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Knowledge, Practices and Influencing Factors Regarding Use of Contraceptive Methods among Rohingya Refugee Adolescent Girls in Cox's Bazar, Bangladesh: A Cross Sectional Mixed Method Study

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Abstract

Introduction: Knowledge on the use of contraceptive in humanitarian setting still pose a huge challenge due to the fact that there are wide range of competing priorities coupled with low education among the refugees. It was also shown in this study that, there are significant knowledge gap with cultural, religious and societal influences that contribute to the low level of practice of contraception amongst the Rohingya adolescent refugee girls. This has therefore contributed to the significant negative perceptions already established toward contraceptive use. This study therefore looked at the knowledge, practices and influencing factors related to contraceptive use among the Rohingya adolescent refugee girls.

Method: This was a mixed-method study of a cross-sectional survey with 340 adolescent girls, IDIs with 8 husbands of adolescent girls and 2 FGDs (one each with married and unmarried adolescent girls). For quantitative, a multi-stage sampling was done and five camps were randomly selected followed by a CFS in which adolescent girls were conveniently selected and interviewed around the pockets of that CFS. For qualitative, IDIs were done by purposively selecting husbands of adolescent girls involved in the survey while the FGDs were also done by purposively selecting one group each of married and unmarried adolescents involved in the survey. Data was collected using the survey CTO open data kit electronically.

Result: It was found that there is a huge knowledge gap between the married and unmarried adolescent girls in terms of contraceptive use with over 96% of contraceptive users been married. The most common contraceptive type was Depo-Provera and oral contraceptive pills. Husband's decision, religious belief, family/community influence, societal stigma and fear of side effects were among major influencing factors.

Conclusion: This study has indicated that adolescents in this population lack proper knowledge, deprived from access and culturally succumbed to the status quo of contraceptive use. Breaking the barriers means doing extensively peer education, social marketing, engaging the leadership (religious and cultural) and improving level of formal education among the adolescents.

Keywords: Contraceptive; Persecution; Marginalization; Pregnancy

Abbreviations: OCPs: Oral Contraceptive Pills; FP: Family Planning; FGD: Focus Group Discussion; IDI: In-Depth Interview; HH: House Hold; MMR: Maternal Mortality Ratio; NGO: Non-Governmental Organization; INGO: International Non-Governmental Organization; IAWG: Inter Agency Working Group; CFS: Child Friendly Spaces; AFS: Adolescent Friendly Spaces; DHS: Demographic Health Survey; ERC: Ethical Review Committee; RRRC: Refugee Repatriation and Reintegration Commission; MCH: Maternal And Child Health; DRC: Democratic Republic Of Congo WHO: World Health Organization; SLP: Summative Learning Project; MCP: Modern Contraceptive Method; RA: Research Assistant; JPGSPH: James P. Grant School of Public Health; BRACU: BRAC University

Introduction

About 65.2 million people are displaced as a result of persecution and conflicts since the last couple of years which were the highest after the World War II [1]. Among this high displacement rate, over 20 million are refugees and half of those are accounted to be below age 18 years. It is estimated that about 33% maternal deaths, 10% of the total newborn deaths and about two-third of adolescent deaths happen globally in crisis or emergency settings as a result of unplanned pregnancy [2]. In situations that involve emergency and refugee crisis, only one in five adolescent girls has knowledge of contraceptive use [3]. However, the use of contraceptive methods is mostly affected by factors such as cultural norms, religious beliefs, lack of knowledge about contraceptive methods and reproduction, socio-demographic factors and barriers regarding providing health service [4]. In addition, an estimate of more than 800 women dies due to pregnancy-related causes daily having most of the death occurring in humanitarian settings with highest burden on adolescents, women and populations in hard to reach areas [5].

In a study done on Maternal Mortality Ratios (MMR) in ten countries, all countries except Bangladesh had a lower MMR among the refugees compared to the host country population with 78% of the deaths occurring during delivery or abortion.

Evidences show that the use of contraceptive can avert about 32% of maternal death and about 10% of newborn death in humanitarian or emergency crisis [1]. Contraceptive use in the emergency has been done successfully in countries like Uganda, Guinea, Afghanistan through outreach and subsidized services among displaced and refugees, especially living in camps [6]. In cultures where men are the key decision makers, it is appropriate to have a contraceptive program that is accessible, appropriate and culturally sensitive. This is because for women to be able to take contraceptives which are not quite different from adolescent girls, it will have to be dependent largely on partner agreement, religious beliefs and knowledge towards the service itself [7].

In emergencies, adolescents usually face the highest risk related to acquiring family planning and contraceptive use which likely result into issues like pregnancy, marginalization, social stigma and other health consequences [8]. Even though knowledge of contraceptive use among refugees is usually low, skill health care providers are often not available during the crisis with non-availability of long-acting contraceptive methods except condoms and pills. Contraceptive does not only save lives but also increases the chance of the adolescent to be educated, control number of children, reduce poverty and hunger especially when faced with challenging humanitarian crisis.

The Rohingya populations, who are mostly Muslims, are ethnic group that reside in Rakhine state in Myanmar and have been moving to neighboring countries in southeast Asia since 2015. From 2017 to date, there has been over 1.1 million Rohingya refugees who fled violence in Myanmar at a staggering rate to Cox's Bazar in Bangladesh of which more than 25% are adolescents and are either with single or no parent.

Justification

There are still less information available on the use of contraceptive among refugees especially adolescent girls when it goes beyond the use of pills and condoms. However, refugee adolescents are considered most vulnerable and require more careful study to find out what are the knowledge-based, practices and factors that affect the use of contraceptive during emergencies [9]. With the increase number of refugees in emergency/crisis situations around the world and the adolescents being among the most vulnerable groups, the need to know the knowledge and practices about the use of contraceptive methods and socio-cultural factors that influence contraceptive use and practice are very important. This study will generate and add to the limited evidences as to understanding specifically the situation of the Rohingya adolescent refugee girls (14-18 years) at Cox's Bazar and also may be applicable to similar refugee populations in low and middle-income countries.

