INTRODUCTION

The workshop held at the American University of Beirut is part of the larger project entitled: “Intersectional Analyses of Gender and Health of Female-Headed Households on Low- and middle-income Countries”, which is a collaboration between the International Center for Equity in Health (ICEH) in Pelotas, Brazil; the Countdown to 2030 Secretariat; The African Population and Health Research Center (APHRC) in Dakar, Senegal; and the American University of Beirut (AUB) in Beirut, Lebanon. It is funded by The International Development Research Centre (IDRC). One of the objectives of this project is to build capacity in Africa and in the Middle East and North Africa (MENA) regions on statistical and epidemiological data analyses of national surveys, with emphasis on gender equity analyses through female-headed households.

The MENA region workshop took place at the Faculty of health Sciences (FHS), American University of Beirut in collaboration with the Center for Research on Population and health (CRPH) at FHS, the team at ICEH led by Dr. Cesar Victora and Dr. Aluisio Barros, and the Countdown to 2030 led by Dr. Ties Boerma. The FHS steering committee of the Beirut workshop consisted of Dr. Jocelyn De Jong, Dr. Hala Ghattas, Ms. Zeina Jamaluddine and Ms. Ghada Saad. The workshop agenda is available in Appendix 1.

The objectives of the workshop were:

1. To raise visibility of households headed by females, an understudied aspect of gender equity;
2. To gain a greater understanding of the circumstances of female-headed households (FHH) in the MENA region including the health correlates of female headship of households;
3. To quantify the proportion of such households in low and middle-income countries (LMICs) in the MENA region;
4. To compare the health of women and children living in households headed by men and those headed by women.

The steering committee aimed at inviting two people from each selected country, with at least one of the invitees having a statistical background. The selected countries where DHS or MICS surveys were available are Egypt, Iraq, Jordan, Morocco, Palestine, Sudan, Syria, Tunisia and Yemen. We approached contact people in these countries to invite them and ask them to identify potential participants, preferably with statistical backgrounds. Djibouti, Algeria and Qatar also had MICS surveys conducted, but the team did not have any contacts in Djibouti and Algeria. As for Qatar, it is not an LMIC and was not considered for this workshop. The list of participants who attended the workshop is available in Appendix 2. A total of 12 individuals (ten females and two males) participated from 7 countries.
We invited Dr. Adrijana Corluka who is the Senior Program Specialist at the Maternal and Child Health Program at the International Development Research Centre (IDRC) and briefed her about the objectives of the workshop. She apologized because she was unable to attend. We also invited two staff from UNICEF Lebanon, Mr. Jamil el Khoury and Ms. Farah Hammoud to attend the workshop. They confirmed participation, but, unfortunately, could not attend on the workshop days. A person invited from Iraq declined to attend due to unforeseen work constraints. Furthermore, due to issues with obtaining the visas, one person from Yemen and two invitees approached from Tunisia were not able to travel to Beirut to attend the workshop. The Tunisian researchers, who have senior positions, were able to connect with us via Skype on Days 1 and 3 of the workshop and they actively participated in the discussions.

**DAY 1 – JANUARY 7TH, 2020**

During the first day of the workshop, the participants were introduced to the Faculty of Health Sciences at AUB, the female-headed households project, Countdown to 2030, ICEH and the objectives of the workshop. The facilitators then presented a series of presentations about the family structures, definitions of female-headed households, the socioeconomic characteristics, health and nutrition correlates of FHH in the MENA region. This was followed by presentations on equity concepts and analyses as well as a presentation on the results of FHH analysis generated from the Dakar workshop on 15 African countries.

In the afternoon, the participants were introduced to the practical session and had a chance to start getting acquainted with the data sets using STATA at the computer lab.

Several discussion points were noted from the participants during the presentations of the day:

- There were several points of view about the definitions of a household headed by a female. Females who are breadwinners of the households are the heads. For example, in Yemen and Sudan, the women earn an income through agricultural work. In Jordan, especially in the North, women are the breadwinners and work outside the household instead of the male because of the high prevalence of violence and risk of kidnapping towards the males.
- When looking at the SES and health correlates of FHH compared to male-headed households (MHH), it may be better to compare the female head with the females in MHHs rather than with the male head of the MHH.
- It was suggested that it may be insightful to divide the MHH as well and look at whether the adult women in MHH work.
- It may be more realistic to divide households into MHH, FHH and shared households where the male and the female share responsibilities, e.g. co-heading the household.
- Religion and gender dynamics in the MENA context are very important and can have an impact on the uptake of interventions such as family planning efforts.
The conclusions of day 1 presentations and feedback from the participants were that more work is required to identify a standardized definition of the female-headed households. There was a discussion of three elements that are often combined and define headship: decision-making, presence in the household (which is usually not time defined in surveys), productivity/employment. The specificities of the MENA region in terms of gender norms and dynamics needs to be taken into account to obtain a better understanding of the female-headed households (especially when the husband is present). What are the obstacles to women reporting being the heads of households? Economic migration, forced migration and internal displacement are widespread in the MENA region and are a specificity that must be considered when studying FHH. In the MENA region, there is a scarcity of surveys on this issue, especially recent surveys, and a lack of accurate data. And in many cases datasets that are present may not be accessible to researchers. Research that does exist tends to be on humanitarian settings. Furthermore, there are many limitations with the available data, for example, males who make the household decisions but live elsewhere are not counted and cannot be classified as heading the household, making it a female-headed household. Another limitation to consider is the lack of data in MICS and DHS describing women who are older than 49 years old and are not included in the women’s questionnaire. The Labor Market Survey data (done in Egypt, Jordan and Tunisia) contain a wealth of information on household composition however there is very little data on health-related aspects of these households.

