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Abstract

This study describes what health care providers (HCPs) of fertility services perceive their patients to value most, as well as HCPs' self-evaluation in provision of patient centered infertility care (PCIC). The Patient Centeredness Questionnaire Infertility (PCQ-I) was administered to all clinic staff and completed by approximately 60%. Mean scores and standard deviations were calculated for each dimension as well as for the global score. HCPs ranked staff communication as the highest of the dimensions and accessibility of care as the lowest, respectively indicating areas of strength and weakness. Degree of variance within scoring was used as a marker of consistency of assessment. Ranking of staff competence was the most uniform and ranking of accessibility the most varied, suggesting HCPs are confident in assessing patients' perceptions of competence, but not with respect to accessibility. Staff communication was thought to be the most important dimension of PCIC for patients, based on the correlation with global score, while care organization was thought to be the least important, showing the lowest correlation with the global satisfaction score. This is the first study to describe North American HCPs' perceptions of PCIC. This information will inform further professional development in provision of quality PCIC.

Keywords

Health Care Providers (HCPs), Patient Centered Infertility Care (PCIC), Patient Centeredness Questionnaire Infertility (PCQ-I), Quality of Care, Infertility Patients, Patient Centered Care (PCC)

Background

In the 1980s, the concept of patient-centeredness garnered an increased amount of attention and utilization with its introduction into education, research, and ultimately the realm of medicine. Patient-centered medicine began to replace the 'traditional' illness-centered medicine as the primary approach to treating patients.[1]

The newly conceptualized patient centered care (PCC) model emphasized the role of the patient in clinical decision-making[2] and was defined as "providing care that is respectful of, and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions".[3]

The Institute of Medicine defined PCC by 7 domains: access to care, patient engagement in care, information systems, care coordination, integrated and comprehensive team care, patient centered care survey, and publicly available information.[3]

On the other hand, in the primary care setting, specifically in family medicine, PCC is defined by 6 domains: the physicians exploration of both the patient's disease and illness experience, the physicians understanding of the whole person, the patient and physician finding common ground, the physician incorporating prevention and health promotion into the visit, the enhancement of the patient-physician relationship, and the requirement that the patient centered practice be realistic.[4]

Despite the differences in the definitions of PCC, there is a universal understanding that being patient centered does not mean relinquishing all control to the patient.[4] The physician must listen to the patient, engaging them in discussion and decision-making regarding their treatment in order to provide quality care.

Providing quality PCC is extremely beneficial to both patients and health care providers (HCPs) as high-level PCC in family medicine is directly associated with fewer malpractice complaints, higher physician satisfaction, higher patient satisfaction, consistent durations of office visits, improved patient health and an overall increase in efficacy of care.[4,5]

The quality of PCC provision can be evaluated with either of the following instruments: the Patient Perception of Patient Centeredness (PPPC) or the Consultation Care

Measure (CCM). Both tools were developed from the Stewart et al. model of PCC and work to measure patient perceptions of PCC during their last visit with their physician. [1,5]

Evaluating the quality of PCC in a given medical setting, such as fertility, allows HCPs to identify areas of weakness and implement appropriate changes. The method for PCC in a fertility setting is referred to as patient centered infertility care (PCIC), a model of care developed from direct patient input.

PCIC is defined by 10 dimensions: provision of information, competence of clinic and staff, coordination and integration, accessibility, continuity and transition, physical comfort, attitude of and relationship with staff, communication, patient involvement, and privacy and emotional support. [6,7]

Fertility patients from across Europe were asked to rank the PCIC dimensions from most to least important to their overall clinic satisfaction. Results indicated Europeans to have very similar views, ranking provision of information as first and accessibility as the last of the 10 dimensions. This was the first time these dimensions were ranked by patients, giving HCPs a more clear understanding of patient values in the fertility setting and allowing HCPs to focus their energy on these specific aspects of care. [8]

It is important that HCPs provide quality PCIC as it has been determined to directly and indirectly improve a patient's tolerability of treatment, adherence to treatment, feelings of wellbeing and ultimately fertility outcomes (pregnancy). [9,10]

The quality of PCIC in an individual clinic can be measured with a validated survey, the Patient Centeredness Questionnaire – Infertility (PCQ-I). [11] The PCQ-I tool was developed and validated in the Netherlands by gathering data from patients from 30 different fertility clinics and facilitating focus groups. The aim of developing this questionnaire was to create a reliable benchmarking tool and a method to distinguish between performance levels at distinct fertility clinics. [11]