Therefore, this study will focus on the knowledge, practice, and determining factors of contraceptives use among the adolescents of Rohingya Refugee girls in camps of Cox's Bazar, Bangladesh. This study will not only generate evidence for the Government, international organizations and NGOs to test, develop and implement necessary training and support for healthcare professionals not only aiding to their services in humanitarian settings but also to help in other similar settings in the future. The Rohingya crisis is one of the largest and fastest growing humanitarian crises globally.

Research questions/objectives

General research question: What are the knowledge, practices and influencing factors regarding use of contraceptive methods among Rohingya refugee adolescent girls living in refugee camps in Cox's Bazaar, Bangladesh?

Speci ic research questions: What is the knowledge on the use of contraceptive methods among the Rohingya refugee adolescent girls?

What is the practice regarding the use of contraceptive methods among the Rohingya refugee adolescent girls?

What are the factors that influence use of contraceptive methods among the Rohingya refugee adolescent girls?

Conceptual framework: Based on information so far got from literature review, different factors affect the use of contraceptive in humanitarian crisis which span from religious belief, knowledge and practices towards the services it [7]. However, there are other factors that also influence the use of contraceptives which mainly evolve around culture and social norms. This conceptual framework will look at knowledge related to awareness of contraception, risk factors to unprotected and source of information, the practices will look into perceived risks to pregnancy, fear of ridicule by family, peer and parent approvals, fear of side effects, partner communication, client satisfaction of perceived quality and the determinant/influencing factors will expand on the social, cultural and religious aspects (Figure 1).

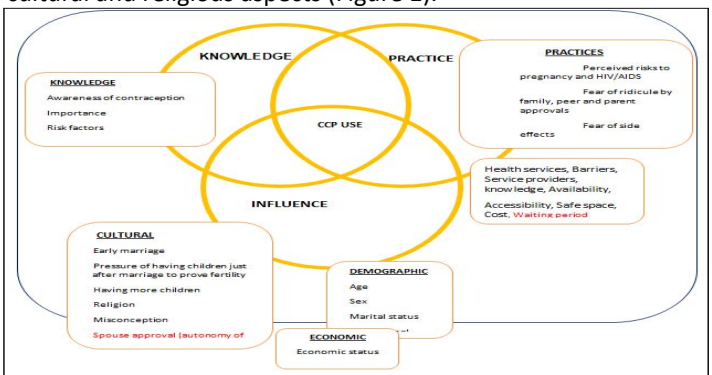

Figure 1: Conceptual framework.

Methodology

Study design: This study was mixed design using both quantitative and qualitative methods. This study was designed mixed because information on factors such as culture, religion and social can only be well explored using the qualitative method. Also, information can be better explored contextually from respondents using qualitative design.

Study site: This study was conducted in the Rohingya refugee camps situated in and around the Cox's Bazar district, about 393 km away from the capital of Bangladesh. It was typically done in 5 camps (11, 13, 14, 8E and 8W) randomly selected in Ukhiya upazila in Cox's Bazar, Bangladesh.

Study population: The study population is adolescent girls (14-18 years), married and unmarried, who have lived in camps of Ukhiya upazila in Cox's Bazar district for at least six months and has been there only after the 25 August, 2017.

Sampling technique: A multi-stage sampling strategy was followed by which 5 camps was first selected using probability by simple random sampling to meet the required sample size for the study. A list of CFSs were collected from the BRAC humanitarian response program from which one CFS was conveniently identify and data were collected from pockets of selected CFS and adjacent CFSs. This process was followed systematically until at least 60 respondents were interviewed from each selected camp to meet the established sample size.

Quantitative sampling: Respondents were selected conveniently in pockets of selected CFSs and adjacent CFSs based on the sampling technique. Each camp was targeted for a minimum of 60 interviews that can culminate to the total targeted sample size.

Qualitative sampling: purposive/convenient sampling was done for the qualitative respondents. IDIs were done with husbands of adolescent girls who were interviewed in the survey and also FGDs with married and unmarried adolescent girls from amongst those who took part in the survey.

Inclusion criteria: All adolescent girls age 14-18 years old, married/unmarried and who have stayed in the camp at least 6 months and came to the camp after 25 August 2017.

Husbands of adolescent girls who have taken the survey and have stayed in the camp at least 6 months and came to the camp after 25 August 2017.

Exclusion criteria: All adolescent girls outside age 14-18 years old, married/unmarried and who have stayed in the camp less than 6 months from 25 August 2017.

Parents /in laws/community member who are Myanmar Rohingya refugees and who have stayed in the camp for less than 6 months from 25 August 2017.

Husbands of adolescent girls who have not taken the survey and have stayed in the camp at least 6 months from 25 August 2017.

Sample size calculation

In the quantitative study a prevalence of 16% of pregnant adolescents among adolescents of Rohingya refugees in Cox's Bazar was used. A 10% non-response rate, designed effect of 1.5 and a confidence interval of 95% which makes the total sample size for our study as 340 was used. This prevalence was used because it gives an idea of the sexual and reproductive health information in terms of pregnancy which possibly gives a gist on contraception and also gives a reasonable sample size to be used within the current study frame.

Sample size (n) = Using the formula

$$\frac{Z^2 p(1-p)}{d^2}$$

Z (z-value)=1.96 for 95% confidence interval level)

p=16%

q=1-p=(1-0.16)=0.84

D (margin of error)=0.05

D (design effect)=1.5

Nr (non-response rate)=10%

=309+31 (10% non-response rate)=340

So, the total sample size for our study was being 340.

For the qualitative, 8 IDIs were done among the husbands of married adolescent girls who were involved in the survey, and 2 FGDs, one each from the married and unmarried adolescent girls were done also on those involved in the survey.

Data collection method and tools

Quantitative: The questionnaire was translated into Bangla, pre-testing was done on selected respondents from close by camps to examine the reliability and construct the validity of the instrument. Data was collected through face-to-face interview using a structured questionnaire adopted from the demographic and health survey of Bangladesh, 2014 (Survey, 2014). From the icddr, b 2017 report and some context-based questions also formulated to adapt to the current situation of the camp. All quantitative data were collected with Samsung mobile tablet using the SurveyCTO software, an open data collection kit (ODK).

