An exploratory QUALquan comparison of patient-centeredness priorities in outpatient Care for Patients and Pharmacists

Anthony W. Olson Ph.D., Pharm.D.1,2 | Brian J. Isetts Ph.D.2 | Timothy P. Stratton Ph.D.2 | Rajiv Vaidyanathan Ph.D.3 | Lisa A. Hillman Pharm.D.4 | Jon C. Schommer Ph.D.2

1Research Division, Essentia Institute of Rural Health, Duluth, Minnesota, USA
2College of Pharmacy, Department of Pharmaceutical Care and Health Systems, University of Minnesota, Minneapolis, Minnesota, USA
3Labovitz School of Business and Economics, Department of Marketing, University of Minnesota, Duluth, Minnesota, USA
4College of Pharmacy, Social & Administrative Pharmacy Graduate Program, University of Minnesota, Minneapolis, Minnesota, USA

Abstract

Introduction: Evidence-based practice is necessary for improving chronic disease prevention, reduction, and management while simultaneously lowering care costs. Patient-centeredness encompasses one of three essential and overlapping components of evidence-based practice, the others being clinical expertise and scientific/research evidence. While patient-centered care was placed at the center of the Joint Commission of Pharmacy Practitioners Pharmacists' Patient Care Process (PPCP), few studies investigate the concept’s meaning in outpatient pharmacist care.

Objectives: This study explores the meaning of patient-centeredness from the perspectives of patients and their pharmacists participating in outpatient care consistent with the PPCP, and compares the elements that matter most between these two groups.

Methods: Data for this exploratory QUALquan mixed methods study were collected via in-depth interviews designed to elicit perceptions of what matters to patients in pharmacist care from a purposive sample of adult patients with multiple chronic conditions and their outpatient pharmacists in the United States. Data were assessed using directed content analysis informed by 40 seminal patient-centeredness concepts from the health professional literatures of medicine, nursing, and health policy.

Results: Data analysis produced 13 distinct superordinate concepts representing the meaning of patient-centeredness in the context of the PPCP. The perceived importance of the patient-centeredness superordinate concepts was generally consistent between patients and pharmacist groups except for “Therapeutic Alliance,” “Care Coordination and Integration,” and “Care Experience.”

Conclusion: This study’s superordinate concepts of patient-centeredness adds clarity for what matters to patients in pharmacist care encounters, key elements for organizing team-based systems to meet the unique needs of each patient, and upstream factors that can facilitate or prevent patient-centered care. Future research should assess the reproducibility of the findings, explore reasons behind patient-pharmacist priority differences, and evaluate the resulting impact.
Evidence-based practice (EBP), sometimes referred to as evidence-based medicine, has been defined as “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient.” EBP is recognized as necessary for improvements in chronic disease prevention, reduction, and management, as well as lowering health care costs. “Patient-centeredness” encompasses one of three essential and overlapping components of evidence-based practice, the others being “clinical expertise” and “research evidence.” Patient-centeredness is grounded in a holistic, biopsychosocial ethos that respects an individual’s preferences, values, and needs as it relates to their health and health care. This extends to factors like patient goals, caregiver expertise, nature of the illness treated, family and friend involvement, access constraints, health-related social needs, and health system integration.

The multi-dimensional nature of patient-centeredness has been studied extensively for over 50 years, particularly in the fields of medicine, nursing, and health policy. Pharmacist conceptualizations of patient-centeredness come primarily from medicine, which is characterized by guiding principles for consideration by the clinician to understand the patient’s perspective and facilitate desirable clinical outcomes (Table 1; see Data S1 for coding definitions and descriptions Additional information about concepts can be requested from Olson and colleagues). Less represented in pharmacist conceptualizations of patient-centeredness are concepts reflecting a health care systems-oriented approach that adjusts the care context to meet the unique needs of the patient. This perspective expands the focus of care from the patient-provider encounter (ie, micro-level) to the level of health systems (ie, meso-level) and considers even more upstream factors like workforce dynamics, accreditation, and payment (ie, macro-level). Filling this conceptual gap is important for understanding how patient-centeredness in pharmacy relates to this construct in other health fields and as a means to improving the consistency, quality, and experience of pharmacist care with patients in contemporary team-based health care as envisioned by the Joint Commission of Pharmacy Practitioners “Pharmacists’ Patient Care Process (PPCP).”

1 | OBJECTIVES

This study (1) explores the meaning of patient-centeredness from the perspectives of patients and their pharmacists participating in outpatient care consistent with the PPCP, and (2) compares and contrasts elements that matter most between these two groups.

2 | METHODS

2.1 | Design and Data Collection

This study employed a QUALquan approach utilizing a directed content analysis method to enable the data richness necessary for capturing the experiential nature of patient-centeredness necessary to explore the meaning of patient-centeredness in a pharmacy practice context. The approach also represents a pre-requisite step for building a theory-informed foundation for meaningful quantitative investigation. Data trustworthiness was also assessed using procedures outlined by Guba and Kregting.

Data were collected from in-depth, semi-structured phone interviews (interview guide available in Data S2) with adult patients and their pharmacists in the United States 1 to 3 days before a care encounter. All interviews were conducted between January 2019 and January 2020. A care encounter was defined as any prescheduled pharmacy care visit regardless of the specific service delivered. The definition was intentionally broad to match the diversity of pharmacy services and settings applicable to the PPCP. Interview questions were designed to elicit descriptions of care within and surrounding patient-pharmacist encounters, as well as the meaning and components of patient-centered care (eg, pharmacist attitudes or competencies; settings or circumstances where the care services take place). The development of the interview guide was informed by the patient-centeredness literature, adapting questions from prior seminal research, and refined using cognitive interviewing. All interviews with study participants were conducted by the corresponding author. Demographic and health-related information was collected to improve the interpretation of the findings. The University of Minnesota’s Institutional Review Board (IRB) approved this study (STUDY#00005247).