After a summary of day 1, the participants gathered at the computer lab to continue the country practical exercises and prepare their poster presentations. The participants were provided with a poster template and were encouraged to modify it as they see fit and add any analyses and information that were relevant to the topic. The practical sessions are made up of analyses on FHH patterns in each country, the differences among male- and female-headed households in terms of demographics (women’s age, marital status for DHS surveys, number of children, presence of adult males), urban/rural residence, wealth (measure by asset index) and the household head’s education level. The last set of analyses looks at the differences among male- and female-headed households in terms of selected child indicators: birth registration, full immunization coverage, care-seeking for symptoms of pneumonia, care-seeking for any disease, stunting and overweight.
On the last day of the workshop, the posters prepared the day before were displayed on boards. The participants and facilitators had an hour to go through the posters and post any questions they had in an envelope for the authors of each poster. Subsequently, the participants from each country had a chance to present their findings and interpretations of the presented data. Below are some key points that came out of each poster presentation:

- Dr. Aref el Ahmadi from Yemen presented his data and hypothesized that polygyny may be more prevalent currently (the survey used for the analysis was from 2013). The level of education is very low, nevertheless, because the in the Yemeni context the educational levels are low overall. Birth registration may be low in Yemen because most of the population live in rural areas in addition to the fact that the war had started by 2013 and this may have created barriers such as transportation issues and economic hardship. It would be useful to identify causal pathways that would lead to low registration in order to pinpoint whether living in rural areas or FHH differentials that have led to low registration levels.

- Dr Nafisa Bedri and Dr. Arwa Saleh presented the findings generated from the Sudan 2014 MICS survey. The age of female heads is relatively low mainly because of the early age at marriage, which is still common in Sudan, not to mention that age is frequently estimated in Sudan. Internal and external migration are very common. Almost 80% of Sudanese households live in rural areas. The proportion of children in formal schools is very little. The only incentive that forces parents to register a child’s birth is if the child will be registered in a formal kindergarten or school. However, children, especially the girls usually help in labor and agricultural work in households in rural places.

- Dr Sanaa Belabbes and Dr. Kenza Hassouni presented the results of the Morocco 2013 DHS survey. Morocco is less conservative than other societies in MENA, probably due to its proximity to Europe. Yet, education levels are low and this is a result of the Moroccan context in general. It is worth noting that the data is very old and in 2004 the government changed the family law to make it easier for mothers to register their babies. There is a 2014 DHS survey however it is not accessible. The participants have mentioned that there is 2014 and 2018 national datasets however it is not clear whether the datasets are accessible. There was a discussion about contraceptive use. Married women living with their husbands may not use contraceptives because they believe it is against religion. And women may find it difficult to buy contraceptives if not married due to cultural norms that sexual relations among unmarried women are not acceptable; if they do use them, they may not report it.

- Dr. Weeam Hammoudeh and Ms. Hala Khalawi presented the results of Palestine 2014 MICS survey. The prevalence of FHHs is unexpectedly low, as per the presenters. They believed that FHH households would be more common because of males being exposed to conflict and political arrests. The explanation for this may be that these women move to reside with in-laws or parents who are headed by the male and not a female. Polgamy is low in Palestine and levels of education are generally high (education fees covered by 50% from the Ministry of Health, 40% from UNRWA and 10% from other NGOs). Education is viewed as an empowerment tool, nevertheless this has not translated into better employment opportunities, especially for women. Vaccination and birth registration are available for free in Palestine which may explain the relatively high prevalence. In the case of Palestine, important disparities may show up if the results are stratified by regions: West Bank and Gaza; and not urban-rural differences. When analyzing the data it is important to note that...
Palestinians residing in camps may have been grouped with those residing in urban areas. Having an identification card is very important for the Palestinian people as it is the key to legality and successfully crossing Israeli checkpoints. Keeping this in mind, birth registration becomes very important.