Qualitative: The IDI and FGD guidelines were translated into Bangla, pre-tested also in near-by camps and feedbacks incorporated. The data was then collected through an In-Depth Interview (IDI) and Focus Group Discussion (FGD) using the final tested IDI and FGD guidelines.

Data collection procedure: The data was collected by recruiting local inhabitants of Cox's Bazar who were familiar with the refugee camps, know the context, culture and communicate in the Rohingya local dialect. They were trained on the use of the questionnaires and guidelines for collecting the data at the field. The quantitative data was collected using face to face interviews accompanied by the female researchers to ensure that procedures were followed. For the qualitative data (IDIs and FGDs) the male interviews were done by male Research Assistants (RAs) accompanied by a male researcher to ensure quality and procedures which was same for the adolescent girls' FGDs. RAs speak both Bangla and English so they were in conversation with us the researchers on matters of concern from either them or from us the researchers.

The quality of the data was ensured using many steps from daily checking/debriefing with RAs and correction of data to weekly meetings to resolve problems in data if at all they arise. If there are any discrepancies in the data after checking, the data

collector is then informed on the necessary corrections to be made. The data was collected over a period of two weeks and lasted from 17th November 2018 to 3rd December 2018.

Data analysis

The quantitative data which was collected using ODK in surveyCTO (an account opened only for the study which was access only by the research team and was closed immediately the data were downloaded) was downloaded in Stata version 13.0 and also excel format where cleaning and analysis was done. Descriptive analysis was done using summary statistics and the data presented in tabular and graphical formats using frequencies and percentages. Bivariate analysis was done using chi square test of independence to see if there is any significant association between dependent and independent variables with p-value of 0.05 considered significant.

For qualitative data analysis, Apriori codes were developed prior to data collection. After the interviews were done in the local language, the transcripts were then transcribed into Bangla and then translated into English which were coded based on the themes/codes previously set from literatures and conceptual framework. The data was then displayed in a matrix that was easy to derive the information required to be reported.

Ethical consideration

Ethical approval of the study was taken from the Ethical Review Committee (ERC) of BRAC James P. Grant School of public health with reference number 2018-035-IR. Approval was also sort from the Refugee, Relief and Repatriation Commission (RRRC) in Cox's Bazar district, Bangladesh as a government agency.

The respondents who were 18 years and above were asked to give verbal consent whiles respondents below 18 years were asked to give assent and parent's consent was also sorted prior to conducting any interviews and recordings. After given consent and/or assent, the study was explained to each participant in detail and guaranteed understanding base on it being voluntary, unquestionable withdrawal of respondent in the study at any time, privacy and confidentiality ensured. The interview was then done in a place identified based on the convenience and privacy of the respondent.

Confidentiality was assured first by coding all respondent's vital information like name, resident and data collection site. All data collected were only accessed by the researcher team, supervisors, mentors and the school all of which are part of the research process. Tape recorders were used for recording the qualitative interviews and/or discussions in order to collect full and intact thoughts. These recording were transferred to computers and accessed by the research team only.

Results

Socio-demography characteristics

Quantitative indings: This study was conducted on adolescent girls of age group 14-18 years with an average mean age of 16 years. With the total sample size of 340, 63% were ever married given the age at first marriage as 15 years and age at first pregnancy was found to be 15.26 years. It was further found in the educational status that most (95%) of the adolescent girls between this age group had either no formal education or only primary education but none had never been to any secondary or higher education of learning. Based on occupation, most (69%) of the adolescent girls were not involved in any income generation activities while few were engaged in doing handicraft/tailoring (11%) and household paid job (18%) in order to generate income for themselves and their family. Most of the household heads were found to be the fathers (55%) especially so in most cases both couples stay with the husbands' parents and 24% of the household head were the husbands. The study also looked at the family major source of income been that almost all adolescent girls (97%) stay with either of a member of the family. It was also found that even though the situation of the camp was very challenging, the family size were averagely large with about seven members in one family. It was also found that the most income generating source of family head was unskilled work (as in daily, weekly or monthly) 33% and relief (63.53%) for survival (Tables 1-9).

Table 1: Qualitative demography.

	Respondent ID	Age	Educational status	Marital status	Duration of stay at camp (months)	Number of children	Occupation
IDI	I_Husb_1	23	Primary	Married	13	1	Unemployed
	I_Husb_2	24	No education	Married	12	2	daily labor
	I_Husb_3	20	Primary	Married	10	0	daily labor
	I_Husb_4	27	Primary	Married	12	2	daily labor
	I_Husb_5	28	No education	Married	13	0	Unemployed

	I_Husb_6	30	Primary	Married	7	3	Shopkeeper
	I_Husb_7	28	No education	Married	10	1	daily labor
	I_Husb_8	21	Primary	Married	12	1	daily labor
FGD 1	F_1_R1	17	Primary	unmarried	NA	11	Household chores
	F_1_R2	15	No education	unmarried	NA	15	Household chores
	F_1_R3	17	Primary	unmarried	NA	17	Household chores
	F_1_R4	17	No education	unmarried	NA	17	Household chores
	F_1_R5	18	No education	unmarried	NA	18	Tailoring
	F_1_R6	16	No education	unmarried	NA	16	Household chores
	F_1_R7	18	No education	unmarried	NA	18	Household chores
FGD 2	F_2_R1	18	Primary	Married	Service in CARE	18	Housewife
	F_2_R2	18	No education	Married	Fisherman	18	Housewife
	F_2_R3	15	Primary	Married	Day laborer	15	Housewife
	F_2_R4	18	No education	Married	Day laborer	18	Housewife
	F_2_R5	18	No education	Married	Day laborer	18	Housewife

Table 2: Knowledge on contraceptive.