Before the PCQ-I was developed, surveys were being used to measure global satisfaction of patients with specific clinics. However, this method was not comprehensive in its evaluation of specific patient experiences that dictate quality PCIC. [11]

In ensuring effective PCIC provision, it is critical that all HCPs provide the same level of care. In order to guarantee consistent delivery of care, HCPs' perceptions of quality care must align with each other as well as with their patients'. Therefore, steps must be taken to determine the

precise nature of care that patients expect and ensure that this care is implemented in a consistent fashion.

The purpose of this study is to initiate a quality assessment of PCIC in a university associated fertility clinic by means of analyzing and determining HCPs' perceptions of the quality of PCIC they provide, as well as, the areas of care they perceive patients to value most.

Materials and Methods

This study received ethics approval from the institutional Research and Ethics Board. The data were collected from April-August 2014. All doctors, nurses, lab and administrative staff members at the hospital-based, university affiliated fertility clinic were asked to complete the PCQ-I to assess PCIC. The anonymous PCQ-I took approximately 10 minutes to complete.

With permission from the authors, the wording of the questionnaire was adapted to more colloquial English and questions were added to better assess the quality of PCIC. The updated PCQ-I asks questions pertaining to 8 dimensions of PCIC (accessibility, information and explanation, staff communication, involvement in your treatment, respect for your values and needs, continuity and transition, staff competence and care organization) and one pertaining to global clinic satisfaction totaling 50 questions.

Sample questions from the updated PCQ-I include: Was it a problem for you to contact staff if you had any questions? Was the information about the treatment you would receive complete and understandable? How often did physicians listen to you carefully? Was decision-making shared with you, if you preferred? How often did your nurses have empathy for your emotions and your current situation? How often did you have an appointment with the same physician? How often did staff use difficult words without explaining them to you? How much time passed between your first clinic visit and the moment you received your treatment plan?

The scoring of each question within the 8 dimensions was determined in accordance with the score sheet provided with the original questionnaire. The dimension scores always ranged from 0-3, 3 indicating a higher quality of care and zero being the lowest. The global satisfaction score ranged from 0-10, 10 indicating the highest level of satisfaction and zero indicating the lowest.

Mean scores and standard deviations were calculated for each of the dimensions in the PCQ-I. A higher dimension score indicated what HCPs believed to be better care in that area of PCIC, and a lower score indicated the opposite. Standard deviations indicated the level of consistency in HCPs' answers. An f-test was implemented

to determine where there was significantly more variance, significantly less or no significant variance between dimensions at all. Cronbach's alpha was used to determine the correlation between individual dimensions and the overall patient satisfaction score.

Results

Approximately 60% of clinic staff anonymously completed the PCQ-I (n=26). Data was consolidated and analyzed. Table 1 indicates the correlation between individual dimensions and overall clinic/global satisfaction. According to Table 1, HCPs predict the dimensions of communication and staff competence to have the greatest correlation with global satisfaction (a=0.68, a=0.63), i.e. areas of PCIC that HCPs perceive to be most important to patients. HCPs predict the dimensions of patient involvement in care and care organization to have the lowest correlation with global satisfaction (a=0.34, a=0.10), i.e. areas of PCIC that HCPs perceive to be least important to patients.

Table 2 provides the mean scores for individual dimensions. According to Table 2, HCPs perceive themselves to excel in the dimension of staff communication (mean=2.24), whereas they see accessibility of care to be the dimension in which the unit provides the lowest quality of care (mean=0.70). However, HCPs are least consistent in their scoring of the accessibility domain (SD=0.66), and most consistent in their assessment of the quality of staff competence (SD=0.31) at the clinic.

Table 3 indicates the level of variance amongst mean dimension scores. According to Table 3, there was significantly more variance in the HCPs' assessment of accessibility than in information provision, staff communication and staff competence dimensions. There was significantly less variance in HCPs' assessment of staff competence than in accessibility, patient involvement, respect for patient values, continuity of care and care organization dimensions.