2.2 | Sampling criteria

A target of 10-20 patient and pharmacist study participants was established following Bengtsson’s criteria to balance in-depth assessment of each participant’s response with a sufficient number of sources for data richness and transferability. Most similar in-depth, qualitative studies in health care enroll between 1 and 30 participants. The comparatively smaller sample sizes in this area of research reflects the focus on qualitative depth that can then be used to inform quantitative breadth.

Inclusion criteria for pharmacists were U.S. licensure, actively providing direct patient care, accumulation of at least 10 000 hours of direct patient care consistent with the PPCP (ie, expertise indicator), English speaking, and the provision of two de-identified care plans as
TABLE 1 Level of care for 40 seminal patient-centeredness concepts from three health profession fields and their relationships with the pharmacist literature9-14

| Health professional field | Seminal patient-centeredness concepts | Level of care (micro, meso, macro) | Relationship with pharmacist literature |
|---------------------------|-----------------------------|-----------------------------------|--------------------------------------|
| Medicine                  | Therapeutic Alliance        | Micro                             | √                                    |
|                           | Shared Power, Responsibility, and Common Ground | Micro | ≈                              |
|                           | Patient as Unique Person    | Micro                             | √                                    |
|                           | Biopsychosocial Perspective | Micro                             | √                                    |
|                           | Provider as Person          | Micro                             | √                                    |
|                           | Context and Time            | Micro/meso                        | √                                    |
|                           | Disease Prevention and Health Promotion | Micro/meso | √                              |
| Nursing                   | Health and Social Care Policy | Macro                             | –                                    |
|                           | Strategic Frameworks        | Macro                             | –                                    |
|                           | Workforce Developments      | Macro                             | –                                    |
|                           | Strategic Leadership        | Macro                             | –                                    |
|                           | Professional Competency     | Micro                             | ≈                                    |
|                           | Job Commitment              | Micro                             | –                                    |
|                           | Interpersonal Skills        | Micro                             | ≈                                    |
|                           | Knowing Self                | Micro                             | ≈                                    |
|                           | Clarity Of Beliefs and Values | Micro                             | ≈                                    |
|                           | Organizational Systems Support | Meso                          | –                                    |
|                           | Physical Environment        | Meso                             | –                                    |
|                           | Appropriate Skill Mix       | Meso                             | –                                    |
|                           | Effective Staff Relationships | Meso                          | –                                    |
|                           | Team Power Sharing          | Meso                             | –                                    |
|                           | Shared Decision-Making System | Meso                          | –                                    |
|                           | Innovation and Risk-Taking Potential | Meso                      | –                                    |
|                           | Authentic Engagement        | Micro                             | ≈                                    |
|                           | Shared Decision-Making      | Micro                             | √                                    |
|                           | Working With Patient's Beliefs and Values | Micro                             | ≈                                    |
|                           | Sympathetically Present     | Micro                             | ≈                                    |
|                           | Provide Holistic Care       | Micro                             | ≈                                    |
|                           | Care Experience             | Meso                             | ≈                                    |
|                           | Patient's Care Involvement  | Micro                             | ≈                                    |
|                           | Patient's Feelings Of Wellbeing | Micro/meso                  | ≈                                    |
|                           | Healthful Culture           | Meso                             | –                                    |
| Health Policy             | Respect For Patient Preferences, Values, and Needs | Micro/meso                  | ≈                                    |
|                           | Emotional Support           | Micro                             | ≈                                    |
|                           | Physical Support            | Micro                             | ≈                                    |
|                           | Involve Family and Friends  | Micro                             | –                                    |
|                           | Care Access                 | Meso                             | –                                    |
|                           | Information, Education, and Communication | Meso | ≈                              |
|                           | Continuity and Transition   | Meso                             | –                                    |
|                           | Care Coordination and Integration | Meso | –                              |

Note: √, Seminal concept directly linked to conceptualization of patient-centeredness in pharmacist literature. ≈, Seminal concept is congruent with conceptualization of patient-centeredness in pharmacist literature. –, Seminal concept not mentioned in conceptualization of patient-centeredness in pharmacist literature. Micro, care that takes place within and adjacent to the patient-provider encounter. Meso, the environmental conditions within and adjacent to health care institutions organizing patient care. Macro, upstream factors like workforce dynamics, accreditation, and payment that influence patient care.

Evidence of PPCP consistent care. A key informant network of individuals involved in the development or implementation of the PPCP model identified potential pharmacist participants for the study and connected the corresponding author with prospective participants through email. The corresponding author proceeded to recruit these prospective participants as well as assess their eligibility for the study using the criteria described above. A purposive national sampling strategy was employed to include pharmacists in states that allowed modification of drug therapy by pharmacists, and that were representative of four distinct geographic regions (ie, East Coast, Midwest,
South/Southeast, West Coast) and three distinct types of outpatient care settings (ie, Federally Qualified Health Center, Health System/Clinic, Retail/Health and Personal Care Pharmacy). This sampling strategy was consistent with the PPCP’s assumption of applicability to all patient care settings involving pharmacists. The criteria were also selected to recruit pharmacists and patients in contexts more likely to be involved in care that could be characterized as patient-centered. Inclusion criteria for patients were: U.S. adults with more than one chronic condition, nomination by a pharmacist enrolled in the study, had received care from the pharmacist study participant in the past 2 years, English speaking, and were soon scheduled for another care encounter with that same pharmacist. Enrolled pharmacists were aware of the study’s objectives and identified eligible patients whose care the pharmacist believed best exemplified patient-centeredness as part of the PPCP. While this may bias the patient sample towards individuals positively disposed towards the pharmacist, it was an intentional decision by the authorship team to acknowledge that patient-centeredness is more meaningfully defined by focusing on the relations and activities between people or systems, rather than focusing on any one individual’s satisfaction or dissatisfaction. Patients with a diagnosis of a psychotic disorder, schizophrenia, or a Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) Axis II condition were excluded from the study sample per the IRB.