Interview	CODE (Know and Don't know)	Quotation/code
IDI5	Don't Know	I don't know what is contraceptive (L305,311,315)
IDI1	Know	There are many problems if you use them. Side effects occur. Women become weak. Their menstruation doesn't stop. Like that. I don't know anything other than that. (L171-173)
IDI1	know	Contraceptives stop the process of having children. (L187)
IDI2	Know	Yes, some people take Dipo to give birth to babies lately. (L361)
IDI2	Know	Some push it for giving birth lately. Some push it for not giving birth anymore. They take Dipo. (L384)

IDI8	Know	They take medicines if they don't want to take babies. (L117)
FGD2	Know	Know from health center(L147 R1)
IDI4	Duration of depo, pill use	Medicines are taken for short term and Dipo is pushed for long term. Those who want to take babies soon they take medicines. Those who want to take babies lately they are take Dipo. (L297/300)

Table 3: Knowledge on contraceptive.

Theme	References	Possible quotes
Know	IDI 1 L171-173, IDI 1 L187, IDI 2 L361, IDI 2 L384, IDI8 L117, FGD2 L147 R1	There are many problems if you use them. Side effects occur. Women become weak. Their menstruation doesn't stop. Like that. I don't know anything other than that.
Don't know	IDI5 L305, L311, L315,	I don't know what is contraceptive, I only have learnt it now
Neutral about	IDI4 L297/300	They said medicines are taken for short term and Dipo is pushed for long term. Those who want to take babies soon they take medicines. Those who want to take babies lately they are take Dipo.

Table 4: Perception on contraceptive.

Interview	Source line	Code used	Quotation
IDI 7	L147-148	Positive	Those who do not have any knowledge about the usage of this are the ones who do not use it.
IDI8	L130	Positive	This is good because the baby's health keeps well for this. On the other hand, mothers suffer less.
IDI 1	L190	Negative	And it is a sin to use these
IDI1	L194	Negative	It will be a sin if they use these. It is religiously forbidden, that's why.
IDI2	L406	Negative	They think, if it is used then they won't have babies anymore. Some think they'll have babies.
IDI2	L424	Negative	Because they think they won't be able to give birth anymore. They also think this is harmful for the body.

IDI2	L379-182	Negative	They think that by eating this, they won't be able to give birth anymore. So, they don't eat it. Again, there are some girls who have less idea, they eat it unintentionally. Some of them gives birth lately and some often can't give birth ever.
IDI2	L480-489	Negative	Because they are afraid that it'll stop them from giving birth to babies. They are afraid that "Vaja" will occur. For some women bleeding occurred as a result of using contraceptives. Some women die of bleeding. Everyone is afraid because of these. They think it'll be harmful so they don't want to push Dipo and all other contraceptives.
IDI1	L167	Negative	I don't think that it is good thing to use.
IDI1	L179-180	Negative	They don't. Obviously they won't if they are married. They want children. Only the unmarried ones will use these.
IDI2	L472	Negative	Because they are afraid that it'll stop them from giving birth to babies.
FGD2	L154 R2	Negative	Men do not, women do.

Table 5: Practice of contraceptive.

Interview	Source line	Code used (source, reason for and not practicing)	Quotation
IDI2	L406	Pill	(They) use the medicine (meaning pills as contraceptive)
IDI2	L413	depo	They take Dipo, they use cards, and they eat tri-monthly medicines.
IDI2	L417	who practice	Whatever is done to control birth is done by the women. Condom is basically used by those who get into illegal physical relation.
IDI2	L461	age	20 years old adolescents.
IDI4	L276	depo	Women push Dipo.
IDI4	L280	pills	Many of them eat medicines. Many of them go to the hospital & push Dipo.

IDI4	L303	age	Girls of 16-17 years old (usually use contraceptive method)
IDI4	L297/300	Duration of depo, pill use	Medicines are taken for short term and Dipo is pushed for long term. Those who want to take babies soon they take medicines. Those who want to take babies lately they are take Dipo.
IDI6	L207	age	13 to 14 years old.
IDI8	L134-136		Yes, the use these medicines. They use these medicines for both shorter and longer period of time. For shorter period of time they take medicines. For longer period of time they take Dipo.
IDI8	L138	age	Generally, girls take this treatment when they are 20 years old.
IDI3	L135	Pills, Depo	They take different types of medicines. They take Dipo
IDI3	L140	depo and pills	They use Dipo and medicines most of the time.
IDI3	L145	age	Around here, girls of 25 years age take these medicines
IDI5	L336	pills	Take medicines to space children
IDI3		pills	Generally after giving birth to the first child, some of the girls do not want to take another child because of all the pain that they go through. That's why they want to have a gap and take pills.
IDI7	L140	Duration of depo, pill use	Some girls take pills for a short period of time and some take for a long time
IDI7	L150-152	pill	Because, it's become very difficult for the mothers and the children if they give birth every year. So they take those pills to have a gap.
FGD2	L173 R5	depo, pills	We who are scared use pills, who are not scared, use Depo?
FGD2	L175 R4	pills	Most take pills.

FGD2	L176 R3	depo, pills	There is bleeding on taking Depo, so most are scared. Pills cause fewer problems.
IDI1	L170	depo	I heard that there is thing called Dipo or something.
IDI2	L356-359	Depo, beauty	Here people take Dipo to control birth. As a result, 'Oneker Bacchar Dani Gorom Hoye Jay'. Some take Dipo to take babies lately, their "Bacchar Dani Jole Jay". Some women take Dipo to keep the body structure proper.
IDI2	L361	Depo, late birth	Yes, some people take Dipo to give birth to babies lately.
IDI2	L451	depo	Yes, they take Dipo.
IDI2	L480-489	depo	Because they are afraid that it'll stop them from giving birth to babies. They are afraid that "Vaja" will occur. For some women bleeding occurred as a result of using contraceptives. Some women die of bleeding. Everyone is afraid because of these. They think it'll be harmful so they don't want to push Dipo and all other contraceptives.
IDI8	L117	depo	They take medicines if they don't want to take babies.
FGD2	L147 R1	From health worker	Know from health center

Table 6: Influencing factors on contraceptive.

