Shababline Data Research Project

RNW Media & Yamaan

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Summary

In this report, we present the results of an analysis of user engagement with Shababline across three different media: the hotline, Facebook direct messages and Facebook comments under #doctor_online posts. The key recommendations from the analysis are:

- Overall, sensitive topics are discussed via the hotline instead of Facebook. Knowing this, Shababline could consider focusing their Facebook activity on less sensitive issues, and redirect users to the hotline if they want to discuss more sensitive topics.
- Women tend to engage more with Shababline via the hotline, whereas men are generally more present on Facebook. With this information, Shababline could think about the gender distribution of colleagues working on Facebook/Hotline engagement (e.g. put more female colleagues on the hotline in case women request to speak to a female colleague).
- Some users indicated that they would like Shababline to have a Whatsapp group for communication. The team could consider starting this. However, it is important that safety considerations are always kept in mind.
- Many users ask about the procedure the Shababline team uses to process inquiries, especially with regards to safety. It may comfort these users if Shababline prepares an explanation of the methodology that it can provide to users.

Background

Shababline, or Youthline in English, is a free number that young Yemenis can call for confidential, safe, non-judgmental and accurate information about sexual and reproductive health and family planning. Besides the hotline, Shababline also has a Facebook page. On this page, users receive information and can discuss SRHR and family planning. Shababline posts an open call for questions every week using *#doctor_online*. Facebook users can ask any question under this post. This means that young Yemenis have three options for contacting Shababline: by calling, by commenting a question under a *#doctor_online* post, or by directly messaging the Shababline account in a private chat.

Research questions

Knowing its users' key areas of interest can help the Shababline team better estimate necessary resources and distribute them appropriately across different themes and media. Essentially, this will help Yamaan to better serve its users. In this report, we will therefore answer the following main research question:

What issues did Shababline users address most often across the four main thematic areas (via Facebook or the hotline) between January 2018 and June 2019?

The four main thematic areas in this regard are ***family planning; reproductive health; sexual health including HIV/AIDS and STI; and Sexual and Reproductive Rights*** (for an overview of all thematic areas, please refer to Appendix I).

The main research question is best answered by 3 more in-depth sub-questions:

1. How was general user engagement with Shababline between January 2018 and June 2019?

First, we will take a snapshot of general user engagement with Shababline between January 2018 and June 2019. We will look at, for example, how many calls, direct messages and Facebook comments (specifically under *#doctor_online* posts) Shababline received.

Comparing between different media calls for a standardized definition of a user "inquiry", so to say. Facebook user engagement will need to be compared to a hotline call so that one user's engagement on Facebook equals one user's engagement via the hotline. Table 1 below illustrates how this will be approached:

Table 1. Defining inquiries across media	
Medium	**Definition of inquiry**
Hotline	1 call
Facebook (public)	1 comment under a *#doctor_online* posts on Shababline's Facebook page
Facebook (private)	1 direct message to Shababline's Facebook inbox

2. Was there a relationship between the thematic area discussed and the medium used by Shababline users between January 2018 and June 2019?

Secondly, we will look for patterns in the distribution of engagements by medium and by thematic area. This allows us to see, for example, whether certain themes were addressed more often via hotline or Facebook.
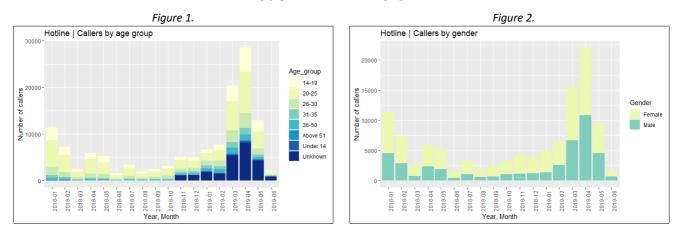
3. What were the key issues discussed across the four main thematic areas between January 2018 and June 2019?