2.3 Coding protocols and inter-judge reliability

Data were transcribed and uploaded into Dedoose (Manhattan Beach, CA) for directed content analysis with the 40 seminal patient-centeredness concepts from Table 1 as initial codes. The unit of analysis for codes were excerpts consisting of the interviewer question and interviewee response. Two coders independently coded one-fourth of all excerpts (ie, 110/439) over four rounds, resolving any disagreements when possible. Perreault and Leigh’s reliability index (I) was used to calculate inter-judge coding reliability.21 Index values reached an acceptable level of agreement in all rounds (I ≥ 0.9), and the first author coded all remaining excerpts.

2.4 Content analysis

The frequency of superordinate codes was assumed to reflect perceived importance to patient-centeredness in pharmacist care. Analysis began by merging initial concept codes that were co-applied in 70% of excerpts or more from the Patient-only (n = 162), Pharmacist-only (n = 277), and Composite (N = 439) datasets into superordinate concepts. Mergers were also carried out for concepts with the greater than 70% co-occurrence of excerpts in two of the three datasets. These mergers reduced artificial inflation or deflation of importance for patient-centeredness elements from overlap between concepts across different fields.

Next, code frequency counts for superordinate concepts were weighted to equalize the magnitude of influence from the Patient-only and Pharmacist-only groups on the Composite dataset. Weighting consisted of taking the number of excerpts for each superordinate concept within the Patient dataset and multiplying by a factor of 277/162 (ie, numerator = total number of excerpts coded in the pharmacist-only dataset, denominator = total number of excerpts coded in the patient-only dataset). This enabled comparisons of the perceived importance of superordinate concepts.

Finally, superordinate concepts were rank-ordered and compared as continuous (ie, differentials of weighted applications) and discrete (ie, rank-order differentials) variables using the Perreault Leigh index value to identify significant differences.

3 RESULTS

3.1 Sample description

Over 20 hours of in-depth interview data were collected from nine pharmacists and six patients (n = 15) balanced across four geographic regions (ie, West Coast, Midwest, South/Southeast, East Coast) and three types of outpatient care settings (ie, Retail/Health and Personal Care, Federally Qualified Health Center, and Health System/Clinic Pharmacy). This purposive sampling strategy was undertaken to capture pharmacist care and practice dynamics in states with statutes allowing for drug therapy modification as well as a diversity of services and workflow frameworks.22 Medication dispensing services were available at all care sites where pharmacists in the study practiced, but only pharmacists in “Retail/Health and Personal Care” setting provided these services. The sample’s demographic and health-related distributions were: 11 females and 4 males; age range 32 to 82; 13 with a college degree and 2 without; and 14 with health insurance and 1 without. Table 2 shows a complete description of demographic characteristics for both the patient and pharmacist participants including self-perceived health status, number of chronic illnesses, and number of daily medications.

3.2 Content analysis results

Directed content analysis of 439 excerpts (unit of analysis) produced 13 superordinate codes representing the meaning of patient-centeredness in pharmacist care consistent with the PPCP and the literature.9,30 The applicability and comprehensiveness of the a priori coding scheme were sufficient to avoid adding new inductively generated codes.

Table 3 displays the weighting and rank-ordering of the superordinate concepts, revealing similarities and differences in what matters in patient-centeredness from the perspectives of patients and pharmacists.

The top-three superordinate concepts for the Composite and Patient-only datasets were “Care Experience,” “Therapeutic Alliance,” and “Information, Education, and Communication.” The top-three superordinate concepts for the Pharmacist-only dataset were “Care Coordination and Integration,” “Care Experience,” and “Information, Education, and Communication.”
Figures 1 and 2 illustrate comparisons between patient and pharmacist perceptions of importance for the superordinate concepts by assessing group differentials using continuous (i.e., superordinate code application differentials) and discrete (i.e., rank-order differentials) variables. The multivariable analytical approach enables data evaluation from multiple angles that highlights key findings while mitigating biases (e.g., discrete rank-ordering misses unequal intervals between ranks).

Both figures display parallel findings between the patient-only and pharmacist-only datasets for 7 of the top 10 superordinate concepts. Figure 1 depicts high levels of consistency between the comparator groups \((I \geq 0.9)\) “Information, Education, and Communication,” “Provider as Person,” “Patient as Unique Person,” “Biopsychosocial Perspective,” “Shared Power, Responsibility, and Common Ground,” “Professional Competency,” and “Strategic Framework.”