Interview	**Source line**	**Code used (barriers and facilitators)**	**Quotation**
IDI 3	L151/152	OBSTACLE /CULTUTRAL ASPECT	The members of the society may speak ill, that is the reason. They don't want to take it.
IDI 2	L447-451	OBSTACLE /religion	I think these are not good. I think it's good if it's not allowed to use. It's prohibited in our Shariah. There is no such statement to use it. It'll be sin if it's used. So, neither I use nor I allow to use. But it'll be helpful if a training is given here on pregnancy & contraceptives.
IDI 2	L463-468	Obstacle/religion	I think marriage is a deed of Sawab. And giving birth to

			babies is the Niamath of Allah. And it is a very big sin to use contraceptives after marriage. Many people become happy if no babies are born, but I become happy if any baby is born. I think it's not a problem if babies born after marriage.
IDI 2	L471	Obstacle/religion	It'll be sin if we use it. It's not good either.
IDI 2	L481	Obstacle/religion	We don't use it for religious reasons. Only because of religious reasons we don't use it.
IDI 2	L494	Obstacle/religion	As much Allah will give me, I'll happy with that.
IDI 2	L496	Obstacle/religion	If Allah gives, then I'll be happy.
IDI 4	L285	facilitator/husband	Husband's decision.
IDI 4	L289	facilitator/husband	For the decision taken by husband, mother in law or father in law
IDI 4	L315	facilitator/husband	If husbands and in laws ask her to take babies then they don't use these.
IDI 4	L324	facilitator/husband	Yes, they take it following the decision of their husbands.
IDI4	L328	Obstacle/marital status	Those who are unmarried but are in a relation they go to hospitals and take treatment without letting their parents know.
IDI 6	L204	Obstacle/religion	It's not good to use protections here, religiously is a sin, and girls might face different health issues regarding it people considers.
IDI 6	L209	Obstacle/religion	Marriage is a blessing. Family planning isn't a good thing. Using protection is a sin during intercourse,
IDI 6	L215-216	Obstacle/religion	People who uses protection basically they are from other religions, these are sins brother to use protection is a sin.
IDI 8	L150	Obstacle/religion	They don't take medicine for religious reasons.

FGD 1	L411 R1	facilitator/husband/beauty	There are some husbands who want their wives to look nice, so they want to spacing of birth. While some only desire children.
FGD 1	L429 R6	facilitator/husband	It is husbands who bring it (pills).
FGD 1	L431 R7	facilitator/husband	Husband brings, wife takes. They get from hospitals.
FGD 1	L454 R2	Obstacle/marital status	We are not married, why should we want to know. Married need to know. If one does not know will ask another. What will happen if they take, will it cause some disease or not.
FGD 1	L468 R7	facilitator/husband	Have to listen to husband.
FGD 1	L469 R2	facilitator/husband	Have to listen to husband.
FGD 1	L470 R3	facilitator/husband	Have to listen to husband and in laws
FGD 1	L471 R3	facilitator/husband	And have to follow husband's wish or else Allah will not like.
FGD 1	L472 R4	facilitator/husband	If you fear Allah then you have to listen to husband.
FGD 1	L475-480 R6	facilitator/husband/family members	How can you make husband understand. If parents in law understand then husbands will understand. If parents-in-law think that their daughter-in-law should look beautiful then they will tell the husband who will then listen. If they think that they need grandchildren, or if someone scares them that after giving depo if the girl does not conceive then there will be lot of sorrow.
FGD 2	L197 R3	Barrier	Has to take husbands advice.
FGD 2	L202 R5		Has to take husbands advice.
FGD 2	L371	Barrier	And if I don't take babies and then take Dipo, then we'll face a bigger problem.
FGD 2	L424	Barrier	Because they think they won't be able to give birth anymore. They also think this is harmful for the body.
FGD 2	L379-182	Barrier	They think that by eating this, they won't be able to give birth

			anymore. So, they don't eat it. Again, there are some girls who has less idea, they eat it unintentionally. Some of them gives birth lately and some often can't give birth ever.
FGD 2	L480-489	Barrier	Because they are afraid that it'll stop them from giving birth to babies. They are afraid that "Vaja" will occur. For some women bleeding occurred as a result of using contraceptives. Some women die of bleeding. Everyone is afraid because of these. They think it'll be harmful so they don't want to push Dipo and all other contraceptives.
FGD 2	L152 R1	Facilitator	Learned after marriage.
FGD 2	L388=392	Facilitator	Because, if they give birth within a gap of time then it's better for them. Better in a sense that, they already have a baby. So, they can take care of the baby if they get enough time to give birth to another baby. When the previous baby becomes capable to walk, then they take another baby. Then they face less problems.
IDI 8	L144-147	Facilitator	Many people take babies within gap because they'll suffer to grow the child up properly. Some look at health condition of their wives and some look at financial problem. Thus, they take break between giving birth to babies.
IDI3	L148.149	Facilitator	Normally, it is difficult for them to have children every year. They become sick. It is problematic to raise the children.
IDI 5	IDI 5	Facilitator	Generally after giving birth to the first child, some of the girls do not want to take another child because of all the pain that they go through. That's why they want to have a gap and take pills.
IDI 7	L144-145	Facilitator	After having few kids they use it to have a gap. Generally they use more.
IDI 7	L150-152	Facilitator	Because, it's become very difficult for the mothers and the

			children if they give birth every year. So they take those pills to have a gap.
FGD 1	L373 R1	Facilitator	They do not say these to us, only to those who have husbands
FGD 1	L417 R5	Facilitator	No, at a gap. So that one child gets proper care and grows quickly.
FGD 2	L173 R5	Facilitator	We who are scared use pills, who are not scared use Depo?
FGD 2	L176 R3	Barrier	There is bleeding on taking Depo, so most are scared. Pills cause less problem.
FGD 2	L193 R5	Facilitator	Now it is used more.

Table 7: Quantitative aspect of the study analysis.

No.	Step	Explanation
1	Data downloaded from survey CTO software app.	When a maximum of 200 data were collected, checked and uploaded
2	Data cleaning	After data have been downloaded
3	Data analysis using Stata 13.0 version	Based on planned analysis
4	Univariate and bivariate analysis	Based on the variables

Table 8: Socio-Demography of study population quantitative.