- Mrs. Rama Erekat and Mr. Ahmed Marei presented the findings from the Jordan 2017 DHS survey. The most significant issue in the country is that they receive Palestinian, Iraqi and Syrian refugees, but the DHS doesn’t collect data on nationality. Education attainment among women is at a good level however the problem is with economic participation. In the private sector there are work opportunities that are not open to women hence it is more common to find women in the public sector employment as teachers or nurses. The inability to find work in the private sector is related to favoritism, corruption and connections. With regard to health care, primary healthcare is freely available and children under 5 receive health insurance. Vaccination is important because it is required to present the vaccination card upon school enrollment. The 2017 DHS does not have data collected on stunting and obesity. Inheritance is one of the financial resources for women. Previously widows would receive the inheritance and give it all to the brother or father; however the law has been modified to stipulate that the women cannot do anything with the money for 3 months. This was done for providing her time to think about the proper use of these resources and keep the money. Additionally, currently there is more awareness regarding economic rights among women and female representation in parliament is increasing.

- Dr. Zeinab Khadr presented the findings from the data analysis of Egypt 2014 DHS survey. She highlighted that it may be better to compare the women in MHH and the Female head of the FHH. Polygyny is low in Egypt; there is a law that stipulates that the wives need to approve a second or third wife. If the husband re-marries and does not have his wife’s approval then she can sue him; and this is regarded as a form of female empowerment. With regards to education, 28% of women in Egypt are illiterate especially in the older age group. The government has several health campaigns and screening programs that are important. However, the quality of care in governmental health facilities is not very good.

After the poster presentations and discussions were completed, the participants were grouped into three groups and asked to brainstorm and come up with ideas around the following issues:

1- What more questions do we want to ask from the survey?
2- What further analysis do you want to do to understand the situation more?
3- What other datasets could there be that can be looked at and would be relevant?

The groups were: Yemen & Sudan; Palestine & Jordan; Morocco, Tunisia(laptop) & Egypt

Summary of Feedback from group work:

With regards to question 1 on what more survey data are required the feedback from the 3 groups is as follows:

- Disaggregation by nationality and identification of refugee populations
- Country traditions and gender roles in the family
- Formal and informal education (particularly for refugees)
- Generally, more comprehensive income and employment questions, such as, who is earning income (and sources of income)? Specific questions on absence for work, especially of husband. Who is spending their income in the household?
- Decision making within the household (disaggregated by type of decision, including specific questions related to child health and family health more generally)
- Data on marital status (in MICS surveys)
- Data about FHHs in non-reproductive ages as well as single females in FHH.
- More comprehensive health measures for men and women
- More demographic data, e.g. occupation of the head, detailed educational levels
- Data on care-seeking for the child
- Data on the number of years in the current location
- Detailed expenditure and consumption data
- Data about participation in public and social life
- Identifying who is actually responding to the questionnaire
- Availability of services
- Timeframe i.e. living in the house since 6 months or for at least 6 months.
- Identification of the family composition in the household
- Identification of the role of adult members in the household
- Revision of the decision-making indicators. Currently, these indicators provide mixed responses and we do not have good experience with these responses. It is possible to ask for changes in these questions, the more requests DHS and MICS receive may get them to change the indicator.

Question 2 - What additional analysis would one want to do?
- Disaggregated analysis by demographic variables, region, nationality, more detailed educational levels
- Analyses by locality
- Analyses on decision making, employment, consumption and expenditure, and power dynamics within the family
- Including area level indicators pertaining to context (service context, infrastructure, etc)
- Analyses with different definitions of household head
- Including employment/unemployment and number of employed household members
- Comparisons between women in FHH and MHH
- Comparisons with further disaggregation of MHH category
- Use multivariable analyses
- Perform further equity analysis using more variables
- Account for household structure and size in the analyses. With larger size of HH there is more wealth (buying more things) and more people helping with the household as well as more expenses
- Important to take into consideration the place of residence and the education at the same time. In urban areas the woman is probably married to a richer better off husband. All these points need to be considered when doing analysis. Comparative and geographical and chronological comparisons on the proportion of FHH were proposed.
Question 3 - What other datasets might there be?

- Jordan: Department of Statistics surveys; UNHCR statistics pertaining to refugees; Vulnerability Assessment Framework; some WHO studies/surveys; INGO/IGO data; Higher Population Council; Higher Council for Family Affairs
- Palestine: PCBS surveys, including family health surveys, health service surveys, labor force participation survey, social and economic living conditions surveys (have two sets so far with a category for sex of household head); UNRWA data; registry data; and some additional data from NGOs/IGOs/INGOs
- It is important that reports should provide more information on context, including strategy and policy data
- Regarding health facility data it would be useful to try to get GPS locations of the facilities and distance to the health facility can be equity indicator. In Sudan and Egypt there are datasets on facility locations however they are inaccessible. With this data it should be kept in mind that location is not enough and it is important to map the road itineraries to reach the facilities as well as the means of transportation. Additionally, we can only assume that families will access the nearest health facility. Families and women tend to go to the facility that are most convenient for their needs and the staff are readily available and helpful.
- In Jordan there are the Vulnerability Assessment Surveys. Additionally there are the IRC MoPIC – published reports
- Country census data
- Datasets related to nomads and displaced populations.
- Sudan National Simple, Spatial, Survey Method (S3M)
- The Economic Research Forum collect data using small surveys from different institutes. They are accessible with request.
- University of Minnesota has Integrated Public Use Microdata Series (IPUMS) - a large individual-level population database.
- The Haut Commissariat au Plan or Higher Planning Commission in Morocco has a National Survey of Population and Family Health. They publish reports with statistics.
- Tunisian Health Examination Survey in Tunisia
- HICS and Labor market survey in Egypt