Figure 2 also shows that five of these superordinate codes were within one rank order \((\Delta \leq 1; \Delta \text{ refers to the difference in rank order between subsamples})\) of each other between the two groups, with slightly more variance for “Shared Power, Responsibility, and Common Ground” \((\Delta = 2)\) and “Biopsychosocial Perspective” \((\Delta = 3)\). Inter-group differentials for the remaining three superordinate variables of “Therapeutic Alliance,” “Care Coordination and Integration,” and “Care Experience” revealed noticeable contrasts. “Therapeutic Alliance” had 66 more weighted code applications \((I = 0.72)\) and ranked much higher \((\Delta = 5)\) in the patient-only dataset. Conversely, “Care Coordination and Integration,” registered 48 more weighted code applications \((I = 0.81)\) and ranked substantially higher \((\Delta = 7)\) in the pharmacist-only dataset. The continuous and discrete measures for perceived importance differentials between the datasets were also markedly divergent for “Care Experience.” The discrete variable analysis showed minimal difference in rank \((\Delta = 1)\) in this superordinate code, which had the top-ranking in the composite dataset.

**TABLE 2** Descriptive summary of patient and pharmacist study participants

| Descriptor                          | Patient | Pharmacist | Total |
|-------------------------------------|---------|------------|-------|
| Gender                              |         |            |       |
| Female                              | 4       | 7          | 11    |
| Male                                | 2       | 2          | 4     |
| Age                                 |         |            |       |
| 18-37 (Millennial)                  | 0       | 5          | 5     |
| 38-58 (Gen X)                       | 1       | 3          | 4     |
| 59-76 (Boomer) [† Medicare Part D eligible] | 1       | 4          |       |
| 77-94 (Silent Gen)                  | 2       | 0          | 2     |
| Race/ethnicity                      |         |            |       |
| Asian/Pacific Islander              | 1       | 1          | 2     |
| Black/African American              | 1       | 0          | 1     |
| Hispanic/Caucasian                  | 1       | 1          | 2     |
| White/Caucasian                     | 3       | 7          | 10    |
| Education                           |         |            |       |
| High school/GED or less             | 1       | 0          | 1     |
| Some college                        | 1       | 0          | 1     |
| Bachelors                           | 0       | 1          | 1     |
| Masters                             | 3       | 0          | 3     |
| Doctorate                           | 1       | 8          | 9     |
| Health insurance                    |         |            |       |
| No                                  | 1       | 0          | 1     |
| Yes                                 | 5       | 9          | 14    |
| Primary healthcare access           |         |            |       |
| Primary care                        | 6       | 7          | 13    |
| Pharmacist                          | 0       | 0          | 0     |
| Other                               | 0       | 2          | 2     |
| Worried about health                |         |            |       |
| Not worried                         | 5       | 9          | 14    |
| Worried                             | 1       | 0          | 1     |
| # of chronic illnesses              |         |            |       |
| 0                                   | 0       | 8          | 8     |
| 2-5                                 | 3       | 1          | 4     |
| 6-10                                | 2       | 0          | 2     |
| 10+                                 | 1       | 0          | 1     |
| # of medications                    |         |            |       |
| 0                                   | 0       | 8          | 8     |
| 1                                   | 0       | 0          | 0     |
| 2-5                                 | 0       | 1          | 1     |
| 6-10                                | 3       | 0          | 3     |
| 11-15                               | 2       | 0          | 2     |
| 16-20                               | 1       | 0          | 1     |
| Participant type and occupation     |         |            |       |
| Patient                             | 6       | 0          | 6     |
| Counselor                           | 1       | 0          | 0     |
| Home healthcare                     | 1       | 0          | 0     |

(Continues)

**TABLE 2** (Continued)

| Descriptor                          | Patient | Pharmacist | Total |
|-------------------------------------|---------|------------|-------|
| Retired lawyer and financial planner| 1       | 0          | 1     |
| Retired psychologist                | 1       | 0          | 1     |
| Retired teacher                     | 1       | 0          | 1     |
| Warehousing                         | 1       | 0          | 1     |
| Pharmacist                          | 0       | 9          | 9     |
| Pharmacist—FQHC                     | 0       | 2          | 2     |
| Pharmacist—HS/Clinic                | 0       | 4          | 4     |
| Pharmacist—Retail/H&PC              | 0       | 3          | 3     |
| Geographical locations of participant care settings (state) | | | |
| East Coast (NC, VA)                 | 1       | 2          | 3     |
| Midwest (IA, MN, OH)                | 3       | 3          | 6     |
| South/Southeast (FL, TX)            | 1       | 2          | 3     |
| West Coast (CA, WA)                 | 1       | 2          | 3     |

Abbreviations: CA, California; FL, Florida; FQHC, Federally Qualified Health Center; HS, Health System; GED, Tests of General Educational Development; H&PC, Health and Personal Care; IA, Iowa; MN, Minnesota; NC, North Carolina; OH, Ohio; TX, Texas; VA, Virginia; WA, Washington. † Additional context added in Descriptor column.

Figures 1 and 2 illustrate comparisons between patient and pharmacist perceptions of importance for the superordinate concepts by assessing group differentials using continuous (i.e., superordinate code application differentials) and discrete (i.e., rank-order differentials) variables. The multivariable analytical approach enables data evaluation from multiple angles that highlights key findings while mitigating biases (e.g., discrete rank-ordering misses unequal intervals between ranks).