Variables	Frequency (n)	Percentage (%)
Age		
Mean ± SD	16±1.54	100
Marital status		
Ever Married	104	30.59
Never married	236	69.41
Age at first pregnancy	15.3±1.49	100
Age at marriage	15 ±1.64	100
Education		
No Schooling	165	48.53
Primary	157	46.18

Secondary and above	18	5.29
Current occupation		
Housemaid work	60	17.65
Tailoring/ handicraft	36	10.59
Volunteering with I/NGOs	15	4.41
Not employed	233	68.53
Others	8	2.35
Household head		
Father	186	54.71
Mother	44	12.94
Husband	81	23.82
Self	9	2.65
Brother/ sister	12	3.53
Others	8	2.35
Average household size		
1 – 3	61	17.94
4 – 6	155	45.59
7 – 9	87	25.59
>9	37	10.88
Family income source		
Informal jobs	111	32.64
Shop keeper	25	7.35
Service at I/NGOs	24	7.06
Teaching	20	5.88
Relief	216	63.53
Others	16	5.7

Qualitative findings

Table 9: Socio-Demography of study population qualitative.

Variable	IDI (Husbands)	FGD (Married adolescents girls)	FGD (Unmarried adolescents girls)
Age (mean)	23	17	17

Duration of stay in the camp (Mean)	11	8	8
No. of children (mean)	1	-	0
Education			
Primary education	5	2	2
No formal education	3	5	3
Occupation			
Unemployed	2	7	5
Daily labor	5	-	-
Shop keeper	1	-	-

Summary: 8 IDIs (Husbands), 2 FGDs (1 each married and unmarried): The qualitative data showed the mean age of husbands to be 23 years and that of adolescent girls as 17 years. On average, the husbands have stayed longer (11 years) in the camp compared to the adolescent girls (8 years) and almost all demographic data for both the married and the unmarried adolescent girls are found to be closely similar.

Knowledge and perception about use of contraceptive methods

Quantitative findings: From the survey of 340 adolescent girls, their knowledge were measured based on key questions set which indicate that in general 63.24% know what contraceptive is, where to get it and the importance of taking contraceptive. However, proportionately, more married adolescents are aware and knowledgeable about the use of contraceptive than the unmarried adolescents. All adolescents, married and unmarried were asked if they know what is contraceptive, 71% said yes, among which 66% said they know where to get contraceptive and 86% indicated that they think it is important to take contraceptive (Table 10).

Table 10: Marital status and knowledge of contraceptive practice.

Variable	Ever Married (n=104)	Never Married (n=236)
Response	Yes (%)	Yes (%)
Know the term 'contraceptive'	88 (85)	154 (65)
Know the place of receiving contraceptive	83 (80)	142 (60)
Know the importance of using contraceptive	102 (98)	191 (81)
Know other methods different from MCM	2 (2)	2 (1)

Qualitative findings: Similar knowledge questions were asked in the qualitative In-Depth Interviews (IDI) with husbands where all the husbands mentioned that they know what contraceptive is but had limited knowledge on it used. The unmarried adolescent girls also lack proper understanding of contraception while most of the married adolescent girls knew about the use of contraceptive methods. All husbands interviewed indicated like the adolescent girls that depo Provera (Depo) and Oral Contraceptive Pills (OCPs) are the two methods used in the camp by the adolescent girls who are married which is similar to the quantitative findings. Most of the husbands like the married adolescent girls also indicated that contraceptives stop the process of having children, early pregnancy and gives freedom to the mother to rest before giving birth to the next child.

A 27 years old husband of an adolescent girl said, "Contraceptives are taken by married women only who either do not want to take babies for the moment or want to wait for some time before taking next child. Those who want to have babies soon, they take oral contraceptive pills whiles for those who want babies later, take Depo Provera". (IDI 4, L297-302).

With regards to the perception, most respondents had negative perception about contraceptive use. All respondents perceived contraception as a sin and also religiously unacceptable. They mostly believe that contraception is used

only for not having babies and explain that children are gift from Allah (God) and no one should take measures to stop having them.

With the negative perception, they believe that only women that are married and have given birth to their children should use contraception and that it can be used as a form of beauty enhancer for married women. Some respondents also indicated that some women are always sick as a result of taking contraceptive.

A 24 years old husband said. "They think that by eating this, they become fat and beautiful. So, some don't eat it. Again, there are some girls who have less idea, they eat it unintentionally. Some of them gives birth lately and some often can't give birth ever" (IDI 2, L 379-382).

Another 24 years old uneducated daily labor man said "because they are afraid that it'll stop them from giving birth to more babies. They are afraid that "Vaja" (sterility) will occur. For some women bleeding occurred as a result of using contraceptives. Some women die of bleeding and therefore everyone is afraid because of this reason. They think it will be harmful so they don't want to use Dipo and all other contraceptives." (IDI 2, L480-489).

On the other hand there were few positive perception about contraceptive practice which indicated that it keeps the mother healthy for child bearing by having a gap, the family size remain small and that the children can be well cared for.

A 23 years old primary level educated adolescent husband said "they don't. Obviously they want to take if they are married to space their children and the family be happy. They family is more happy with smaller size family." (IDI 1, L 179-180).

A 24 years old uneducated daily labor man said "yes whatever is done to control birth is done by the women. Condom is basically used by those who gets into illegal physical relation" IDI 2, L 417.

Use of contraceptive methods

Quantitative indings: The use of contraceptive methods is critical among the Rohingya adolescent refugee girls which show that mostly married adolescent girls used contraceptive. It was further indicated that among the total adolescent girls (married and unmarried) only 6.8% of them are practicing contraception. With respect to adolescent girls currently practicing contraception, 96% of them are married. Further results indicate that most (62%) unmarried adolescents are also not interested in contraceptive practice. The only adolescent unmarried girl who was using contraception was influenced by a friend and was using OCP that was got from a private doctor. Among those who reported use of contraceptive, about 21% reported experiencing side effects at some point (Table 11).

Table 11: Marital status and practice of contraceptive.

Practice of contraceptive	Ever married (n=104)	Never married (n=236)
Variable	Yes (%)	Yes (%)
Current practice	23 (22)	1 (0.4)
Ever practice	30 (29)	0 (0)
Desired to practice	56 (54)	90 (38)

With the reported contraceptive practice in quantitative survey, among those who practice contraceptive, about 67% were reported to be using injectable Depo Provera, 25% reported using the oral contraceptive pills whiles 8% reported using other methods. When asked about their desire to practice contraception, 43% expressed that they are willing to practice contraception at some point in the future. However, more than half were not willing to take any form of practice of contraception (Figure 2).