Wrap-up and Evaluation

After the group session and discussion were concluded it was time to wrap up the workshop and ask the participants for their overall feedback about the workshop. Overall, the participants were satisfied with the workshop content and organization. Several people felt that it would have been helpful to share datasets and practical sessions beforehand so that they can have an idea of what they will be doing during the workshop.

The participants were informed that these datasets were summarized versions of the full datasets and if anyone would like to continue these analysis and explore further stratifiers, they can contact Aluisio and the team at ICEH can prepare the datasets based on their needs.
Please rate the following:

- The workshop was useful: 4.4
- The workshop will encourage me to do further equity analysis of existing surveys in my country: 4.6
- The described equity analysis approach is relevant in my country: 4.1
- The analysis on FHH in relation to health is relevant for my country: 4.3

Did the workshop provide you with useful skills for:

1. Understanding of FHH
2. Equity analysis
3. Use of Stata
What did you like most about the workshop?

different countries
discussion
everything
topic
effort in organization
experienced participants
unique topic
APPENDIX 1

COUNTDOWN 2030 ANALYSIS WORKSHOP ON GENDER EQUITY AND HEALTH: THE ROLE OF FEMALE-HEADED HOUSEHOLDS

AGENDA | January 7-9, 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Chair/ presenter</th>
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<tbody>
<tr>
<td>09:00 – 09:20</td>
<td>Opening remarks</td>
<td>Jocelyn Dejong - Faculty of Health Sciences, AUB</td>
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<td></td>
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<td>Aluisio Barros - Countdown to 2030 &amp; University of Pelotas</td>
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<tr>
<td>09:20 - 09:30</td>
<td>Introduction to the workshop – objectives and products</td>
<td>Jocelyn Dejong</td>
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<tr>
<td>09:30 – 09:45</td>
<td>Introduction to the female headed household (FHH) study</td>
<td>Aluisio Barros</td>
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<td>09:45 – 10:15</td>
<td>Family structures in MENA, cultural perceptions and norms, definitions of FHH</td>
<td>Ghada Saad - Faculty of Health Sciences, AUB</td>
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<td>10:15 – 10:45</td>
<td>Coffee break</td>
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<tr>
<td>10:45 – 11:00</td>
<td>Sociodemographic Correlates of FHH in MENA</td>
<td>Zeina Jamaluddine – Center for Research on Population and Health, FHS, AUB</td>
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<td>11:00 – 11:15</td>
<td>Health and Nutrition Correlates of FHH in MENA</td>
<td>Hala Ghattas - Center for Research on Population and Health, FHS, AUB</td>
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<td>11:15 – 11:30</td>
<td>The work of Countdown to 2030 and the International Center for Equity in Health (ICEH)</td>
<td>Aluisio Barros</td>
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<td>11:30 – 11:45</td>
<td>Characterization of family structures in surveys</td>
<td>Aluisio Barros</td>
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<tr>
<td>11:45 – 12:30</td>
<td>Preliminary findings on FHH – lessons from the Dakar workshop</td>
<td>Ghada Saad</td>
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### JANUARY 8, 2020 | VAN DYCK HALL, ROOM 203

<table>
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<th>Presenter(s)</th>
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<tbody>
<tr>
<td>09:00 – 09:15</td>
<td>Summary &amp; conclusions of Day 1</td>
<td>Jocelyn DeJong</td>
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<tr>
<td>09:15 – 10:30</td>
<td>Working Session 2 – Descriptive analyses and prevalence</td>
<td>All</td>
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<tr>
<td>10:30 – 11:00</td>
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<tr>
<td>11:00 – 13:00</td>
<td>Working Session 3 – Typologies of FHH and their correlates</td>
<td>All</td>
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<tr>
<td>13:00 – 14:00</td>
<td>Lunch</td>
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<tr>
<td>14:00 – 16:00</td>
<td>Working Session 4 – Household level inequities and gender of household head</td>
<td>All</td>
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<td>16:00 – 16:30</td>
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<tr>
<td>16:30 – 18:00</td>
<td>Working Session 5 – Child health inequities and gender of household head</td>
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### JANUARY 9, 2020 | VAN DYCK HALL, ROOM 203

