56% of deliveries in developing countries occur with the presence of a skilled birth attendant [12]. In the study sample, 46.7% of deliveries occurred at home which is lower than the national figure of 77.2%. It is also lower than what reported by Kempe (69%) from randomly selected urban and rural areas from four governorates in Yemen [8]. The responses in the qualitative study give explanation to such findings as nearly half of the women and all men showed their preference for health facility delivery. Unfortunately, only 36% of home deliveries were attended by skilled attendants. Nevertheless, 16.2% of home deliveries were attended by physicians which is a higher figure compared to that of the national figure (3.7%). Interestingly, mother/mother–in law occupied the first rank as assistant in delivery in the present study (29.3%) as well as in the YSFH (48%) . Another similarity between the two studies was also observed with regards to the reasons for home delivery preference with the belief that "home delivery is better" came first in the list of reasons for favouring home delivery which was also further supported in the qualitative study. In a related context, the qualitative inquiry explored good understanding among the majority of enrolled discussants regarding some RH issues. However, still some participants believe that there is no need to seek health care during pregnancy. Furthermore, the qualitative study provided some alarming indication as some women said that they had never been informed about the need to have institutionalised delivery that encourage them –beside other factors– to have home delivery.

Postnatal care is one aspect of the continuum of care implies the necessity that women should be checked during the 12 hours after delivery and six weeks after giving birth [13]. However, the national figure for postnatal care is very low (9.2% received physician care and 3.4% other care) [6]. In the present study, around one–fifth of women had received such care which is much lagging behind the recommendation of universal postnatal care. Not having problems require professional care was the major reason for not having postnatal care. This could only be a subjective feeling that was not truly mean there is no problem deserves professional health care.

In Yemen, family planning had received great attention in the population and health policies and still conspicuous efforts are ongoing to facilitate the access to and informed use of family planning. Studied women were more familiar with modern contraceptives like IUD and pills compared with natural methods like prolonged breastfeeding and safety period (Table 8). Ever use of family planning methods was reported by 80.5% which is nearly double the figure (40.9%) reported in the YSFH. This higher ever use rate is related to the consensus on the beneficence of family planning and the positive views about it obviously highlighted in the qualitative study. Among family planning users, pills were the most ever used method as was also reported in the YSFH. However, a higher percentage was reported in the present study (64.5%) compared with 20.2% in the YSFH. Furthermore, the second most reported method is IUD (41.8%) which appeared as the third most used method in the national survey (8%). On the other hand, prolonged breastfeeding came in the third rank (16.2%) while it was the second most frequent method in the national survey. Again, including only urban women in the present study could account to the high use rate and ranking of the methods mostly used compared to the national sample of YSFH which also reported higher use among urban women compared to rural ones and variations in the methods type between urban and rural women [6]. Globally, reasons for family planning non–use include poor services quality, limited choice of methods, fear or experience of side–effects, and cultural or religious opposition [12]. The non–use reasons provided in the present study were mostly lack of professional female staff, willingness to have more children and husband refusal. This actually reflects services as well as cultural related factors which require great efforts to help improving the current non–use rate.

Practice intention is an important concept indicates what persons intend to do in the future as a reflection of their perception and experience [14]. Generally, favourable practice intention was encountered with regards to having future professional antenatal consultation. Such positive responses might reflect positive experience with current services associated with the project. The qualitative study detailed more reasons for seeking health facility care particularly for antenatal care and delivery services. However, intention for future intra–natal care (Table 6) indicated a slightly higher percentage of those intended to deliver at home (48.2%) compared to the percentage of home delivery (46.7%). One explanation of these figures is that favourable home delivery outcomes encouraged women to have future home delivery. A comparable result was reported from Zambia [15] where it was concluded the necessity to communicate the importance of institutionalized delivery to women who gave birth at home through focussing on the possible risks associated with home delivery particularly if not attended by skilled birth attendants. More privacy and lower cost were the most frequently presented reasons for intending to have home delivery. The same justification for home delivery preference was confirmed by the qualitative study.

