Published in final edited form as:

Community Ment Health J. 2018 July ; 54(5): 514–520. doi:10.1007/s10597-017-0216-6.

Do Providers Know What They Do Not Know? A Correlational Study of Knowledge Acquisition and Person-Centered Care

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Abstract

Person-centered care (PCC) is a central feature of health care reform, yet the tools needed to deliver this practice have not been implemented consistently. Person-centered care planning (PCCP) is a treatment planning approach operationalizing the values of recovery. To better understand PCCP implementation, this study examined the relationship between recovery knowledge and self-reported PCCP behaviors among 224 community mental health center staff. Results indicated that increased knowledge decreased the likelihood of endorsing non-recovery implementation barriers and self-reporting a high level of PCCP implementation. Findings suggest that individuals have difficulty assessing their performance, and point to the importance of objective fidelity measures.

Keywords

Mental health services; Training; Knowledge; Implementation

Introduction

Health care has increasingly embraced a person-first approach to treatment, also referred to as “patient-centered care”. In the landmark report *Crossing the Quality Chasm*, the Institute of Medicine (2001) stated that the implementation of patient-centered care practices is a necessary, critical ingredient to enhancing the quality of health and mental health services. As such, the promotion of person-centered care practices has become a central priority for state and federal health policies, including the Affordable Care Act.

The origins of person-centered care (PCC) can be traced back to the recovery movement within mental health care, which emerged in the 1980s in order to challenge the prevailing

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Conflicts of interest The authors have no conflicts of interest to report.

Ethical Approval This study was approved by the New York University Institutional Review Board.

Informed Consent Informed consent was obtained from all individuals included in this study.

paternalistic approaches to treatment (Corrigan et al. 2012). This movement advocated for care that both acknowledged the decisional authority of the client and was responsive to his or her unique values, preferences, and needs (Davidson et al. 2005). In addition to this moral imperative, a growing body of evidence has demonstrated the benefits of placing clients at the center of their own care. Adopting a person-centered approach to mental health care has been found to increase engagement in therapeutic (Davidson et al. 2012) and psychiatric treatment (Wilder et al. 2010), improve medication adherence (Stanhope et al. 2013) and client reports of wellbeing (Joosten et al. 2008), and reduce symptom severity (Greenwood et al. 2005).

One practice central to promoting person-centered care is person-centered care planning (PCCP), a manualized process for developing an individualized and collaborative plan of care. PCCP offers providers the necessary clinical tools to deliver person-centered care, and guides treatment towards achieving a user-defined vision of wellness and recovery (Adams and Grieder 2014). Throughout the care planning process, providers adopting PCCP elicit and empathize with their clients' subjective experiences, regard clients holistically as people rather than as patients, and help people to articulate their personal recovery goals. Underlying this approach is a focus on clients' strengths, rather than the treatment of their deficits (Tondora et al. 2014), which includes reframing symptoms and impairments as *barriers* to goal attainment, and reframing medications as *tools* for overcoming these barriers.

With the ideological appeal and empirical support for PCC well established, behavioral health professionals are now tasked with integrating person-centered care practices such as PCCP into routine care. Implementation research has demonstrated that provider knowledge is a fundamental component of this adoption process; Damschroder and colleagues (2009) state that "skill in using [an] intervention is a primarily cognitive function that relies on adequate how- to knowledge and knowledge of underlying principles or rationale for adopting the intervention" (p. 9). This suggests that successful implementation of PCCP requires providers to begin with an understanding of both its practical components and its values. Problematically, current literature suggests that lingering ambiguity around the precise definition of person-centered care has made knowledge acquisition difficult for providers seeking to understand and implement this practice. There is a general consensus that PCC is founded upon the principles of inclusion, empowerment, and respect for individual self-determination; however, the exact meaning and operational requirements of this approach remain vague (Kitson et al. 2013; Morgan and Yoder 2012). Defining PCC more concretely is challenging, as the term "person-centered" is often used to describe a number of phenomena, ranging from an overall *approach* to treatment (i.e., Are you providing person-centered care?) to the *qualities* or *content* of a specific interaction (i.e., Are you engaging in person-centered communication?) (Epstein et al. 2005). Furthermore, PCC is by nature highly individualized and context-dependent, making unilateral declarations of its practical application difficult. As a consequence of this conceptual ambiguity, providers may be operating with insufficient or inaccurate knowledge about the PCC model and how it is integrated into practice.