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<tbody>
<tr>
<td>9:00 – 11:30</td>
<td>Poster presentations: Country FHH and equity analyses</td>
<td>All</td>
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<tr>
<td>11:30 – 12:00</td>
<td>Coffee break</td>
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<tr>
<td>12:30 – 13:30</td>
<td>Group work: Sub-region priority setting exercise for future data needs</td>
<td>All</td>
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<tr>
<td>13:30 – 14:30</td>
<td>Lunch</td>
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<tr>
<td>14:30 – 15:30</td>
<td>Feedback of group work</td>
<td>All</td>
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<tr>
<td>15:30 – 16:00</td>
<td>Workshop evaluation Closing of workshop</td>
<td>Jocelyn DeJong</td>
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## APPENDIX 2

### List of Participants | January 7-9, 2020

<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Participant’s Name</th>
<th>Email</th>
<th>Country of residence</th>
<th>Organization</th>
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<tr>
<td>1</td>
<td>Dr.</td>
<td>Zeinab Khadr</td>
<td><a href="mailto:zeinabk@aucegypt.edu">zeinabk@aucegypt.edu</a></td>
<td>Egypt</td>
<td>American University in Cairo</td>
</tr>
<tr>
<td>2</td>
<td>Mr.</td>
<td>Ahmad Marei</td>
<td><a href="mailto:ahmad.marei@plan-international.org">ahmad.marei@plan-international.org</a></td>
<td>Jordan</td>
<td>Plan International</td>
</tr>
<tr>
<td>3</td>
<td>Mrs.</td>
<td>Rama Erekat</td>
<td><a href="mailto:rerekat@globalhealthdev.org">rerekat@globalhealthdev.org</a></td>
<td>Jordan</td>
<td>The Eastern Mediterranean Public Health Network (EMPHNET)</td>
</tr>
<tr>
<td>4</td>
<td>Prof.</td>
<td>Kenza Hassouni</td>
<td><a href="mailto:khassouni@um6ss.ma">khassouni@um6ss.ma</a></td>
<td>Morocco</td>
<td>Mohammed VI University of Health Sciences</td>
</tr>
<tr>
<td>5</td>
<td>Prof.</td>
<td>Sanaa Belabbes</td>
<td><a href="mailto:sbelabbes@um6ss.ma">sbelabbes@um6ss.ma</a></td>
<td>Morocco</td>
<td>Mohammed VI University of Health Sciences</td>
</tr>
<tr>
<td>6</td>
<td>Ms.</td>
<td>Hala Khalawi</td>
<td><a href="mailto:hkhalawi@birzeit.edu">hkhalawi@birzeit.edu</a></td>
<td>Palestine</td>
<td>Birzeit university</td>
</tr>
<tr>
<td>7</td>
<td>Dr.</td>
<td>Weeam Hammoudeh</td>
<td><a href="mailto:whammoudeh@birzeit.edu">whammoudeh@birzeit.edu</a></td>
<td>Palestine</td>
<td>Birzeit university</td>
</tr>
<tr>
<td>8</td>
<td>Dr.</td>
<td>Arwa Gubara</td>
<td><a href="mailto:arwasalah@yahoo.com">arwasalah@yahoo.com</a></td>
<td>Sudan</td>
<td>Ahfad University for Women</td>
</tr>
<tr>
<td>9</td>
<td>Prof.</td>
<td>Nafisa Bedri</td>
<td><a href="mailto:nmbedri@gmail.com">nmbedri@gmail.com</a></td>
<td>Sudan</td>
<td>Ahfad University for Women</td>
</tr>
<tr>
<td>10</td>
<td>Prof.</td>
<td>Jalila Elati</td>
<td><a href="mailto:jalila.elati@yahoo.fr">jalila.elati@yahoo.fr</a></td>
<td>Tunisia</td>
<td>Institut National de Nutrition et de Technologie Alimentaire</td>
</tr>
<tr>
<td>11</td>
<td>Prof.</td>
<td>Hajer Aounallah-Skhiri</td>
<td><a href="mailto:hajer.skhiri19@gmail.com">hajer.skhiri19@gmail.com</a></td>
<td>Tunisia</td>
<td>Head of the National Health Institute</td>
</tr>
<tr>
<td>12</td>
<td>Dr.</td>
<td>Aref Al-Ahmadi</td>
<td><a href="mailto:dr.arefahmady@yahoo.com">dr.arefahmady@yahoo.com</a></td>
<td>Yemen</td>
<td>Ministry of Public Health and Population (MoPHP)</td>
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### List of Facilitators | January 7-9, 2020