Both figures display parallel findings between the patient-only and pharmacist-only datasets for 7 of the top 10 superordinate concepts. Figure 1 depicts high levels of consistency between the comparator groups for \((I \geq 0.9)\) “Information, Education, and Communication,” “Provider as Person,” “Patient as Unique Person,” “Biopsychosocial Perspective,” “Shared Power, Responsibility, and Common Ground,” “Professional Competency,” and “Strategic Framework.” Figure 2 also shows that five of these superordinate codes were within one rank order \((\Delta \leq 1; \Delta \text{ refers to the difference in rank order between subsamples})\) of each other between the two groups, with slightly more variance for “Shared Power, Responsibility, and Common Ground” \((\Delta = 2)\) and “Biopsychosocial Perspective” \((\Delta = 3)\). Inter-group differentials for the remaining three superordinate variables of “Therapeutic Alliance,” “Care Coordination and Integration,” and “Care Experience” revealed noticeable contrasts. “Therapeutic Alliance” had 66 more weighted code applications \((I = 0.72)\) and ranked much higher \((\Delta = 5)\) in the patient-only dataset. Conversely, “Care Coordination and Integration,” registered 48 more weighted code applications \((I = 0.81)\) and ranked substantially higher \((\Delta = 7)\) in the pharmacist-only dataset. The continuous and discrete measures for perceived importance differentials between the datasets were also markedly divergent for “Care Experience.” The discrete variable analysis showed minimal difference in rank \((\Delta = 1)\) in this superordinate code, which had the top-ranking in the composite dataset. However, the...
### TABLE 3

Rank-ordered patient-centeredness superordinate concept codes for the weighted composite, weighted patient-only, and pharmacist-only datasets

| Superordinate concept codes                        | Rank order (excerpt applications) | Composite ($n = 554^a$) | Patient ($n = 277^a$) | Pharmacist ($n = 277$) |
|---------------------------------------------------|-----------------------------------|--------------------------|------------------------|------------------------|
| Care Experience$^b$                                | 1                                 | 1 (322)                  | 1 (190)                | 2 (132)                |
| Therapeutic Alliance                               | 2                                 | 2 (286)                  | 2 (176)                | 7 (110)                |
| Information, Education, and Communication          | 3                                 | 3 (278)                  | 3 (152)                | 3 (126)                |
| Provider as Person                                 | 4                                 | 4 (264)                  | 4 (142)                | 5 (122)                |
| Patient as Unique Person                          | 5                                 | 5 (241)                  | 5 (123)                | 6 (118)                |
| Biopsychosocial Perspective                       | 6                                 | 6 (240)                  | 7 (115)                | 4 (125)                |
| Care coordination and Integration                  | 7                                 | 7 (232)                  | 8 (92)                 | 1 (140)                |
| Shared Power, Responsibility, and Common Ground    | 8                                 | 8 (228)                  | 6 (118)                | 8 (110)                |
| Professional Competency                           | 9                                 | 9 (88)                   | 10 (46)                | 10 (42)                |
| Strategic Frameworks                               | 10                                | 10 (68)                  | 10 (21)                | 9 (47)                 |
| Workforce Developments                             | 11                                | 11 (50)                  | 11 (15)                | 11 (35)                |
| Health and Social Care Policy                      | 12                                | 12 (44)                  | 12 (10)                | 12 (34)                |
| Strategic Leadership                               | 13                                | 13 (6)                   | 13 (0)                 | 13 (6)                 |

Note: “Respect for Patient Preferences, Values, and Needs” concept was also removed from the analysis to increase granularity of the findings given the concept's high co-occurrence with otherwise distinct concepts.

aData weighted so the magnitude of influence from patient study participants matched pharmacists study participants.

$^b$“Care Experience” is the superordinate concept for “Context and Time;,” which was the only initial concept that did not meet the >70% co-occurrence threshold with a superordinate concept across all three datasets (66% patient-only, 90% pharmacist-only, 73% composite).  

### FIGURE 1

A continuous-variable comparison of code application differentials between the pharmacist-only and weighted patient-only datasets for the top 10 superordinate concepts of patient-centeredness. $^a$Perreault and Leigh Index value; <0.90 represents notable level of disagreement
Continuous variable analysis yielded 58 more weighted code applications ($I = 0.76$) in the patient-only dataset than in the pharmacist-only dataset.

### 4 | DISCUSSION

The directed content analysis identified 13 distinct superordinate concepts that begin to outline the contours of patient-centeredness in outpatient pharmacist practice. The high rate of co-occurrent code applications among the initial 40 seminal concepts produced by this study sample is an initial indication that pharmacy patients, pharmacists, and other health professional groups share congruent meanings of patient-centeredness. Findings also suggest a potential gap in understanding of patient-centeredness in the macro-level of care factors (ie, workforce and policy).

Comparisons revealed high consistency in patient-centeredness priorities between patients and pharmacists, with notable differences for the superordinate concepts of the “Therapeutic Alliance,” “Care Coordination and Integration,” and “Care Experience.” Each of these areas may represent important evidence-based practice factors that are clinically relevant to patient care provided by pharmacists.

#### 4.1 | Therapeutic Alliance differences

The weighted results show a higher relative importance expressed by patients for the “Therapeutic Alliance.” This finding is intriguing given patient-centeredness is unachievable without a “Therapeutic Alliance” between patient and clinician. Additionally, this study intentionally sampled for pharmacists most likely to exemplify patient-centered care.

There are at least four potential explanations for this finding with corresponding implications. First, patients and pharmacists may have had different frames of reference in answering interview questions. Patients likely spoke only for themselves, while pharmacists’ answers reflected all patients for which they provide care. Thus, pharmacists could have equally valued the importance of their bonds with some...
specific patients but not all. Additionally, patient study participants may have valued the “Therapeutic Alliance” with their pharmacist more so than other patients who saw the same pharmacist. This is plausible given that each individual patient’s care needs, preferences, and priorities may be different.