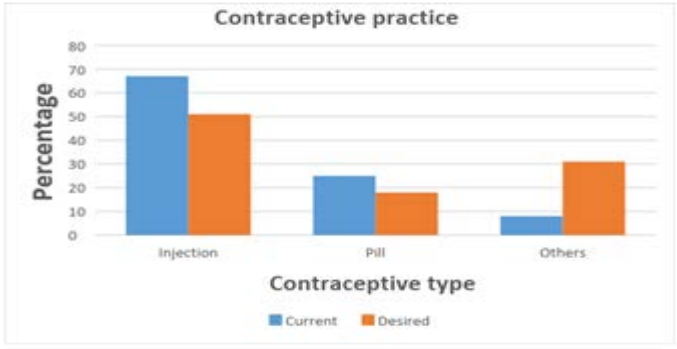

Figure 2: Contraceptive practice.

When the survey respondents were asked about their preference of using contraceptive method if they are allowed by their family members or husbands, 43% of them indicated that they want to use a method at some point for either birth spacing, health reasons or due to current status of living in

camp. It was further indicated that half of them expressed their interest to use injectable, one-fifth desired for OCPs whiles 31% will use other available methods like implants, permanent methods, emergency contraceptives and female condom.

Qualitative findings: From the qualitative study, In-Depth Interviews (IDIs) for husbands of adolescent girls and Focus Group Discussions (FGDs) with married and unmarried adolescent girls were conducted which indicated that Depo Provera and OCPs were the most commonly used contraceptive methods among the adolescent girls. Contraceptive practice among the Rohingya population was considered to be a business of the female and the husbands considered an age range between 14-25 years to be best to practice contraception.

A 27 years old primary level educated adolescent husband said (Figure 3) "Contraceptive is practiced mostly by married girls and many of them eat medicines (meaning take OCPs) and for those who want to take for long time go to the hospital and push Depo (take injection of Depo Provera)" IDI 4, L 280-282

Factors in luencing use of contraceptive methods

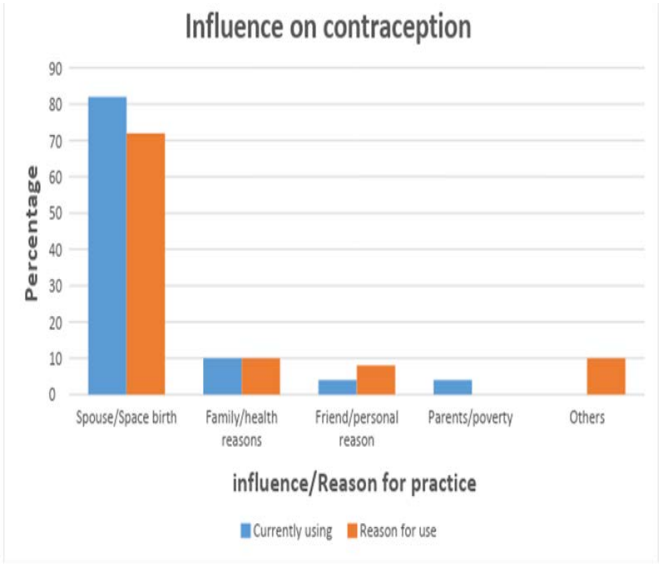

Figure 3: Influencing Factors on contraception.

Contraceptive used in this population mostly are been influenced by one or many factors as adolescent girls lack independence to decide whether or not to use contraceptive (Figure 3). Because contraceptive are mostly know and used by married adolescents, it indicated therefore that husbands of the adolescent girls have the greatest influence (73%) whiles family members contribute only 3%.

Qualitative findings: When further information were obtained using in-depth interviews and focus group discussions, the influencing factors were basically categorized into obstacles influencing not to use contraceptives and facilitators influencing the use of contraceptive. With this analysis, common obstacles/ barriers to contraceptive use were religion, culture, husband and family members whereas common facilitators which drive them to take contraceptive include their husbands (for married adolescent girls), getting a healthy child, getting a healthy wife and also allowing to raise the children better due to staying in an unfavorable condition. All respondents believe that the key decision maker for contraceptive use is the husbands (Figure 4).

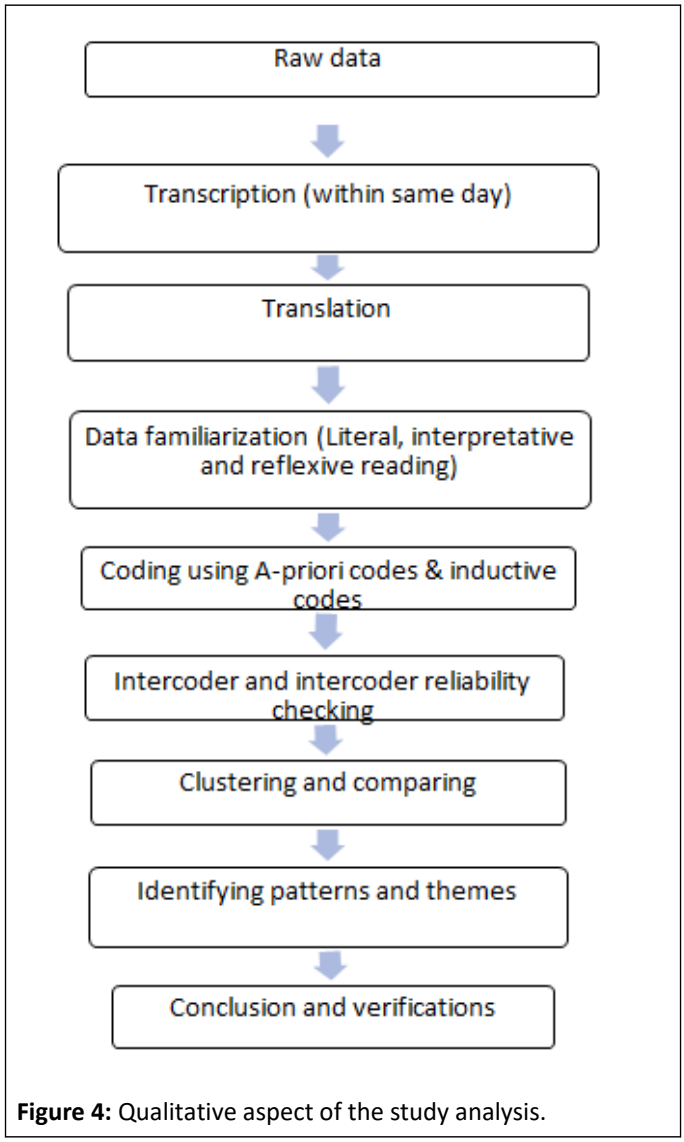

Figure 4: Qualitative aspect of the study analysis.

