

Do Patients Seek Women-Centered Cardiac Care? Patient Experience of an All-Female Multidisciplinary Heart Center for Women

Adi Finkelstein^{1,*}, Elisheva Leiter^{2,*}, Tanya Reinfeld², Ora Levy², Sara Hoss², Lori Sloman², Donna R Zwass²

¹Department of Nursing, Faculty of Life and Health Sciences, Jerusalem College of Technology, Jerusalem, Israel; ²Linda Joy Pollin Cardiovascular Wellness Center for Women, Hadassah University Medical Center, Jerusalem, Israel

*These authors contributed equally to this work

Correspondence: Elisheva Leiter, Linda Joy Pollin Cardiovascular Wellness Center for Women, Cardiology Department, Hadassah University Medical Center Ein Karem, POB 12000, Jerusalem, 91120, Israel, Tel +1 972 54 332 9044, Email elisheval@hadassah.org.il

Purpose: Cardiovascular disease in women is frequently under-diagnosed and under-treated. Numerous heart centers for women have opened throughout the world to address these disparities; however, there is a paucity of data regarding participants' perspectives. The current study assesses motivation to participate and perceived benefits in attending a heart center for women (HCW) in Jerusalem, Israel.

Methods: This study utilized qualitative methods to assess patients' motivation and perceived benefits to attending a women's heart center, particularly as they relate to gender medicine and single-sex staffing. A random sample of 42 clinic patients were asked to participate in interviews. Inclusionary criteria consisted of previous cardiovascular event, active cardiac symptom or three or more cardiovascular disease risk factors. Exclusionary criteria consisted of pregnancy, type 1 diabetes requiring insulin, psychiatric diagnosis that precluded participation, dementia, or other multidisciplinary clinic participation. Interviews were audio recorded and transcribed verbatim. Qualitative data analysis followed Braun and Clarke's methodology of thematic analysis.

Results: The single-sex and gender medicine aspects did not motivate women to attend the HCW, although some participants perceived this as beneficial in retrospect. Women reported that the clinic visit enhanced their knowledge and awareness of issues related to heart disease in women as well as personal health benefits. They reported benefitting from the holistic approach, consideration of their lifestyle, the staff's expression of concern, personalized attention, common language, and feeling understood.

Conclusion: This study describes the patient experience in an all-female HCW, highlighting their motivation for attendance and perceived benefits. While they did not actively seek women-centered care, women reported educational and care provision benefits to their attendance. The care attributes that women identified as beneficial typify the person-centered approach to care. These findings may inform both the design and evaluation of medical care facilities that aim to address the sex and gender disparities in cardiology as well as other medical specialties.

Keywords: gender medicine, patient experience, cardiovascular disease, person-centered care

Introduction

Cardiovascular disease is the leading cause of death in women throughout the world.¹ Despite significant improvements over the past two decades, cardiovascular mortality is significantly higher in women than men after a heart attack and women are less likely to undergo cardiovascular screening tests, receive interventional treatment, or cardiac rehabilitation referrals.^{2–5} Risk factors specific to women have also been described, including gestational diabetes,⁶ polycystic ovary syndrome,⁷ and pre-eclampsia.⁸

In Israel, women have higher mortality rates than men from acute coronary syndrome (i.e heart attack and unstable angina), with 30-day mortality rates of 6.5% versus 3.6%.⁹

Critics of Israel's medical system have indicated that it does not adequately address women's gender-related health care needs, calling for national funding and policy changes that promote gender-sensitive medical care.^{10,11} Additionally, women in Israel are less likely to be counseled by their physician on issues such as nutrition, smoking, alcohol, or weight than women in the US, even when identified as high risk.¹²

Heart centers for women (HCW) were created to address these disparities, providing sex and gender-specific cardiovascular care.^{13,14} Despite the increasing prevalence of HCWs, there is little data assessing the patient's perspective on this gender-specific method of health care delivery.¹⁵ Given that randomization is less feasible in health care delivery and complex clinical care settings, qualitative methods may provide the best approach to understanding and evaluating these questions. Investigating patients' perspectives of a women-centered HCW can inform the design of other HCWs as well as medical centers targeting various women's health issues. The current paper aims to identify patients' preferences and perceived benefit to cardiovascular gender medicine and an all-female staff in a HCW through qualitative interviews.