Alternatively, study pharmacists may have underappreciated the importance of the “Therapeutic Alliance” compared with their patients. This suggests potential room for improvement that if realized, may lead to better patient experience and outcomes. Future research is needed to make such a determination and better understand the presence of a differential for “Therapeutic Alliance” but not a related concept like “Pharmacist as Person.”

Third, study pharmacists may have undervalued the “Therapeutic Alliance” relative to patients given the superordinate concept’s subjective and dynamic nature over time. Patients who have a “Therapeutic Alliance” with their pharmacist may begin to feel better about their health unbeknownst to the pharmacist. Objective or subjective improvement in a patient’s health may also occur whether or not a patient’s medication regimen changed.

Finally, the pharmacist and patient subsamples were very different in terms of age. As seen in Table 1, only one study pharmacist was over the age of 58 years with more than half of the subsample being younger than 37 years old. Meanwhile, only one study patient was under the age of 59, with half of the subsample over the age of 65 years. This noticeable contrast in the generational representation and the corresponding potential differences in values among the subsamples may warrant further research into the influence of this factor on the therapeutic alliance.

4.1 | Actionable takeaway for patient-centeredness in pharmacy practice

Findings suggest that pharmacists should prioritize developing a therapeutic alliance with patients. This means establishing common ground in health goals, shared decision-making, and providing cognitive and affective support. Shoemaker and de Oliveira’s six “openness” strategies for pharmacist care adapt well for this purpose:

1. Listen—carefully listen for patient’s story including content and emotions
2. Acknowledge—recognize the unique characteristics specific to the person, their situation, and experience as a patient
3. Wonder—reserve judgement and attempt to explore through the patient’s eyes
4. Recognize—identify your own personal and professional bias relevant to the patient’s care
5. Question—consider how your own biases and values impact the patient’s care
6. Reflect—evaluate ways to improve care.

Another important practice-based implication relates to an unsubstantiated misconception of patient-centered care—that it takes too much time. Research suggests more time and costs are saved using a patient-centered care approach with patients who have a therapeutic relationship with their provider. This is because the approach better identifies and supports the fulfillment of priorities and goals that are complex in nature.

4.2 | Care Coordination and Integration differences

The most frequently coded superordinate concept in the Pharmacist-only dataset was “Care Coordination and Integration” and is not well-represented in the pharmacist patient-centeredness literature. Patients in the sample ranked this superordinate concept considerably lower than pharmacists. This may indicate a meaningful disconnect where the latter inappropriately overemphasizes the needed level of coordination and integration with other care providers to produce patient-centered care. However, the high level of importance assigned by both groups to the meso-level superordinate concept “Care Experience” (ie, #1 for patients, #2 for pharmacists) suggests an alternative interpretation. “Care Coordination and Integration” might be seen as more important by pharmacists than patients because pharmacists spend large amounts of time in these activities that are not visible to patients, often taking place outside the care encounter. This may also explain why both pharmacists and patients rated macro-level superordinate concepts like “Health and Social Care Policy” lower in importance—both are less perceptible or modifiable in their care activities. A separate deduction that can be made from the high importance assigned to “Care Coordination and Integration” by pharmacists is the high alignment between patient-centeredness with team-based care approaches. This is consistent with the PPCP’s approach to patient care (eg, inclusion of the “collaborate,” “communicate,” and “document” concepts around the patient-centered care hub) as well as contemporary health care practice and training generally.

4.2.1 | Actionable takeaway for patient-centeredness in pharmacy practice

Pharmacists may want to communicate to patients about the activities they do behind the scenes to help the patient navigate (eg, referrals), access (eg, collaborative practice agreements, over-the-counter recommendations), and afford (eg, medication selection, insurance troubleshooting) their health care needs. The result may be a better patient experience through a more informed understanding of the actions of their care team that would reflect optimal alignment in the relative importance of “Care Coordination and Integration” assigned by pharmacists and patients.

4.3 | Care experience differences

The “Care Experience” was the only superordinate concept where the discrete and continuous variables told different stories, justifying the
use of both approaches in the analysis. Both patients and pharmacists found the superordinate concept important (ie, #1 for patients and #2 for pharmacist; Δ = 1) but the Perreault and Leigh Index indicated notable inconsistency (I = 0.76). Essentially, pharmacists saw the “Care Experience” as one of the most important components of patient-centeredness, but still undervalued its importance relative to patients. Thus, while pharmacists know the “Care Experience” is highly important to patient-centeredness, they are further removed from it than the patients - just as the inverse is true for “Care Coordination and Integration.”

4.3.1 | Actionable takeaway for patient-centeredness in pharmacy practice

Pharmacists should prioritize their activities outside of the care encounter by considering its impact from the patient’s experience. This requires that pharmacists familiarize themselves with how care systems interface with patients (ie, patient portals, text message reminders, phone systems, refill syncing, etc.), consider each patient’s unique life situation, and find opportunities to alter systems accordingly.

4.4 | Limitations

There are several limitations to consider when drawing conclusions from these findings. First, semi-structured interviews are prone to bias from inadvertent researcher cues about desirable responses to questions from interviewees. Investigators created neutrally-phrased stem questions and evaluated the likelihood of this bias from field journal notes taken during interviews. Phone-only interviews also limited the possibility of non-verbal cue transmission, but also blinded the researcher’s ability to assess non-verbal messages from study participants. Thus, frequent checks for understanding were utilized to maximize appropriate interpretation of interviewee comments.