Finally, to get a better understanding of the key issues Shababline users are interested in, we will analyse the main words/topics used per thematic area. This will give an indication of the more specific issues addressed per theme. Specifically, we will focus on the four main thematic areas as mentioned above, and the five most addressed keywords per theme.

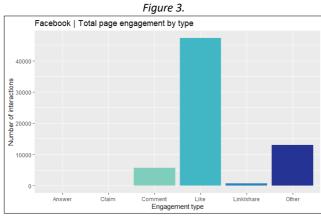We will conclude this report with a general recommendations section.

What did we find?

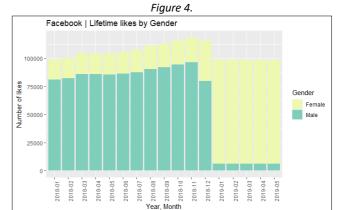### *How was general user engagement with Shababline between January 2018 and June 2019?*

Key figures: Hotline engagement
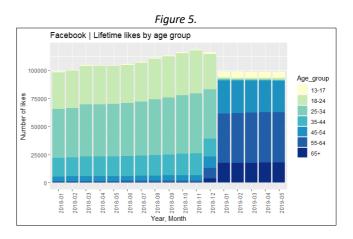
Figure 1.

Figure 2.

Shababline staff answered 134,113 calls from January 2018 – June 2019 (note that we only had 16 days' worth of data for June 2019, hence the sudden decrease). Both Figures 1 and 2 show that monthly calls decreased in early 2018 but increased again after August 2018. Most callers in both years were female, and more than half was aged 14-25. Another interesting finding is that almost 80,000 callers were married. Most callers (17.5%) were from the Ibb governorate. Starting in 2019, the number of unknown age groups increased. The Shababline team could explore why this happened.

Key figures: Facebook engagement

Figure 3.

Figure 4.

Figure 5.

Looking at Shababline's overall Facebook engagement, we find that the vast majority of interaction with Shababline is through *likes* of posts. There were no *claims or answers.* It looks as though the 2019 Facebook engagment data is conflicted, so we will disregard this period (see Appendix III for further discussion about why this is). Overall, the lion's share of Shababline Facebook fans was male, as opposed to the hotline users. The age distribution of users who have liked the page is similar to that of the hotline: most users were aged 13-24.

Key figures: #doctor_online post comments and direct messages

Tables 2 to 5 below provide the key characteristics of people contacting Shababline via #doctor_online posts and direct messages on Facebook. The tables show that roughly half of the Facebook inquiries were from returning users, which indicates that users trust Shababline and return if they want to ask more questions. It also becomes clear that the majority of Facebook engagement through #doctor_online post comments or direct messages, is from men. There are no substantial differences in the gender distributions between comments and direct messages.

Table 2. Facebook inquiries: New vs. Returning users		
	New users	**Returning users**
Messages	50%	50%
Post comments	58%	41%

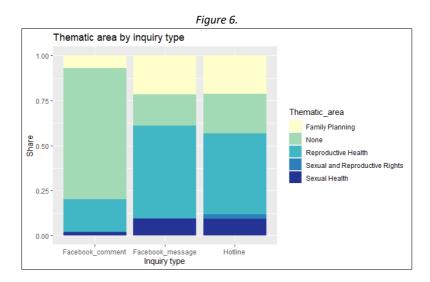| Table 3. Facebook inquiries: Male vs. female	
Male	**Female**
63%	37%

Table 4. Facebook: New vs. Returning users by inquiry type		
	New users	**Returning users**
Messages	50%	50%
Posts comments	58%	42%

Table 5. Facebook: Gender distribution by inquiry type		
	Messages	**Posts comments**
Male	82%	18%
Female	80%	20%

Was there a relationship between the thematic area discussed and the medium used by Shababline users between January 2018 and June 2019?