Methods

Setting

Heart Center for Women

The Linda Joy Pollin Cardiovascular Wellness Center for Women is a heart center for women in Jerusalem, Israel, primarily focused on disease prevention. On first visit, patients were evaluated by a female nurse, nutritionist, physiotherapist, psychologist and cardiologist. Patient cases were reviewed in a multidisciplinary meeting, providing patients with a summary and recommendations. Follow-up appointments were scheduled according to clinical indications. Inclusion criteria consisted of experiencing a cardiovascular event (eg, myocardial infarction, percutaneous coronary intervention, or stroke), having an active cardiac symptom (eg, chest pain or arrhythmia) or three or more risk factors (eg, diabetes, hypertension, hyperlipidemia, peripheral artery disease, smoking, family history of coronary disease, gestational diabetes, pregnancy-induced hypertension/pre-eclampsia, or obesity). Exclusion criteria consisted of pregnancy, having type 1 diabetes with insulin adjustment, a psychiatric diagnosis that precluded participation, dementia, or receiving care from another multidisciplinary clinic.

Sample

At the time of data collection, 363 patients were seen at the clinic, aged 21–91, 93.5% of whom were self-referred. Qualitative data were collected in two waves: (1) Patients who attended the clinic between January 2016–December 2017 were called in a random sequence to obtain consent until saturation was reached in the qualitative interviews. Thirty-one women consented and 25 ultimately were interviewed. (2) In order to deepen insights on the gender-focus of the clinic, additional interviews were conducted with a modified interview guide. Patients who attended the clinic between May 2019–January 2020 were called in a random sequence to obtain consent until saturation was reached. Of the 20 who consented, 17 ultimately were interviewed.

Data Collection

This data were collected as part of a larger clinic evaluation; the current analysis focused on motivation to participate and perceived benefits of attendance exclusively. Data were collected over two waves. The first wave included 25 semi-structured interviews conducted by phone using an interview guide. Questions were based on previous research,¹⁶ addressing patient experience rather than satisfaction, to avoid positive bias.¹⁷ Wave 1 interviews did not ask directly about gender in order to obtain unprompted perceptions regarding this aspect of care. Questions in wave 1 and wave 2 were identical except for 3 items, which were added following the initial analysis of wave 1 data. These items relate directly to motivation for attending this HCW as well as gener-related aspects of care. See [Supplement 1](#) for the full interview questions. The second wave included 17 interviews, bringing the total number of interviews to 42. Interviews were audio recorded and transcribed verbatim.

Data Analysis

Qualitative data were analyzed manually using the six phases of Braun and Clarke's thematic analysis¹⁸ and following Nowell et al's criteria¹⁹ to achieve trustworthiness. Our full analysis included three stages (See Table 1). Phase implementation for each stage are detailed as follows:

Stage 1

During the first stage, the initial 25 interviews (wave 1) were analyzed following the first 4 phases of Braun and Clarke. Phase 1 and 2 were done by AF and research assistants and was reviewed by TR, who worked separately, sharing insights until consensus of a code book was reached. First, transcribed interviews were read several times to get familiar with the data and to search for possible meanings and patterns. Ideas were marked for coding in subsequent phases. The second phase involved the production of initial codes from the data. Phase 3 was led by AF and completed with TR and EL. Different codes were sorted into potential patterns (themes) and all relevant coded data extracts were coded within the identified themes and sub-themes. Phase 4 was done by AF and reviewed by DZ.