As Kempe indicated [8], Yemeni women's underutilize modern delivery care. In our study, only 44.6% (Table 6) expressed their willingness to have skilled birth attendants in the future. Although such figure is higher than the encountered figure for skilled attended deliveries (36%), it is far below the recommendations of having universal

childbirths attended by skilled persons. Nevertheless, such increase in the percentage could reflect more awareness for such crucial need that should further be enhanced. Noteworthy that favouring future public health facility delivery is outweighing private health facility delivery. However, low cost was the major reason for preferring public health facility delivery whereas better services and care was the comparable reason for preferring private health facility delivery. In contrast, more preferences for childbirth in the private health facility compared to public health facility was encountered in the qualitative study despite the criticism that private health services overestimate the profit aspect over the actual provided care.

In the present study, some discrepancy between the quantitative and qualitative phases is noticeable with regards to health education. Despite that the quantitative study showed that only 16.7% of the respondents indicated not receiving any antenatal care–related health education and each health education topic was received by at least two–thirds of the respondents (Table 3), half of the FGD participants complained of the lack of health education or its ineffectiveness in terms of frequency, technique, used materials and targeted topics. The above discrepancy might be resulted from inadequate communication technique, that despite delivering some relevant information, it was done in a way that does not ensure good provider–client interaction and enough time to elaborate on all topics and answer women questions as seen in each of The Gambia [16] and Nepal [17]. The WHO antenatal care model recommends 30–40 minutes for the first visit and 20 minutes for subsequent visits to carry out all activities including individual IEC [18]. In Yemen like many developing countries, ineffective IEC might be largely caused by staff shortage and excessive workload entailing attending large number of women in a definite period associated with inadequate providers' IEC skills [16].

Ddecision making has particular importance with regards to RH issues as it implies important decisions that could had favourable or unfavourable consequences on the life and wellbeing of women [19]. The qualitative study showed clear gender–based view with regards to the decision making with more males favour having RH decisions in the hand of husbands compared to women who believed that the husband and wife should jointly make such decision. This might indicate lower women status in a conservative society like Yemen.

Health–services responsiveness has important influence in demanding health services. Responsiveness has been defined to also encompass the non–health enhancing aspects of the health system that had shown to be associated with high patient welfare. Examples of such aspects include easy access to the health facility, healthcare providers who treat one with respect and services cost [20]. Some of the above aspects had been evaluated in the present study. The majority of the respondents considered the conduct of healthcare providers mostly excellent to good in family planning services (Table 9) despite the inconsistency noticed in the qualitative study that indicated maltreatment in the health facility. Likewise, access to the health facility appeared between less than quarter hour to quarter to half an hour in the latest antennal and family planning visit. Other related factors highlighted in the qualitative study as negative determinants for health facility utilization were the absence of female professionals and remotely located health facility.

The quantitative study demonstrated no consensus regarding services cost. While antenatal care (Table 2) and delivery cost (Table 5) were considered mostly expensive by the highest percentage of the respondents, it was considered mostly very appropriate for family planning (Table 9). However, there was no consensus about the care cost in the qualitative study. Nevertheless, agreement on cost inaffordability in the private health facilities and for some services like operative interventions and laboratory investigations was obvious.

Conclusion

Women's RH seeking behaviour appears far from optimum particularly in childbirth, and postnatal care. Future intention for home delivery and having unskilled birth attendants is perceived by a high proportion of participants. Inadequate self decision making capacity in RH related issues was obvious. Furthermore, a gap in RH awareness and inconsistencies regarding services preparedness, cost, quality, staff competencies and conduct are clear. Besides ensuring better health services delivery, effective measures at the community and health sector and multipronged IEC strategies as part of the efforts to reduce maternal morbidity and mortality need to be seriously considered. Husbands need also to be effectively involved in such settings.

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