A second limitation inherent to qualitative research was the small size and non-random selection of the sample, which limits generalizing the findings to all outpatient pharmacists and patients. For instance, the patient subsample was likely far more educated and insured than the general patient population, which could represent uncontrolled and relevant factors to exploring the research question. However, the purposeful sampling (key informant network involved in the development or implementation of the PPCP model identified pharmacists for recruitment), pharmacist inclusion criteria of two de-identified care plans consistent with the PPCP, statistical weighting of patient data, and overall data richness produced in-depth insights consistent with the study’s exploratory purpose. The methodological design also enables transferability for future research involving persons and situations with similar characteristics.

A third potential limitation was the imbalance of pharmacists and patients in the sample. This may have happened because although patients were identified for recruitment by their pharmacists, all recruitment materials were addressed from the University of Minnesota, to which most patients had no connection. Weighting was used to mitigate imbalance and appropriate given the exploratory and QUALquan nature of this study.

A fourth potential limitation inherent to directed content analysis was bias from an a priori lens of the 40 patient-centeredness concepts (Table 1). Thus, the study’s two coders attempted to inductively generate other concepts that were possibly overshadowed. The first author also conducted a code-recode technique, where the complete data was separately coded 2 weeks apart to assess dependability and confirmability.

4.5 | Future research

Operationalized, quantitative field testing of the superordinate concepts in outpatient pharmacist practice is needed to assess for the validity (internal and external), generalizability, and reliability for the findings across populations. This will enable better assessment of how patient-centeredness in pharmacist practice relates to patient reported and clinical outcomes. Given there is not a universal way to operationally measure patient-centeredness, efforts should incorporate several types of instruments and data sources (ie, triangulation) relevant to the care context and populations studied. For example, the “Therapeutic Alliance” could be analyzed at the micro-level of care by triangulating data from direct observation of patient and pharmacist activities using the Pharmacy Practice Activity Classification (ie, identifies and defines all pharmacist care activities into 14 classes within four domains), post-encounter patient-reported experience measures (ie, patient descriptions and evaluation of care received), and a retrospective analysis of patient-reported outcomes measures (ie, quality of life, functional status, health care utilization).

These findings could be evaluated by considering care moderators (eg, age, insurance coverage, health status) and mediators (eg, self-efficacy, adherence, trust) through structural equation modeling. A similar approach could then be taken at the meso- and macro-levels of care for patient-centeredness superordinate concepts.

5 | CONCLUSION

This study identifies 13 distinct elements for understanding patient-centeredness in outpatient pharmacist practice from the perspectives of patients and their pharmacists participating in care consistent with the PPCP. These component concepts may provide useful guidance for pharmacists fulfilling evidence-based practice. Results also suggest high levels of congruence in patient and pharmacist perceived priorities for patient-centeredness, but with some potentially important differences surrounding the valuation of the “Therapeutic Alliance,” “Care Coordination and Integration,” and “Care Experience” that warrant further investigation. Taken together, this study’s findings add clarity for what matters to patients in pharmacist care encounters, identifies key elements for organizing team-based systems to meet the unique needs of each patient, and names upstream factors that can facilitate or prevent patient-centered care. Future research is
needed to assess the reproducibility of the findings in other contexts, the reasons behind potential differences in patient and pharmacist care priorities, and an evaluation of their impact. Additional insight in these areas can lay the necessary theoretical groundwork for quantitatively exploring patient-centeredness in a meaningful way.

CONFLICT OF INTEREST
The authors have no conflicts of interest to declare.

AUTHOR CONTRIBUTIONS
Anthony W. Olson: Conceptualization, Methodology, Formal Analysis, Investigation, Writing- Original Draft, Writing-Review & Editing, Visualization, Funding Acquisition; Brian J. Isetts: Conceptualization, Methodology, Writing-Review & Editing, Supervision; Timothy P. Stratton: Conceptualization, Methodology, Writing-Review & Editing, Supervision; Rajiv Vaidyanathan: Conceptualization, Methodology, Writing-Review & Editing, Supervision; Lisa A. Hillman: Methodology, Validation, Writing-Review & Editing; Jon C. Schommer: Conceptualization, Methodology, Formal Analysis, Resources, Writing-Review & Editing, Supervision, Funding Acquisition.