In some cases, the parents and in laws regulate the activities of the home since they stay together as extended family and therefore they decides whether the wife is required to have children or not. The decision on contraception therefore cannot be done by the husband alone but through other family member.

A 24 years old uneducated daily labor man said "I think marriage is a deed of Sawab (the created). And giving birth to babies is the Niamath (blessing) of Allah and it is a very big sin to use contraceptives after marriage. Many people become happy if no babies are born, but I become happy if any baby is born. I think it's not a problem if babies born after marriage." IDI 2, L 463-468.

Discussion

This study result show that the mean age at marriage for adolescent girls in the refugee camp was found to be 15 years which is slightly lower than that found in a recent study

conducted in the same camp as 16.8 years [10]. With their educational status, 49% had no formal education which reflected also on the report on "Demographic profiling and Need Assessment of Maternal And Child Health (MCH) care for the Rohingya Refugee Population in Cox's Bazar, Bangladesh" showing that 31% of that study population never got any formal education. In the same study, it was shown that adolescent girls not only get married early but also get pregnant as soon as getting married and therefore showed mean age at first pregnancy as 15.3 years whiles among women of child bearing age was 18 years [10]. The differences may be explained due to the fact that the icddr, b study was conducted among all reproductive age group women including the adolescents of 14-18 years old.

The knowledge on contraceptive was also assessed and was found to be 63% of adolescent girls knowing what contraceptive is, where to get it and the importance of using contraceptive. Knowledge on contraceptive can prevent the high rate of death of adolescent girls (Ammerman, 2016) being used as tool to prevent unwanted pregnancy, unnecessary abortion and complications related to adolescent pregnancies [11]. More married adolescent girls were knowledgeable about contraceptive than the unmarried ones. This can also be supported by an Ethiopian study which shows that less than two-third of the population of adolescents (male and female) have knowledge about contraceptive which was justified that the female adolescents get married at an earlier age compared to the males [12].

This study further showed that the contraceptive prevalence among the adolescent girls of 14-18 years who were married was 22.1% which is lower (33.7%) than in a study conducted in same camp [10]. It is also lower (26.7%) among married women of the Democratic Republic of Congo (DRC) a setting that is impoverished, politically unstable and has limited coverage of contraceptive availability with high social and cultural stigma [13]. It has also been found in a cross sectional study in Ethiopia on the reproductive health knowledge and services, that utilization of contraceptive among rural adolescent girls is only about 22% who know, get access and practice contraception which is similar to the result of this study [12,14].

With about 22% who have ever practiced contraceptive use in this study, 96% of them were married adolescent girls. The common contraceptive practice use was injection depo Provera and oral contraceptive pill amongst those that are currently practicing. Similar information also we got from the unmarried adolescent girls and husbands of the married adolescent girls [15,16]. In similar study, depo Provera and OCPs were shown to have a high projection of use in Ethiopia and in another study done by conducted at the same refugee camp amongst women of reproductive age. When looked at a multi-country study on refugee contraceptive practice, less adolescent girls 14-18 years are aware of contraception, have access and affected by religion, social and other factors [17].

Influencing factors identified in this study were also stated as husbands and family members as they desire to have more children [18]. There are always stigma for a woman to be married and do not have children coupled with their religious belief. Other studies have been conducted that have shown husbands of married adolescent girls, family members and religion as key factors influencing contraceptive use. Study from the unstable political state of the DRC always gave similar result as influencing contraceptive practice [19]. Also, it was shown in the study conducted in the same camp among married women of reproductive age and was found that religion, disagreement with partner and demand for more children came out as the top three influences deterrents on the use of contraceptive. It is also seen that parents disapproval, less knowledge as shown in a study [15]. And partners give a lots of influence in making the decision to use reproductive health services including contraceptive use which is consistent with this study [20].

Conclusion

Contraceptive practice among the adolescent girls with the age group of 14-18 years among the Rohingya refugees is low. Education both formal and on contraception also was found to be very low which may contribute towards the limited knowledge on the practice of contraception. It was also clearly shown that mostly the married adolescent girls were practicing contraception whiles the unmarried adolescent girls of the same age group never practice contraception. Contraceptive use was also found to be very strongly associated with religion, family looking bad at it, husband not allowing wife to take contraception and stigma of the community as influencing factors.

Recommendation

With the current low knowledge among adolescent girls about contraceptive, it is prudent to set up separate sessions at the adolescent friendly spaces to provide them with the necessary information required for the practice. Husbands of adolescent girls can be grouped into clubs/teams and together be informed about contraceptive use where they can ask freely all questions and get appropriate answers. Service providers can also involve interested leaders (religious and traditional) who are knowledgeable and interested about contraception so that they can understand the context well and can be directed with the appropriate path for contraceptive services.

Limitations

This study which was done among Rohingya adolescent refugee girls of 14-18 years was not exhaustive and therefore cannot be generalized to the rest of the adolescent girls population in the camp due to small sample size and limited age window. Another limitation of this study was the issue of language barrier which we as research team never spoke the traditional language of the adolescent girls. Also this study was limited by time and resource availability as it was done for the purpose of masters of public health student summative learning project report. Finally, there may have been recall bias in responding to most of the questions which may have led to over or under reporting in response to some questions.

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