Figure 6 below shows that the distribution of thematic areas addressed through Facebook messages and via the hotline was roughly similar in the period studied. The main difference between these two inquiry types is that 2,737 hotline calls were about Sexual and Reproductive rights, while this theme was addressed only 4 times through Facebook message and just once in a Facebook comment. Facebook comments often did not address a thematic area, which could mean that they tagged a friend under a post, or commented more generically (e.g. "good post" or "direct message sent").

Figure 6.

In Figure 7 below, the distribution of thematic areas addressed among men and women across both Facebook and the hotline is depicted. Between January 2018 and June 2019, 46.6 thousand inquiries were from men and 68.5 thousand were from women. An interesting finding is that roughly half of women's inquiries was about Reproductive Health, while men only addressed this theme in 37.6% of their inquiries. When contacting Shababline via Facebook or the hotline, men addressed issues outside the four main thematic areas more often than women. Besides these two differences, the distribution of thematic areas addressed among men and women was fairly similar.

Figure 7.

What were the key issues discussed across the four main thematic areas between January 2018 and June 2019?

Hotline

The overview below shows the top 5 questions per thematic area. As you can see, *Reproductive Health* was the most popular thematic area in the period studied. The most asked question not just under *Reproductive Health,* but across all thematic areas was "*What are pre-marriage consultations and why do I need them?".*

	Table 6. Hotline: Top 5 questions per thematic area Structure: [Topic] – [Question]	
Theme	**Sexual Health**	**N**
#1	STDs – Vigilant infections	3,464
#2	STDs – Vigilant infections and late pregnancies	2,038
#3	About sexual health – Impotence	811
#4	STDs – What are vigilant infections?	573
#5	About Sexual Health – Frigidity	400
Total[1]		9,915
Theme	**Sexual and Reproductive Rights**	**N**
#1	Pre-marriage consultations – Wife/husband rights	826
#2	Early marriage issues – Early marriage hazards	742
#3	Early marriage issues – Right age to get married	449
#4	Early marriage issues – Early pregnancies before the age of 18	443
#5	About reproductive health – FGM	96
Total		2,737
Theme	**Reproductive Health**	**N**
#1	Pre-marriage consultations – What are they and why do I need them?	8,925
#2	Pregnancy and delivery care – Advances for pregnant women	6,546
#3	About reproductive health – Infertility	5,356
#4	About periods – Irregular periods	2,861
#5	About periods – Period pain	2,641
Total		48,888
Theme	**Family Planning**	**N**
#1	Family planning – What are family planning tools?	7,118
#2	Family planning – What is the best family planning tool?	6,011
#3	Family planning – What is family planning?	2,180
#4	Family planning – What are family planning tools' issues?	1,375
#5	Family planning – How to use birth control pills?	1,366
Total		23,011

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[1] Note: total here is the total number of calls for the thematic area, not the sum of the top 5 questions.

Table 7 below shows the most asked questions through Facebook direct message. There seems to be a slight tendency to address more sensitive issues, such as *FGM* and *Wife/husband rights*, via hotline instead of Facebook message. In general, *sexual and reproductive rights* were hardly discussed on Facebook, which could be because questions related to this theme are highly sensitive and people consider the physical hotline to be the most confidential. It may be interesting to explore this hypothesis through a survey.

Table 7. ***Facebook direct messages: Top 5 questions per thematic area*** *Structure: [Topic] – [Question]*		
Theme	**Sexual Health**	**N**
#1	STDs – Vigilant infections	18
#2	About sexual health – Impotence	15
#3	About sexual health – Fast ejaculation	8
#4	About sexual health – Pain during intercourse	6
#5	STDs – What are vigilant infections?	6
Total[2]		68
Theme	**Sexual and Reproductive Rights**	**N**
#1	Early marriage issues – Right age to get married	2
#2	Early marriage issues – Early pregnancies before the age of 18	1
#3	About reproductive health – FGM	1
Total		4
Theme	**Reproductive Health**	**N**
#1	About reproductive health - Infertility	69
#2	Pregnancy and delivery care – Advances for pregnant women	42
#3	After delivery care for mother and the baby – New-born care	28
#4	About periods – Irregular periods	27
#5	Pregnancy and delivery care – Pregnancy symptoms	26
Total		382
Theme	**Family Planning**	**N**
#1	Family planning – What is the best family planning tool?	38
#2	Family planning – What are family planning tools issues?	21
#3	Family planning – Natural birth control tools	15
#4	Family planning – What are family planning tools?	14
#5	Family planning – How and when to use IUD?	13
Total		160