Stage 2

The second stage included both the initial 25 interviews (wave 1) and the additional 17 interviews (wave 2). During this stage, all 42 interviews were analyzed as one data set following Braun and Clarke's phase 1–6. Phase 1 and 2 were done by AF and reviewed independently by EL, sharing insights until consensus of a code book was reached. Transcribed interviews were initially read several times to establish familiarity with the data and then to search for possible meanings and patterns. During the second phase, initial codes were produced. Phase 3 was completed by AF. Codes were sorted into potential patterns (themes) and all relevant coded data extracts were coded within the identified themes and sub-themes. Phase 4 was completed by AF and reviewed by DZ. Phases 5 and 6 were completed by AF and EL, with the final report reviewed by DZ.

Table 1 Three Stages of the Full Analysis

		Stage 1	Stage 2	Stage 3
Braun and Clarke's six phases of thematic analysis	1. Familiarizing yourself with your data	+	+	–
	2. Generating initial codes	+	+	–
	3. Searching for themes	+	+	–
	4. Reviewing themes	+	+	–
	5. Defining and naming themes	–	+	+
	6. Producing the report	–	+	+
Aim of the analysis		To assess the patient experience at a HCW	To assess the patient experience at a HCW, including motivators and perceived benefits	To refine the aspects solely related to motivation and perceived benefits of the patient experience at a HCW
Number of interviews		25	42	42
Number of themes		3	4	2
Names of themes		Positive impact of the clinic visit; uniqueness of the Clinic; suggestions for improving the clinic	Motivators for attending the HCW; suggestions for improving the HCW; positive impact of HCW visit; facilitators of a positive HCW experience	Motivators for attending the HCW; perceived benefits of HCW attendance

Note: Bolded text indicate column or row title.

Stage 3

During stage 3, we looked exclusively at the themes of motivation to participate and perceived benefits of attendance and detailed all of the relevant coding (phases 5–6). These phases were done by AF and EL. Phase 5 entailed defining themes and sub-themes by detecting the story that each theme tells and considering how it fits into the broader context of our data. In the final phase, examples that best captured the essence of each of the themes were chosen. The final report (phase 6) was reviewed by DZ.

Ethical Considerations

Human subject approval was obtained from the hospital IRB, the Helsinki Committee of Hadassah Medical Organization (Hadassah University Medical Center, Study # HMO- 0094-15). This study complies with the Declaration of Helsinki. All participants provided informed consent, which included publication of anonymized responses. For anonymity, patients were encoded A1-A25 (first phase) and B1–B17 (second phase). Given the sensitive nature of the data collected, requests to access the dataset from qualified researchers trained in human subject confidentiality protocols may be sent to DZ.

Results

Demographic descriptors of the participants are presented in Table 2. Final thematic map of the interviews and detailed map of the stage 3 analysis are presented in Figures 1 and 2, respectively. The themes identified in stage 3 included: (1) motivators for attending a heart center for women and (2) perceived benefit of a heart center for women.

Table 2 Clinic and sample Demographics, Presenting Complaints, and Risk Factors

Descriptive Characteristic	Clinic Sample N (%)	Study Sample N (%)
Total sample size	363	42
Age	60.9±10.8	61.65±9.7
Marital status (married)	263 (73.5)	32 (76)
Education (college or above)	115 (60.7)	19 (53)*
Income < 7000 NIS/month	72 (30.8)	5 (15)*
Employed	113 (55.7)	18 (49)*
BMI	29.1±5.9	30.5±5.5
Presenting Complaint		
Chest pain	115 (37.1)	12 (29)
Post-MI/PCI	47 (12.9)	5 (11.9)
Dyspnea on exertion	109 (32.9)	8 (19)
Arrhythmia/palpitations	108 (29.8)	4 (10)
Valve disease	29 (9.2)	2 (5)
Stroke/TIA	14 (4.1)	1 (2)
Risk Factors		
Smoker	32 (9)	3 (7)
Former smoker	63 (17.3)	10 (24)
Diabetes	66 (18.7)	7 (17)
Under treatment	24 (36)	1 (2)
Pre-diabetes	64 (20.4)	5 (12)
Hypertension	129 (36.4)	2 (5)
Under treatment	48 (37)	7 (17)
Hyperlipidemia	205 (58.6)	10 (24)
Under treatment	70 (34)	5 (12)
Family history of HD	177 (54.8)	16 (38)

Note: *Percentages calculated without missing data. Bolded text indicate row title or subtitle.