ORCID
Anthony W. Olson https://orcid.org/0000-0003-4026-4716

REFERENCES
1. Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. Evidence based medicine: What it is and what it isn't. BMJ. 1996; 312(7023):71–72.
2. Krause J, Van Lieshout J, Klomp R, et al. Identifying determinants of care for tailoring implementation in chronic diseases: An evaluation of different methods. Implement Sci. 2014;9(1):102.
3. Baker R, Camosso-Stefinovic J, Gillies C, et al. Tailored interventions to overcome identified barriers to change: Effects on professional practice and health care outcomes. Cochrane Database Syst Rev. 2010(3):CD005470.
4. de Silva D. Helping measure person-centred care: A review of evidence about commonly used approaches and tools used to measure person-centred care. Volume 80. London, UK: Health Foundation; 2014; p. 1–81. www.health.org.uk/helpingmeasurepc.
5. Ekman I, Swedberg K, Taft C, et al. Person-centered care-ready for prime time. Eur J Cardiovasc Nurs. 2011;10(4):248–251.
6. Epstein RM, Street RL Jr. The values and value of patient-centered care. Ann Fam Med. 2011;9(2):100–103.
7. Montori VM, Guyatt GH. Progress in evidence-based medicine. JAMA. 2008;300(15):1814–1816.
8. Harding E, Wait S, Scrutton J. The state of play in person-centred care: A pragmatic review of how person-centred care is defined, applied, and measured featuring selected key contributors and case studies across the field. London, UK: The Health Policy Partnership; 2015; p. 1–140.
9. Olson A, Stratton T, Isetts B, Vaidyanathan R, Van Hooser J, Schommer J. Seeing the elephant: A systematic scoping review and comparison of patient-centeredness conceptualizations from three seminal perspectives. J Multidiscl Healthc. 2021;14:973–986.
10. Olson A, Isetts B, Stratton T, Vaidyanathan R, Hager K, Schommer J. Addressing hidden curricula that subvert the patient-centeredness “hub” of the pharmacists’ patient care process “wheel.” Am J Pharm Educ. 2022;86(2):973–986.
11. Mead N, Bower P. Patient-centredness: A conceptual framework and review of the empirical literature. Soc Sci Med. 2000;51(7):1087–1110.
12. Stewart MA. Effective physician-patient communication and health outcomes: A review. Can Med Assoc J. 1995;152(9):1423–1433.
13. McCormack B, McCance T, Klopfer H. Person-centred practice in nursing and health care: Theory and practice. 2nd ed. Chichester, England: Wiley-Blackwell; 2016; p. 269.
14. Gerteis M, Edgman-Levitan S, Daley J, Delbanco TL. Through the patient’s eyes: Understanding and promoting patient-centered care. 1st ed. New York, NY: Jossey-Bass; 1993; p. 317.
15. Joint Commission of Pharmacy Practitioners. The Pharmacists’ Patient Care Process. 2014. Available from: https://jcpp.net/patient-care-process/
16. Bengtsson M. How to plan and perform a qualitative study using content analysis. NursingPlus Open. 2016;2:8–14.
17. Creswell JW, Plano Clark VL. Choosing a mixed methods design. Designing and conducting mixed methods research. Thousand Oaks, CA: Sage Publications; 2006; p. 58–88.
18. Guba EG. Criteria for assessing the trustworthiness of naturalistic inquiries. ECTJ. 1981;29(2):75.
19. Krefting L. Rigor in qualitative research: The assessment of trustworthiness. Am J Occup Ther. 1991;45(3):214–222.
20. Friddlund B, Hildingh C. Health and qualitative analysis methods. In: Friddlund B, Hildingh C, editors. Qualitative research methods in the service of health. Lund: Stedentlitteratur; 2001; p. 13–25.
21. Leiva FM, Rios FJM, Martinez TL. Assessment of interjudge reliability in the open-ended questions coding process. Qual Quant. 2006 Aug; 40(4):519–537.
22. Center for Public Health Law Research, Beasley School of Law TU. Pharmacist Scope of Practice [Internet]. The Policy Surveillance Program. 2015. Available from: https://lawatlas.org/datasets/pharmacist-scope-of-practice-1509023805.
23. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. J Fam Pract. 2000;49(9):796–804.
24. Henbest RJ, Stewart M. Patient-Centredness in the consultation. 2: Does it really make a difference? Fam Pract. 1990;7(1):28–33.
25. Mallinger JB, Griggs JJ, Shields CG. Patient-centered care and breast cancer survivors’ satisfaction with information. Patient Educ Couns. 2005;57:342–349.
26. Smith F, Orrell M. Does the patient-centred approach help identify the needs of older people attending primary care? Age Ageing. 2007; 36:628–631.
27. Stewart AL, Nápoles-Springer AM, Gregorich SE, Santoyo-Olsson J. Interpersonal processes of care survey; Patient-reported measures for diverse groups. Health Serv Res. 2007;42(3):1235–1256.
28. Kaplan SH, Greenfield S, Ware JE. Assessing the effects of physician-patient interactions on the outcomes of chronic disease. Med Care. 1989;27(3):S110–S127.
29. Greenfield S, Kaplan SH, Ware JE, Yano EM, Frank HJ. Patients’ participation in medical care: Effects on blood sugar control and quality of life in diabetes. J Gen Intern Med. 1988;3(5):448–457.
30. Roth A, Fonagy P. What works for whom?: A critical review of psychotherapy research. 2nd ed. New York: Guilford Press; 2005; p. 661.
31. Mead N, Bower P. Patient-centred consultations and outcomes in primary care: A review of the literature. Patient Educ Couns. 2002;48(1): 51–61.
32. de Oliveira DR, Shoemaker SJ. Achieving patient centeredness in pharmacy practice: Openness and the pharmacist’s natural attitude. J Am Pharm Assoc. 2006;46(1):56–64.
33. Mohammed K, Nolan MB, Rajjo T, et al. Creating a patient-centered health care delivery system: A systematic review of health care quality from the patient perspective. Am J Med Qual. 2016;31(1):12–21.
34. Schottenfeld L, Petersen D, Peikes D. Creating patient-centered team-based primary care. AHQR Pub. No. 16-0002-EF. Rockville, MD: Agency for Healthcare Research and Quality; 2016.
35. Maine LL. Pharmacy practice activity classification. *J Am Pharm Assoc.* 1998;38:139–148.

**SUPPORTING INFORMATION**
Additional supporting information may be found in the online version of the article at the publisher’s website.

How to cite this article: Olson AW, Isetts BJ, Stratton TP, Vaidyanathan R, Hillman LA, Schommer JC. An exploratory QUALquan comparison of patient-centeredness priorities in outpatient Care for Patients and Pharmacists. *J Am Coll Clin Pharm.* 2022;5(6):579-589. doi:10.1002/jac5.1618