Reflections on Considerations For Research Within Muslim Women Population in the US

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Researchers in HCI are beginning to consider ways to design for inclusivity to meet the unique needs of diverse populations including faith-based communities. In this paper, we focus on Muslim population and highlight two considerations that became apparent in our attempt to study technology use in Muslim Women population. We propose suggestions on how HCI methods could be utilized to suit the unique needs and values of the Muslim population. Finally, we highlight our research questions and study design as we attempt to include Muslim women user groups in our overall healthcare journeys research.

1 INTRODUCTION

The Healthcare Journey's Lab at Indiana University Bloomington is focused on understanding health journeys, with a focus on the pregnancy journey, which is characterized by a pre-defined start and end time (approximately nine months duration). Over the years, we have focused on studying women and designing for this journey.

We have also learned that individuals from diverse social, cultural and economic backgrounds have different belief systems that influence the way in which they view the world. For example,studies on Indonesian Muslim women have highlighted that spirituality influences women's behavior during the pregnancy journey [4]. This study highlighted that the remembrance of God is leveraged as a means of controlling anxiety and labor pains [4].Therefore,religion, belief systems, cultural values and spirituality form powerful lens and filters through which individuals see, behave and react to the world [3].We recently began considering the inclusion of Muslim women in our research for two reasons: firstly,the research community has not placed much emphasis on this population. Secondly, the first author on this paper is strongly tied to and passionate about the intersection between religion, HCI and technology use. We present two considerations, which we as HCI design researchers can include in our toolbox as we seek to address the unique needs and values of faith-based communities, such as the Muslim Community. The need to consider religion in HCI is not far-fetched, according to Pew Research, the world's Muslim population is expected to rise to 2.2 billion by 2030. In the US alone, it is estimated that 2.1% of the population will identify as Muslim by the year 2050 [1]. In the next sections, we will present the two considerations that are apparent as we approach including Muslim women in our research

2 DESIGNING AROUND CORE FAITH-BASED VALUES

While Islam has many core values, the two values that are very important as we frame our research questions and study design are the concepts of *"Haya"* and *"Amanah"*, both of which loosely translates to *"Modesty"* and *"Trust"*. The concept of *"Haya"* also encompasses bashfulness, shame, conscientiousness that prevents a person from behaving indecently. Haya is considered to be a quality attributing to an individuals good character and moral excellence, both of which are central to the primary objectives of Islam: improving on individual's overall character [2]. The concept of *"Amanah"* in Islam has 2 aspects: trust that you owe to others, and trust that you owe to yourself. First, As researchers, leveraging this concept is very relevant in how we research within and design for the Muslim Population. When participants chose to enroll in our study, in a way, they have entrusted us with aspects of their lives that may otherwise be only known to them. Given this knowledge, it is important that we maintain that trust as best as we can without causing harm. Secondly, in conducting health-related research, it is important to frame research benefits with the perspective that a Muslim's core value is that their health is a trust that the faith strongly recommends that they maintain as best as they can. For a Muslim woman undergoing pregnancy journey, she recognizes through the faith-lens that she owes a responsibility to her child and to herself to maintain the best health and character throughout the journey of pregnancy and beyond. This responsibility is also considered a 'trust' which God Almighty has endowed upon her and which she would be held accountable for in an afterlife. Therefore, when engaging in research with this population, its important to consider how she might view her participation in research.

In HCI design, we recommend understanding the core values of faith based communities and designing with and around those core values.

3 EMBRACING RESEARCH METHODS THAT RESPECTS FAITH-BASED VALUES

As researchers, we are aware of the advantages and disadvantages of the choices of each research method that we choose for our work. We recommend taking an extra step to figure out which of the methods clashes with the values of faith-based communities we intend to study and adjust accordingly.In working with research methods to address the unique needs of community,it is important to consider methods that embrace,and respect some of the faith-based values. For example,in some faiths, community is part of it's faith-based values. For example,methods that respect the faith-based values are: Ethnography, focus groups and Asynchronous Remote Communities (ARC)level of communal feeling that methods such as semi-structured interviews do not offer. In our research consideration with Muslim women, in semi-structured interview format, we opt for research interviewer that are female as deeply held faith values limits Muslim woman's interaction with male individuals that are not related to her.

In HCI design, choose methods and instruments that respect faith values, then, modify these methods and instruments to adapt to the unique values of the faith-based communities we intend on studying.

4 STUDY PLAN AND RESEARCH QUESTIONS

The first phase of our study on investigating pregnancy journey within the Muslim women populations is focused on the pre-conception and menstrual circle phase. We are interested in investigating how Muslim women track their menstrual circle and how existing technologies used to track menstruation fit with or clash with their faith-based values. To approach this topic, we aim to answer the following research questions:

- RQ1: What are the methods of tracking periods by Muslim women?
- RQ2: Are these chosen tracking methods culturally or religiously influenced?

- RQ3: What are the perception of period tracking technologies amongst Muslim women?
- RQ4: What do Muslim women find useful or challenging about the approaches that period apps take to entry and review?
- RQ5: How do these period applications fit into or clash with their faith-based values?

Study design and population

We will conduct a survey on Muslim Women above 18years of age in the US. The survey phase will collect initial data and basic information on methods of period tracking, tracking behaviors, frequency and regularity of period, applications used for tracking and demographics. Survey is intended for two purposes: recruitment and to answer research question numbered one.Qualtrics would be used the surveying tool.In addition to surveying Muslim women, we also intend to interview these women in a semi-structured interview format where the main researchers/interviewers are female, to fit into the core value of modesty. Interviews will be conducted over zoom. The researchers have are able to access the Muslim women population in the US, hence he focus on this region.

5 CHALLENGES AND OPEN QUESTIONS

As we prepare to commence this study, here are open questions that we are still considering in our research:

- How does a researcher who is closely tied to the study population avoid biases in their study?
- There are different sects and nuances in belief systems, how does a researcher ensure that these nuances are handled prior, during and after data collection?

6 CONCLUSION

In this paper, we discussed two considerations for research within Muslim women population as well as research questions aimed at addressing the understanding how existing tools fit into the unique needs of a faith-based population.

7 ABOUT THE AUTHORS

Zaidat Ibrahim is a second year PhD Student at Indiana University Bloomington. Her research interests is centered around HCI,personal informatics, Health Journeys and Muslim population with an intent to pursue a dissertation topic that merges these four topics. Zaidat is currently being advised by Dr. James Clawson, Assistant Professor of Informatics at Indiana University Bloomington and director of the Healthcare Journeys Lab.

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