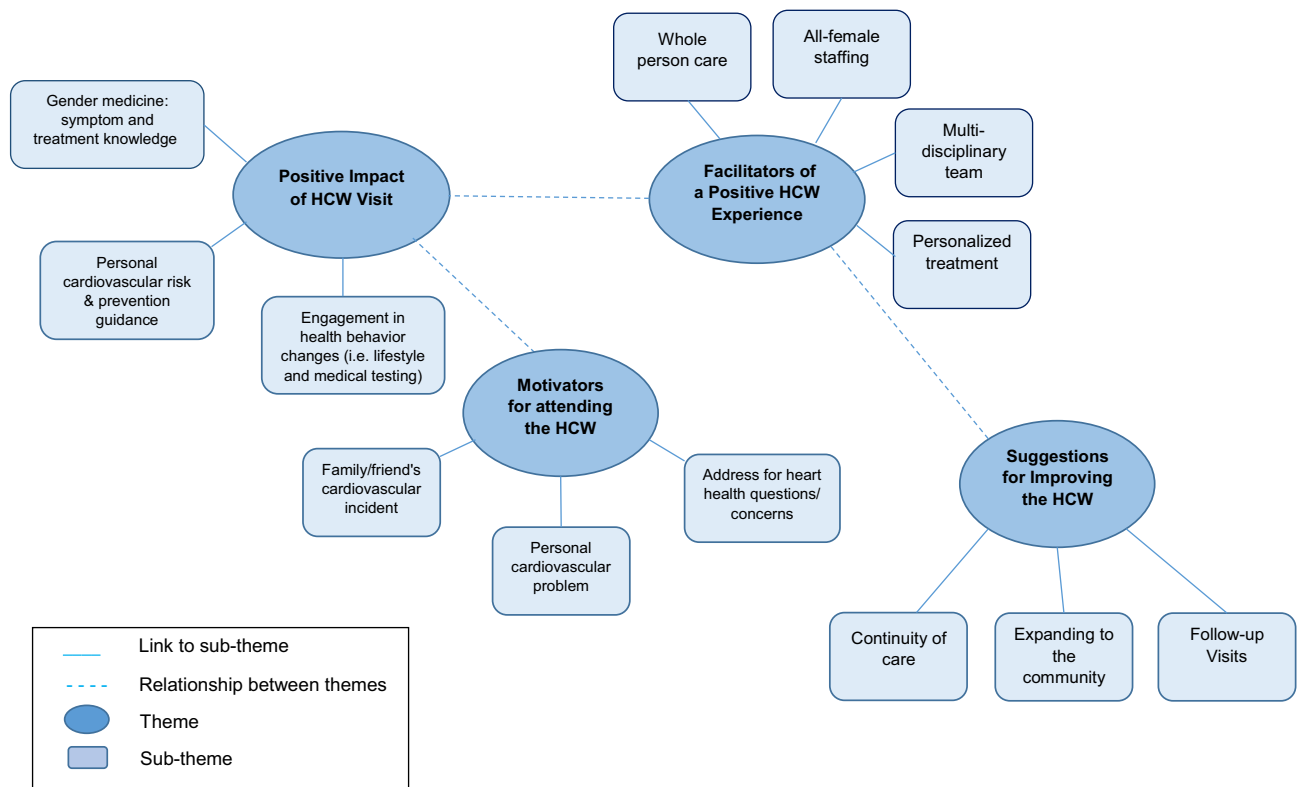


Figure 1 Final thematic map of interviews.