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[2] Note: total here is the total number of calls for the thematic area, not the sum of the top 5 questions.

#Doctor_online post comments

In comments under #doctor_online posts, users seem to address less sensitive issues compared to the other two channels (see Table 8 on the next page). Interestingly, both *pain during intercourse* and *fast ejaculation* were discussed only via Facebook comment or direct message. Another difference between the three different channels is that *pregnancy and delivery care* was discussed more often under #doctor_online posts than in phone calls or direct messages.

	Table 8. Facebook #doctor_online comments: Top 5 questions per thematic area Structure: [Topic] – [Question]	
Theme	**Sexual Health**	**N**
#1	STDS – Vigilant infections	4
#2	About sexual health – Pain during intercourse	2
#3	STDs – What are vigilant infections?	2
#4	About sexual health – Fast ejaculation	1
Total[3]		9
Theme	**Sexual and Reproductive Rights**	**N**
#1	Early marriage issues – Early pregnancies before the age of 18	1
Total		1
Theme	**Reproductive Health**	**N**
#1	About reproductive health – What is reproductive health?	13
#2	About periods – Irregular periods	7
#3	Pregnancy and delivery care – Pregnancy symptoms	7
#4	Pregnancy and delivery care – Embryo formation	7
#5	Pregnancy and delivery care – Advances for pregnant women	6
Total		87
Theme	**Family Planning**	**N**
#1	Family planning – What are family planning tools issues?	6
#2	Family planning – What are family planning tools?	6
#3	Family planning – What is the best family planning tool?	5
#4	Family planning – How and when to use IUD?	4
#5	Family planning – Not getting pregnant after stop using of tool	3
Total		34

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[3] Note: total here is the total number of calls for the thematic area, not the sum of the top 5 questions.

Word clouds

For Facebook direct messages and comments, we analysed the use of words by users by making word clouds and identified the most used keywords per thematic area. The top 5 keywords are displayed in Table 9. The full word clouds are included in Appendix IV. The top 5 shows, for example, that Facebook users discuss *medicine* most often when engaging with the theme *Sexual health,* and *the test* for *Sexual and reproductive rights. Pregnancy* is the most used word for both *Reproductive health* and *Family planning*.

<table>
<tr><td colspan="5">Table 9.
Facebook data only: Top 5 keywords per thematic area</td></tr>
<tr><td></td><th>Sexual health</th><th>Sexual and reproductive rights</th><th>Reproductive health</th><th>Family planning</th></tr>
<tr><td>#1</td><td>medicine</td><td>the test</td><td>pregnancy</td><td>pregnancy</td></tr>
<tr><td>#2</td><td>infections</td><td>the early</td><td>tests</td><td>pills</td></tr>
<tr><td>#3</td><td>fast ejaculation</td><td>attendance</td><td>monthly period</td><td>contraception</td></tr>
<tr><td>#4</td><td>intercourse</td><td>both man and woman</td><td>doctor</td><td>monthly period</td></tr>
<tr><td>#5</td><td>impotence</td><td>marriage</td><td>medicine</td><td>IUD string</td></tr>
</table>

Recommendations

Based on the analysis presented above and the extra knowledge we built throughout the research process, we recommend the following for the Shababline team:

- Overall, sensitive topics are discussed via the hotline instead of Facebook. Knowing this, Shababline could consider focusing their Facebook activity on less sensitive issues, and redirect users to the hotline if they want to discuss more sensitive topics.
- Women tend to engage more with Shababline via the hotline, whereas men are generally more present on Facebook. With this information, Shababline could think about the gender distribution of colleagues working on Facebook/Hotline engagement (e.g. put more female colleagues on the hotline in case women request to speak to a female colleague).
- Some users indicated that they would like Shababline to have a Whatsapp group for communication. The team could consider starting this. However, it is important that safety considerations are always kept in mind.
- Many users ask about the procedure the Shababline team uses to process inquiries, especially with regards to safety. It may comfort these users if Shababline prepares an explanation of the methodology that it can provide to users.

I - Hotline topic codes as logged per call

1- About Reproductive Health
1.1 what is reproductive health
1.2. Infertility
1.3. miscarriage
1.4. blood type differences
1.5. Polycystic ovaries Syndrome
1.6. Uterus Problems
1.7. breast problems
1.8. Bleeding
1.9. Genital Cancer
1.10. FGM
1.11. Infections and infertility
1.12. Hormonal Problems
1.13. Secondary infertility (العقم الثانوي)
1.14. Uterine cancer
1.15. Varicose testicles (دوالي الخصيتين)

2. About Sexual Health
2.1. Masturbation
2.2. Impotence (العجز الجنسى)
2.3. Frigidity (البرود الجنسى)
2.4. Fast Ejaculation (سرعة القذف)
2.5. Hymen
2.6. Pain during intercourse
2.7. How to avoid pain during intercourse
2.8. intercourse during period
2.9. Prevention of chronic infections

3. About Nutrition
3.1. Weight gain and loss
3.2. The right nutrition
3.3. Kids Malnutrition
3.4. right nutrition for growth

4. Body Changes / Growth & Puberty
4.1. Growth & Puberty effects
4.2. late periods
4.3. Acne
4.4. body changes during puberty

5. About Periods
5.1. Irregular periods
5.2. Period pain
5.3. Late periods after 16 years old
5.4. menopause

6. Pre-Marriage Consultations
6.1. Wife\Husband rights
6.2. what are Pre-Marriage Consultations, why I need them?
6.3. where to do per-marriage tests?
6.4. positive and negative blood types.
6.5. marriage
6.6. Genetic diseases

7. Early Marriage Issues
7.1. Right age to get marry
7.2. early marriage hazards
7.3. early pregnancies before the age of 18

8. Family Planning
8.1. what is family planning?
8.2. what are family planning tools?
8.3. what is the best family planning tool?
8.4. what are family planning tools issues?
8.5. bleeding while having IUD string?
8.6. how to use birth control pills while lactating?
8.7. what is the implant? does it cause cancer?
8.8. birth control shot disadvantage.
8.9. not getting pregnant after stopping using the tool.
8.10. my wife is not getting pregnant at all
8.11. natural birth control tools
8.12. how to use birth control pills?
8.13. birth control tools for men?
8.14. emergency pills.
8.15. how and when to use IUD?
8.16. implant side effects.
8.17. how to use birth control shoots and when?
8.18. temporary birth control tools

9. Pregnancy and delivery care
9.1. bleeding during pregnancy
9.2. pregnancy symptoms
9.3. embryo formation
9.4. delivery time
9.5. C-section
9.6. food pregnant woman should avoid
9.7. advances for pregnant woman
9.8. pregnant woman vaccinations
9.9. molar pregnancy causes?