Discussion

This study explores HCPs' perspectives on patients' PCIC values. The results suggest that HCPs believe staff communication to be the most important to infertility patients and care organization to be the least; provision of information was ranked as the 6th most important of 8 dimensions and accessibility as the 3rd (Table 1). By comparison, European patient rankings of the PCIC dimensions deem provision of information as the most important and accessibility as the least.[8] These differences in PCIC dimension ranking might be due to differing staff and patient perspectives or different cultural values between Europeans and Canadians. By the nature of the study, we did not ascertain ethnic background.

According to the Patient Perception of Patient-Centeredness (PPPC) Questionnaire, patient centeredness in general healthcare can be measured by the quality of staff communication, involvement in treatment and information and explanation.[1] This is consistent with our findings (Table 1); however, HCPs perceive infertility patients to least value involvement in care. Once again, this discrepancy may be due to differing staff and patient perspectives on quality care, or differences between what patients value in general healthcare versus what they value in infertility care. It is also possible, given the consumer nature of the field, that patient involvement in infertility treatment is very high and consequently considered a standard, not a goal.

According to Table 2, HCPs perceive the clinic to excel in the staff communication dimension and provide the lowest quality care in the accessibility dimension. This may be due to staff communication being a human factor (an aspect of care that the HCPs can control) while accessibility is a systems factor (less controllable). Interestingly, HCPs also predict staff communication to be the most important to infertility patients (Table 1), suggesting that professionals are driven to excel in areas of importance to patients. However, HCPs also predicted accessibility to be one of the more important aspects of care to patients, but since a systems issue is perceived as being out of their control they don't feel the same responsibility towards it.

According to Tables 2 and 3, HCPs are most consistent in their rankings of staff competence and least consistent in their rankings of accessibility. This suggests that HCPs will have a more uniform understanding of the nature and quality of care in a dimension that they can control (human factor) as opposed to one they cannot (system factor). This finding highlights the challenges associated with implementing change in a domain in which individuals don't take ownership.

Conclusion

Patient centered infertility care is an important concept of which health care providers must be cognizant. This is the first study to address this in a North American context. Correlation of HCP values with patient values and self-reflection of providers is an essential part of provision of quality care.

HCPs working in the fertility setting with little to no experience providing PCIC are encouraged to familiarize themselves with the dimensions of PCIC and look to the PCQ-I, as it was developed from direct patient input.

Table 1. Correlation of individual dimensions and overall clinic satisfaction score (n=26)

Dimension	Correlation with Global Score (a^c)	P value
Accessibility	0.57	0.01
Information	0.49	0.05
Communication	0.68	0.01
Involvement	0.34	-
Respect	0.51	0.01
Continuity	0.49	0.05
Competence	0.63	0.01
Organization	0.10	-

a^c, Chronbach's alpha; - , insignificant at the 1% or 5% levels

Table 2. Individual dimensions and overall clinic satisfaction score (n=26).

Dimension	Mean	SD
Accessibility	0.70	0.66
Information	2.09	0.39
Communication	2.24	0.38
Involvement	1.90	0.50
Respect	1.84	0.58
Continuity	1.69	0.48
Competence	1.83	0.31
Organization	1.74	0.51
Global Satisfaction	7.84	1.07

SD, standard deviation

Table 3. Range and Variance of Dimension Score

Dimension	Variance	F-stat compared to Accessibility	P value	F-stat compared to Competence	P value
Accessibility	0.44	N/A	N/A	4.40	0.01
Information	0.15	2.93	0.01	1.50	-
Communication	0.14	3.14	0.01	1.40	-
Involvement	0.25	1.76	-	2.50	0.05
Respect	0.34	1.29	-	3.40	0.01
Continuity	0.23	1.91	-	2.30	0.05
Competence	0.10	4.40	0.01	N/A	N/A
Organization	0.26	1.69	-	2.60	0.01

-, Insignificant at the 1% or 5% levels

This study emphasizes the need for standardized assessment tools for all HCPs in this field, as HCPs in North America might perceive PCIC differently than their European counterparts. Alternatively, there may also be a difference between HCPs' and patients' perceptions of quality PCIC. This will require larger studies that can address the diversity in North America.

Assumptions made about patient centered care may not apply to the infertility population. However, only further data collection will provide this answer. Critical self-appraisal is vital to quality improvement and this study provides important information on HCP self-assessment in provision of patient centered infertility care, a first step in evaluating and ultimately providing optimal PCIC.

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