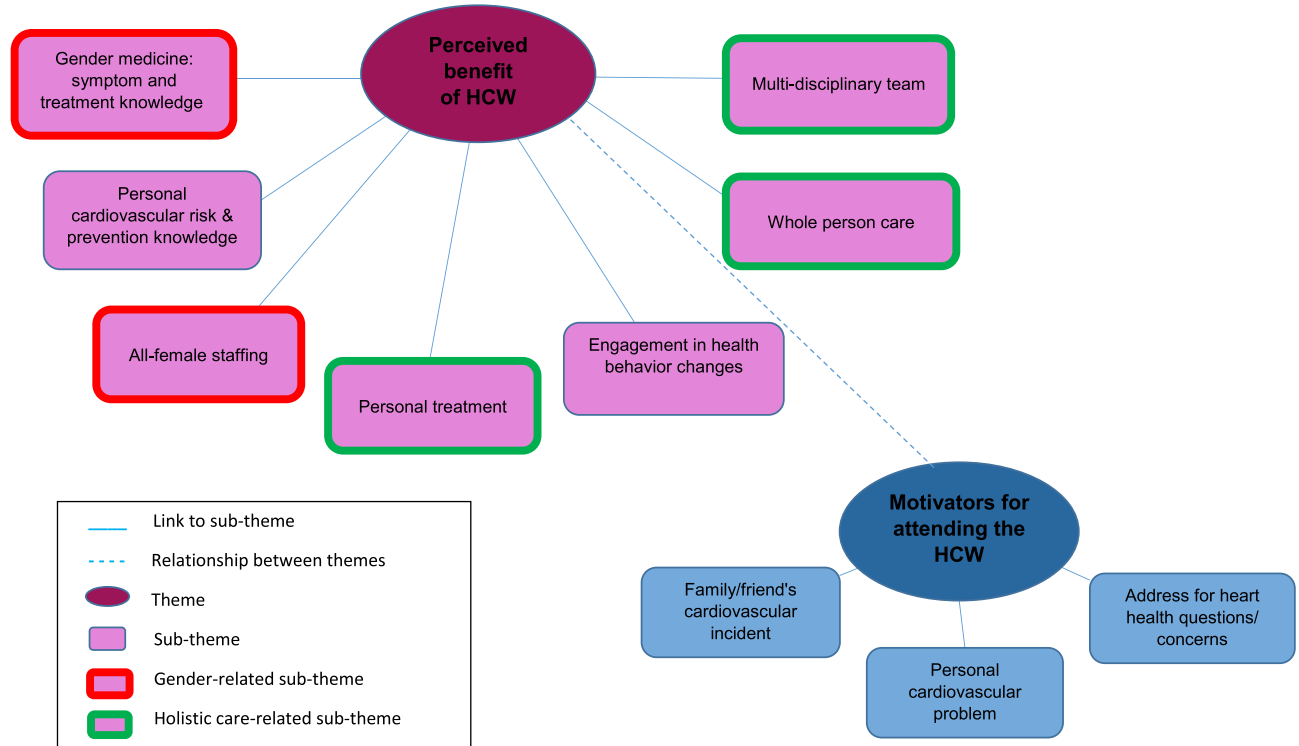


Figure 2 Visual representation of stage 3 analysis.

Motivators for Attending a Heart Center for Women

Participants did not identify the women-centered aspects of the HCW as motivating factors for attending the clinic. This was consistent in wave 1 and even in wave 2, where participants were directly asked if the gender aspects influenced their decision to attend the clinic.

No, no I did not [come to the clinic because it is for women specifically]. Even though I think ... you probably also need to check women ... I don't like the differentiation of men and women, gender ... [B17]

I didn't even think about it [the fact that it is a clinic specifically for women] at all. [B14]

It [The fact that the clinic is specifically for women] was completely not a factor [in my decision to come]. [B4]

A few participants stated that they did not even realize that it was a women's heart clinic.