9.10. miscarriage causes?
9.11. pregnancy after a C-section?
9.12. Ectopic pregnancy
9.13. amniotic fluid?
9.14. Diabetes and high blood pressure during pregnancy

10. after delivery care for mother and the baby
10.1. newborn care
10.2. mother's care after delivery
10.3. newborn nutrition after 6 months old
10.4. vaccination
10.5. mother's nutrition after C-section

11. STD's
11.1. Vigilant infections
11.2. Vigilant infections and late pregnancies
11.3. What are vigilant infections

12. Shabab-line services
12.1. Qat and smoking
12.2. what are Shabab-line services
12.3. question that's not within Shabab-line services

13. HIV
13.1. What is HIV?
13.2. how to protect myself from HIV?
13.3. how to do HIV test? how do I know if I'm affected?
13.4. My friend has HIV?

14. physiological health
14.1. Pregnancy depression
14.2. After delivery depression
14.3. Depression because of counties births
14.4. depression because of birth control bills
14.5. depression during menopause

15. social issues /problems

16. Violence
16.1. deprivation from education
16.2. physical and verbal violence
16.3. sexual violence
16.4. rape
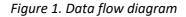16.5. forced marriage

17. Cholera

II – Hotline topic codes and questions by thematic area

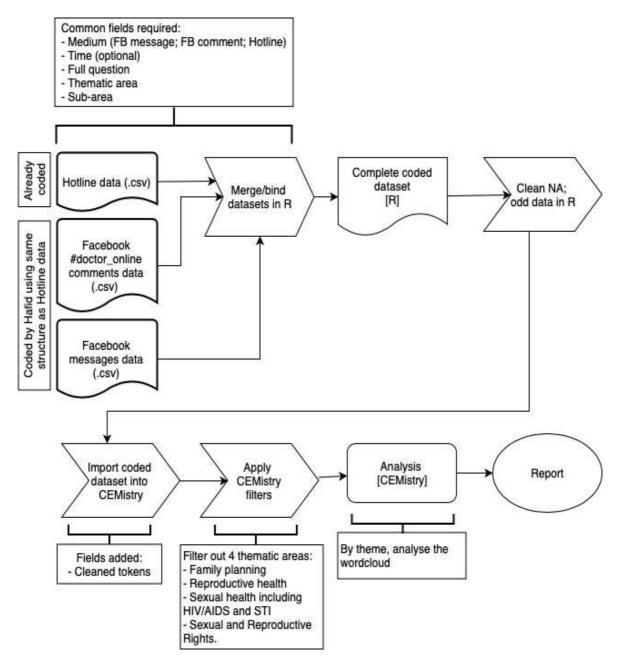| Table X. Thematic area and corresponding topic codes and questions		
Thematic area	**Topic number**	**Questions**
Family Planning	8. Family planning	All questions from 8.1 to 8.18
	14. Psychological health	14.4. depression because of birth control pills
Reproductive health	1. About Reproductive Health	All questions **except 1.10**
	9. Pregnancy and delivery care	All questions: 9.1 to 9.14
	10. After-delivery care for mother and the baby	All questions: 10.1 to 10.5
	6. Pre-Marriage Consultations	All questions **except 6.1**
	4. Body Changes / Growth & Puberty	All questions: 4.1 to 4.4
	5. About Periods	All questions: 5.1 to 5.4
	14. Psychological health	All questions **except 14.4**
Sexual Health	2. About Sexual Health	All questions: 2.1 to 2.9
	11. STDs (STIs)	All questions: 11.1 to 11.3
	13. HIV/AIDS	All questions: 13.1 to 13.4
Sexual and Reproductive Rights	16. Violence	All questions: 16.1 to 16.5
	7. Early Marriage Issues	All questions: 7.1 to 7.3
	1. About Reproductive Health	1.10. FGM
	6. Pre-Marriage Consultations	6.1. Wife\Husband rights

III – Research process and coding procedure

Research process

For this research, data collection and coding of the Facebook data was done by Abdulhafeed Al-Fakih. For this, the same coding procedure as the Shababline team maintains when coding Hotline call data was used. After the Facebook data was coded, the three separate datasets were merged and cleaned in R and then exported to CEMistry for further analysis. This process is illustrated in more detail in the data flow diagram below.