<table>
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<tr>
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<tr>
<td>1</td>
<td>Dr.</td>
<td>Aluisio Barros</td>
<td><a href="mailto:abarros@equidade.org">abarros@equidade.org</a></td>
<td>Brazil</td>
<td>Universidade Federal de Pelotas</td>
</tr>
<tr>
<td>2</td>
<td>Ms.</td>
<td>Ghada Saad</td>
<td><a href="mailto:ges02@mail.aub.edu">ges02@mail.aub.edu</a></td>
<td>Lebanon</td>
<td>American University of Beirut</td>
</tr>
<tr>
<td>3</td>
<td>Dr.</td>
<td>Hala Ghattas</td>
<td><a href="mailto:hg15@aub.edu.lb">hg15@aub.edu.lb</a></td>
<td>Lebanon</td>
<td>American University of Beirut</td>
</tr>
<tr>
<td>4</td>
<td>Dr.</td>
<td>Jocelyn Dejong</td>
<td><a href="mailto:jd16@aub.edu.lb">jd16@aub.edu.lb</a></td>
<td>Lebanon</td>
<td>American University of Beirut</td>
</tr>
<tr>
<td>5</td>
<td>Ms.</td>
<td>Zeina Jamaluddine</td>
<td><a href="mailto:zj14@aub.edu.lb">zj14@aub.edu.lb</a></td>
<td>Lebanon</td>
<td>American University of Beirut</td>
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Appendix 3
Poster Presentations

Countdown 2030 Analysis Workshop on Gender Equity and Health: The Role of Female-Headed Households
Egypt

Household description

- 12.9% of the Egyptian households is headed by a female.
- Female heads are significantly older than male heads.
- 40% of these households had no male in them with the husband present in only 0.7% of these households.
- Male headed households were more likely to have children under five years (42.7%) compared to female headed households (8.6%).
- The majority of male heads are married, while the majority of female heads are previously married with small proportion being currently married. (It might be interesting to know more about the husband in this case.)

<table>
<thead>
<tr>
<th>FHH (female-headed households)</th>
<th>MHH (male-headed households)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex of head (%)</td>
<td>12.9%</td>
</tr>
<tr>
<td>of households</td>
<td>87.1%</td>
</tr>
<tr>
<td>Aged 15-49 years</td>
<td>50.3%</td>
</tr>
<tr>
<td>Average age in years</td>
<td>59.5</td>
</tr>
<tr>
<td>Spouse in household</td>
<td>0.7%</td>
</tr>
<tr>
<td>Child &lt; 5 in household</td>
<td>8.6%</td>
</tr>
<tr>
<td>Household types with children &lt;5y</td>
<td></td>
</tr>
<tr>
<td>MHH - child</td>
<td>95.5</td>
</tr>
<tr>
<td>MHH + child</td>
<td>6.5</td>
</tr>
<tr>
<td>FHH any male - child</td>
<td>37.3</td>
</tr>
<tr>
<td>FHH any male + child</td>
<td>4.6</td>
</tr>
<tr>
<td>FHH no male - child</td>
<td>0.1</td>
</tr>
<tr>
<td>FHH no male + child</td>
<td>0.6</td>
</tr>
<tr>
<td>Marital status of the head</td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>95.5</td>
</tr>
<tr>
<td>Married</td>
<td>6.5</td>
</tr>
<tr>
<td>FHH</td>
<td>80.8</td>
</tr>
</tbody>
</table>
Residents distribution by headship and sex

Among all residents (15+)
- 50.7% of the Egyptian household residents are male with 32% are heading their household
- 49.3% of the Egyptian household residents are female and only 4.8% are heading their households with only 1.1% is in their reproductive age.

Polygyny and women reproductive indicators

Among adult female residents (15+),
- 75.9% were in reproductive age with 2.3.5% were heads in reproductive age
- 24.1% were not in reproductive age with 7.4% were heads and not in reproductive age

Polygynous women in MHH are more likely to report their husbands as the head of the households.
Significant difference can be observed in wealth by the type of the headship in the household. Male head of the households are more likely to have secondary+ education than female heads with or without a male in the household (62.3% versus 24.1% and 26.5%). Female headed households are slightly more prevalence in urban areas compared to rural areas particularly among FHH with no adult male.

Social inequalities for FHH vs MHH

Child health interventions by headship

- Overall non of the child health intervention were significantly different across the headship categories. But
  - Children in male headed households showed high prevalence of overweight or stunted compared to those in female headed households
  - Children in male headed households and in female headed households with an adult male present showed slightly higher prevalence to receive full vaccination than those in female headed household with no adult males
  - Care seeking for any illness was higher among children in FHH with an adult male than the other two groups
The MHHs represent the majority of Jordan family structure with 87.9% overall. This indicates that Jordanian society is men demented. As for the reproductive age for the FHH which equal to 1% out of the total number of the sample 12.1%, this seems very normal comparing to the average of the age which is 58.3 years old (mostly widowed or divorced). However, only 11.2% of the MHH out of targeted sample are within the reproductive age and that is not normal since the MHH represent the vast majority of the sample.

In regard to the FHH who live with no male (6.7%) this percentage is reasonable due to the age group of the female respondents (divorced, widowed, not extended family, etc).
Residents distribution by headship and sex

As chart showed, the majority of the targeted sample are males not head, and that justifiable by the number of the children within the families. While most of the FHH not in reproductive age group.