I did not notice if it was for men or women ... [B1]

While the gender aspects of the HCW were not motivating factors to their attendance, participants did state that they came to the HCW out of fear for their own health or following a personal cardiovascular problem.

I got scared one night. I had very strong chest pains. I immediately thought of the heart, but the doctor told me it was reflux. I was not satisfied with that [answer]. I wanted to stop it right away. [B9]

I want to see if the risk of heart disease at the moment is really high for me. It's very important to me. I need to see what else can help to prevent another attack. [A17]

Participants also reported making an appointment at the HCW after a family member or friend experienced a concerning cardiovascular event.

I have a good friend that had ... a heart attack at a relatively young age. And she goes to this clinic. [B2]

Participants stated that they were looking for a place that would address their concerns related to heart health.

Really, I wanted to have an immediate address ... here I found an address for the heart issues. [B4]

I came voluntarily ... following a workshop that gave a lecture ... it was important for me to check my heart. [A25]

Perceived Benefit of a Heart Center for Women

Participants stated that, as a gender medicine clinic, the HCW addressed the differences between men and women related to symptoms and treatment, which many first learned about during their visit.

I was told that a woman's symptoms are not the same as a man's ... They told me the risks that exist. [A25]

... when I heard about it [that the clinic focuses on a woman's heart], then I said: 'why a woman's heart, and not a heart in general?' So they [the staff] told me that many times the symptoms of heart disease for women are a little different from men, and a lot of doctors have a tendency to think that if you do not have these symptoms of men, then you probably have no heart problem. [B12]

Participants indicated that the all-female aspect of the HCW was a valuable part of their experience at the HCW.

But it was nice when I came ... It was nicer for me that they were all women, yes. [B4]

Yes, I think it's an advantage that everyone is a woman ... [B9]

Participants said that the all-female staff made them feel more comfortable; it created a pleasant atmosphere, they had a common language with the staff, and they felt cared for and understood.

Women understand women better- not just the disease but the experience. Going through menopause, she understands what it means, what it does to the body, to mood - to the entire woman. [B9])

Women, their heads work differently, its more comfortable, more pleasant ... It's easier for them to understand, easier to understand lifestyle, there is much more shared ... no matter the age, religious or not religious, these things are easier to bridge the moment that there is a shared foundation [of being a woman]. [B3]

It was more pleasant; the whole approach is different with men. It's a different world ... the fact that everyone is a woman and professional and kind and they all truly make you feel like they care about you, giving personal attention ... very different. [B6]

Some participants reported benefits that were not directly related to attending a women-centered clinic specifically, but that may not be addressed in a standard clinic. This included personalized treatment, holistic care, and multi-disciplinary treatment all under one roof, in one day.

The treatment is personal, you get the full attention, which does not happen in other clinics that ... you are one of many and here you feel really ... like the only child. [B14]

I felt that someone was really looking at all the parameters, and all the things, to understand my condition ... [B2]

The approach there is holistic. They don't just look at the symptom ... they look at the person as a whole and not as a specific point problem. [B8]

I met with a series of experts, a nurse, a doctor, a nutritionist, with a physical therapist. It was [a] long [day], but it was worth it. [A18]

And every field was ... another area of the whole topic ... nutrition ... exercise ... even psychological. And then the doctor who took all the data and analyzed it along with me. [A5]

A few participants mentioned that their visit at the HCW had a positive impact on their knowledge, health, and health behaviors.