Figure 1. Data flow diagram

This section explains the methodology used to analyse Facebook data in the form of doctor online posts as well as inbox messages. Before collecting and analysing data Abdulhafeed Al-Fakih spent three sessions with Shababline team, through these sessions he learned about the project, the themes the work on, their call centre and the methodology they use to code incoming calls to their hotline service. After he received permission to their Facebook page, he exported the post data and inbox messages from the beginning of 2018 up to 26-6-2019. At first, we intended to analyse 2018 data but upon Shababline request we included quarter one data of 2019. After exporting the data using the Facebook API, the post data was filtered to collect only comments on doctor only posts and this was done selecting all the posts that contain the hashtag "#طبيبك_اون_لاين". We were the told by Shababline this is the hashtag they use for doctor online posts and it refers to post name in Arabic. After filtering there were 53 posts and 646 comments. Messages were also filtered to have only conversations that match the studied date range because some of the conversations were from 2017 and before. After messages were filtered for date, there were 2944 messages from 692 users. Multiple messages from the same user were also filtered to have only those messages that contained inquiries and they were 745. Comments data was then merged with messages data resulting in a data set of 1230 entries. The data coding started with doing a pilot coding using the same methodology used by the Shababline call center team. After confirming the pilot, the coding process was done.
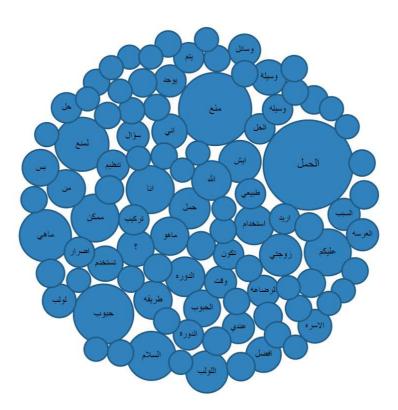
Note: Fake engagement

In 2018 there seemed to be engagement by fake accounts, especially in the second quarter. There were three posts about photo consent which, back then received 326,16 engagements (as found in Facebook insights). When checking them, we found out that the total remainder of engagement for the three post was only 387. This might indicate that there were fake votes from fake account, here are the links to these posts:

https://www.facebook.com/shabablineye/posts/1738984046227872:0
https://www.facebook.com/shabablineye/posts/1731192693673674:0
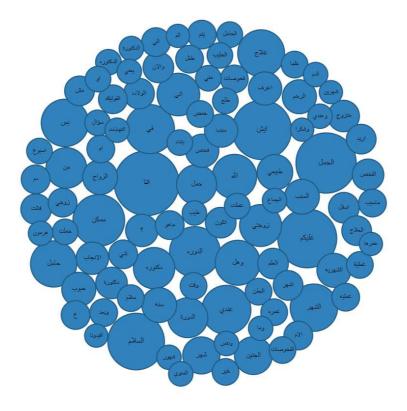https://www.facebook.com/shabablineye/posts/1724979127628364:0

In the first half of 2018 the page received 2310 comments while in 2019 so far until 26-6-2019 it received 2778, which means in terms of engagement in 2019 engagement is more reliable, while engagement in 2018 was affected by fake accounts.

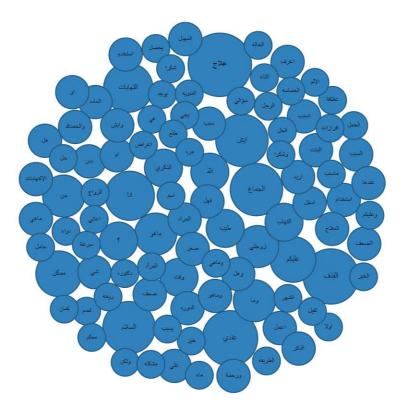## IV – Word clouds per thematic area

Family planning

Reproductive Health

Sexual Health

Sexual and Reproductive Rights