Polygyny and women reproductive indicators

Due to the current economic situation and the high educational level amongst the new generation, the polygyny is not widely spread comparing to other countries in the region. The amendment of the Status Law 2010 gave Jordanian women space to select other alternatives if not accepted the polygyny status, i.e. claim divorce or separation. In the Islamic law, males are allowed to polygyny for having more children when their wives not able to give birth for any reason including age or infertility. Females have the right to divorce their spouses for the same reason. Due to the cultural norms (culture of shame) females usually not taking the divorce step.
The wealth quintiles confirm the theory the feminization of poverty. This means that the FHHs are the poorest category among all because females live with no males lack stable and extra financial resources. The National Aid Fund allocates budget to respond to this category.

As for the education level of HH, the chart indicates that MHH are more educated than female due to some social aspects including the gender reproductive role; pregnancy, breastfeeding, raising children and domestic work. These factors prevent females to obtain higher education.

As for area of residency, there is no significant differences among all HH categories.

The variety appears in both aspects: full vaccination and care seeking any illness, this could be justified by lack of awareness among FHH, lack of financial resources to use transpiration and the burden of domestic work.

There is no stunting nor overweight cases reported.

As for the birth registration there is no significant inequality.
FHH in Morocco are more than 17% and 51.2% of them with no male.

The average age of women in FHH is 50.8 and 81.5% of FHH are headed by women in reproductive age.

The proportion of FHH with a child under 5 is 21.7 while 42.7% of MHH are with a child under 5.
Residents distribution by headship and sex

46.6% of women are living in a household without being the head (while only 32.7% of men are in the same case) and 26.8% of those women are in reproductive age. This might be because of the high rate of men MHH that are married with the presence of the spouse (92.6%).

The proportion of women head of household is only 3.2% and only 50% of them are in reproductive age, while men head of households present 15.5% of residents.

Polygyny and women reproductive indicators

Only 2% of women in reproductive age are in polygynous families. The proportion of women living in MHH is 2.1% and 54% of them are aware about contraceptive modern methods.
The education level of the head of households is higher in the MHH (23.67% have a secondary level) than in FHH.

The big proportion of households live in an urban area regardless of the type of the sex of the household heads (62%).

The rate of women FHH with adult male and none education is high in urban area.

Households with the highest wealth quintiles are those with adult male.

In Morocco, only 66.7% of births are registered with a civil authority. Children in FHH are not easily registered than in MHH, and worse in FHH with the presence of any adult male.

In FHH with adult male, children under 5 years old are more overweight (19.1%) than in the other households.

Children in female households with any male are more commonly sick than in other households (39.8%).

The rate of children fully vaccinated is high independently of the head of the household.

There is slight difference between households, specially MHH, regarding stunting children.
Most household are MHH in Palestine (90.8%). About 9% of households are female headed, about 5.8% female headed with no adult male and 3.4% female headed with an adult male in the household.

Male household heads are generally younger than female household heads, with a mean age of 43.5 compared with about 59 years for female heads. MHH are more likely to have children under five in the household, 53.5% compared with 11.6%. MHH are also much more likely to have a spouse in the household (98% compared with less than 2%).
Residents distribution by headship and sex

Most residents are not household heads. About less than half the resident groups were female not heading a household. While slightly more than half were males.

About 23% of females not heading a household are not within reproductive age compared with about 24% of females not heading a household were not in reproductive age. About 1.2% of residents are female household heads outside of reproductive age, compared with 0.5% of residents who are female household heads within reproductive age.

Polygyny and women reproductive indicators

Polygynous marriage is not very common in Palestine. However, it is slightly more common in female headed houses with no adult male in the household (about 10%). Less than 3% of male headed household is find to have polygynous marriage and just more than 5% has polygynous marriage in Female headed households with an adult male.
Male headed households are generally wealthier than female headed households, with about 43% of MHH in the wealthiest two quintiles compared with about 30% for FHH with no adult male and about 33% for FHH with an adult male. FHH with adult males are more likely to be in the poorest two quintiles (about 50%) compared with FHH with no adult male (about 40%) and MHH (about 37%).

The inequalities in educational attainment of household head are notable. Close to 40% of female heads of households with no adult males have no education compared with about 18% of female heads of households with an adult male and less than 2% of male household heads. About 58% of male household heads have a secondary education or more compared with less than 26% of female household heads. No notable differences can be seen in terms of area of residence.

Child health interventions by headship

The households are generally similar on child health indicators. Birth registration is almost universal in all households. Between 8-9% of households have an overweight child, with little variation by headship. Differences can be seen in stunting, where 15% of children under 5 in FHH with no male have are stunted compared with about 7% for other household types. This is a relatively large difference.