I felt it contributed to my awareness of heart health ... and to pay attention to the signs of ... [when] something is wrong They gave [me] guidance. [B10]

As for the physical activity ... I was given all sorts of tips ... They told me the risks that exist ... Fats or physical inactivity ... that can cause all kinds of problems in the future. It was important to me. [A25]

I did change my lifestyle with a lower carbohydrate diet, I do more sports ... Let's say I'm a happier woman ... I feel it both in body and mind. [B4]

I don't think it's an exaggeration to say that you really saved my life because until I visited the clinic, I didn't know that I had any problem with high blood pressure. [A2]

Discussion

HCWs have been proposed as part of a comprehensive policy for addressing gender equity in women's cardiovascular care.^{14,20} The current study used qualitative methods to explore the patient perspective at an all-female HCW in order to understand the perceived benefit of women-centered care, including cardiovascular gender medicine and a single-sex health care delivery setting. The women in our study did not seek care at this HCW in order to obtain women-centered care; they were motivated exclusively by fear and concern for their health. While these aspects of care did not motivate attendance, the women did report added benefits of increased awareness of heart disease in women, improved health, and behavior changes, as well as the positive interpersonal and emotional benefit of an all-female staff. Women did not spontaneously identify these benefits, however; they were only identified upon subsequent targeted inquiry, in retrospect. To our knowledge, this is the first report of a qualitative assessment of patients who seek care in a HCW setting.

Single-Sex Aspect

Our findings indicate that women did not specifically seek an all-female facility. This was apparent through both indirect and direct questioning about motivation for attending the clinic. It is possible that women prefer same-sex medical care for more intimate and uniquely female care, such as gynecology or breast health,^{21,22} rather than cardiology. While women in our study did not seek women-centered care, they did appreciate aspects of care that they attributed to the female-to-female interaction: feeling comfortable, being understood and cared for, personalized care, and consideration of their experience and lifestyle. Women also stated that they benefitted from the clinic's whole-person treatment.

It has been argued that women-specific services necessitate going beyond the all-female environment, providing care that is substantially different than traditional care.^{23,24} The care attributes mentioned by the women in this study fall under "person-centered care", an approach to medicine that incorporates five dimensions, specifically: holistic care, attendance to patients' beliefs and values, authentic engagement, shared decision making, and sympathetic presence.²⁵ Providing person-directed care, however, is not limited to female providers. As reflected in our study, women report that professional and personal factors are more important than gender in their medical provider selection.^{22,26} Similarly, a study of an all-female cardiac rehabilitation program found that staff members' attention to patients' personal health concerns (and peer support) facilitated participation.²⁷ Research finds that patient-centered communication skills rather than physician's gender influences patient satisfaction and compliance.²⁸ While not exclusively female-provided, research suggests that female physicians are more likely to engage in this patient-oriented style of communication, particularly with female patients.²⁹⁻³¹

Gender Medicine Aspects

Participants reported receiving sex-specific cardiovascular information, which they may not have received in a standard multidisciplinary clinic. Women, in particular young women, cite the lack of perceived personal risk as a barrier to performing cardiovascular health-promoting behaviors.^{32,33} Education and increased awareness of both the medical and non-medical sex and gender-based cardiovascular risk factors, such as socioeconomic and caregiver status, the long-term impact of abuse as well as polycystic ovary syndrome, gestational diabetes, etc., may facilitate more accurate assessment of personal risk and subsequent health behaviors.³⁴

Limitations of this study include its use of a single HCW; however, saturation was reached in the interviews. Additionally, given that study participants continue to receive clinic service, this may reduce their likelihood to provide critical responses. Similarly, those with negative opinions may be more likely to refuse participation. The majority of participants were self-referred; findings may not generalize to patients who are referred to a HCW by a medical professional. This, however, increases the likelihood of determining patient motivators.

Conclusion

While they did not actively seek women-centered care, the women in this study subsequently reported educational, health, and care provision benefits to their HCW attendance. They particularly appreciated aspects of person-centered care, specifically holistic treatment, feeling understood, consideration of their experience and lifestyle, as well as receiving personal attention and concern. These findings may inform both the design and evaluation of medical care facilities that aim to address the gender disparities in cardiovascular health and other medical specialties.

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Disclosure

The authors report no conflicts of interest in this work.

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