There are some slight variations in vaccination coverage, ranging from about 77% in FHH with an adult male, about 79% in FHH with no adult male, and about 83% in MHH. So, male headed households appear to be better off in terms of stunting and vaccination coverage, and FHH without any male appearing to be worse off, particularly for stunting.
FHH have less spouses present with 9.5% compared to 94% in MHH. Similar proportions of women in reproductive age are present in both sets of households. FHH have less children <5 years at 5% compared to 50% for MHH, which could be attributed to both MHH having women in reproductive age and polygamy.
Residents Distribution by Headship and Sex

A very small proportion of women are heading households (14%) compared to 85% MHH. Similar age means (48) meaning FHH tend to be older women. & few are in the reproductive age

Polygyny and women reproductive indicators

14% of the women live in polygynous marriage. Slightly more (17%) are in FHH with an adult male compared to 14% and 15% among those in MHH and FHH with no adult male respectively.

Similar proportions are observed in demand for FP, institutional delivery, SBA and FGM. Slight difference with higher proportions in contraceptive use among women in FHH with an adult male.

Being a FHH has weak relationship to wealth index with correlation ($R^2 = 0.2\%$), and MHH have more proportions in Q4 & Q5 compared to more proportions in Q1 & Q2 for FHH. Overall health indicators for women show slight differences, with lower proportions among the two FHH types compared to MHH.
Similar proportions in wealth quantiles, place of residence and equity in child health exist with more in rural areas across the three groups. Heads of households in MHH tend to have better educational levels which could be due to rural residence, and lack of resources. Higher level of birth registration among MHH with slight difference between the two types of FHH.

Social inequalities for FHH vs MHH

Child health interventions by headship

High poverty, rural residence and older age among FHH, women may hinder their access to education, decent work resulting in less income and time spent to demand and or use health care for themselves or their children. Although most women health indicators were similar across the three groups, yet a consistent lower proportions were observed among FHH types.
The proportion of Fhh in Yemen is 7.7% compared to Mhh 92.3%. This figure considered high and that was because most of Yemenis were migrated outside Yemen due to the economic hardship situation in the country plus the conflict that had led to the killing of many husbands that were headed their families. In the Fhh, around 76% of women in the reproductive age 51-49 years old were presence compared to Mhh Where women in reproductive age represent 93%. The mean age of Fhh is 51 year old compared to the mean age of Mhh which is 46 year old. The type of the HH head is mainly related to Mhh in 92% while Fhh without and with male living in the HH represent around 4.4% and 3.3% respectively. Out of those Fhh with an adult male living in the HH, around 0.3% of Fhh have husbands while 3% live with other male, but no husbands.
Residents distribution by headship and sex

There is no information about women who are not in the reproductive age, which constitutes a large number of the women dataset (one-quarter), that is because the women dataset is suited to ask information about women in the reproductive age only. So why such information regarding those women in the reproductive age were not included in the women dataset?

Polygyny and women reproductive indicators

The proportion of Mhh who act as a head of the household is 93, while the % of Fhh with or without an adult male living in the HH were 3.9% and 2.9% respectively. The proportion of Fhh among reproductive age women 15-49 years old who are a head of the HH is 2.3 while 97.7% were not a head of the household. The proportion of Fhh who are in polygynous status is 3.8 while 96.2 of Fhh were not in polygynous status. The proportion of women in reproductive age 15-49 years old who live in houses where the male is headed the household and they demand for family planning is 41% while the demand for family planning among those Fhh with and without male living are 37% and 11% respectively. The proportion of women in reproductive age 15-49 years old who live in houses where the male is headed the household and used contraceptive drugs is 26% while the proportion of Fhh with or without a male living in the house who used contraceptive drugs were 18% and 5.6 respectively.
There is a slight difference in the educational level between FHH with and without an adult male living in the HH with 81% and 78% were not educated respectively. Compared to FHH with or without an adult male living in the HH, the MHH have primary and secondary or more level of education in 32% and 28% respectively, which is higher than that of the FHH with or without an adult male living in the HH. The majority of FHH without an adult male living in the HH were in the first quintile (poorest quintile of the wealth score proportion/index) in 30% compared to MHH and FHH with a male living in the HH with 22% and 16% respectively. The majority of FHH with an adult male living in the HH were in the 5th quintile (the richest quintile of the wealth score proportion/index) in 28% compared to MHH and FHH without male, that is because there are two sources of income for the same family. Most MHH, FHH with or without an adult male living in the HH are residing in rural areas, that is because around 70% of the Yemenis are living in the rural area.

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The majority of children under 5 who have birth registration were in the FHH with male living in the same HH category in 46% compared to MHH and FHH without a male living in the HH in 31% and 26% respectively. That is because the other adult male (husband) could remind the women about the birth registration process for their children. The majority of children who seek-care for any disease were in the FHH without an adult male living in the HH in 46% compared to MHH in 32.6% and FHH with an adult male living in the HH in 39%. All of the three categories has nearly the same percentage in regards to immunization status for their children. The majority of children who had stunting were in the MHH (46%) and the FHH without an adult male living in the HH (45%) compared to the FHH with an adult male living in the same HH (39%), that is because of the presence of double incomes in the last category. Nearly, the three categories of those who headed the HH (MHH and FHH with or without an adult male living in the same HH) have the same proportion of children who were overweight.