These challenges to understanding PCC have significant implications for the implementation of PCCP. First, at the most basic level, providers cannot integrate PCCP into practice without a sufficient understanding of the model's core skills and operational requirements. One documented barrier to the uptake of PCCP is that providers often believe that it is already being utilized, thereby rendering any training unnecessary (Tondora et al. 2012). Interestingly, this belief persists even when their practice objectively does not resemble PCCP, signaling that providers are unable to identify when PCCP is either present or absent in clinical practice. As a result, providers may feel less motivated to engage in activities that may improve their PCC- and PCCP-related skills, thereby undermining the effective integration of PCCP in routine care.

These findings also suggest that low levels of PCC knowledge can affect PCCP implementation by limiting providers' ability to accurately assess their own skills and proficiencies. Discrepancies between actual and perceived knowledge is a commonly observed phenomenon within the fields of health and mental health; Davis et al. (2006) conducted a systematic review of studies comparing health care professionals' self-assessed skills versus their observed skills in areas such as promoting cultural competence and educating patients on evidence-based practices. Results indicated that not only do providers provide inaccurate self-assessments, but the largest discrepancy existed among the least skilled workers. In other words, those with the lowest levels of knowledge were the most confident in their abilities. Similarly, Walfish et al. (2012) found that mental health professionals also tended to overestimate their clinical abilities, with 25% of respondents estimating their own skill to be in the 90th percentile as compared to their peers. Together, this research suggests that low levels of knowledge may hinder successful implementation by reducing providers' ability to accurately report on their own progress towards adopting a new practice.

Lastly, misunderstandings or misconceptions about PCC and PCCP may affect providers' beliefs about the practices and ultimately their commitment to implementation. Negative provider attitudes have also proved to be a significant barrier to the uptake of PCCP (Tondora et al. 2012). Although a fundamental principle of mental health recovery is that achieving wellness is possible for all people, practitioners have been skeptical about their clients' readiness to engage in PCCP and their ability to set life goals due to the severity of their mental illnesses (Zubkoff et al. 2016).

Despite the established importance of foundational knowledge in implementing new practices, the relationship of PCC- and PCCP-related knowledge to identified implementation barriers has not been explored empirically. To better understand the effect of PCCP-related knowledge in the process of implementation, this study addresses the following questions: To what extent is recovery knowledge associated with perceived implementation barriers? To what extent is recovery knowledge associated with reported PCCP behavior? The research protocol was approved by participating University Institutional Review Boards and state level ethics review boards.

Methods

Participants

Recruitment—Participants ($N = 224$) were all employed in 10 community mental health clinics in two northeastern states. They participated in a randomized controlled trial of PCCP, an emerging recovery-oriented and evidence-based practice. These clinics provided outpatient, crisis, housing, community support, and rehabilitation programs, and served adults fitting the criteria for serious mental illness. Within each organization, a convenience sample of programs was selected for participation in order to reduce disruption on service delivery and minimize organizational burden. All supervisors from each nominated program were recruited to participate in the study, and, in turn, supervisors ($N = 81$) each nominated two direct care staff members who reported directly to them to participate in the trial. Eligibility criteria for direct care staff ($N = 143$) were provision of direct services to consumers, at least 1 year of employment, and high potential as change agents (e.g., leadership potential, openness to change and adoption of evidence-based practice, and/or seen as an opinion leader or role model among staff), with the intent of selecting individuals who were a likely champion of evidence based practice.

Data Collection—As a part of the larger trial of PCCP effectiveness, data for this study were collected from supervisor and direct care staff participants. All data reported in this study were collected from the experimental and control sites at baseline, prior to any agency's receipt of training on PCCP. Organizational leadership introduced the study to staff via email and each participant then received an email with an embedded URL linking them to an online consent form and a 30–45 min electronic survey. Supervisor and direct care staff surveys were commensurate with slight variation in language and versions of measures; participants were allowed to skip questions or sections. A good response rate was achieved, with 86% of providers agreeing to complete the survey, and each individual received a \$20 gift card for their participation. None of the authors have any known conflicts of interest. All authors certify responsibility for the manuscript.

Measures

Recovery Knowledge—The *Recovery Knowledge Inventory* is a 20 item questionnaire commonly used to establish respondent's knowledge of recovery based principles and practices (Happel et al. 2015; Meehan and Glover 2009; Vine and Komiti 2015). Respondents rate their endorsement of fundamental recovery concepts on a five-point Likert scale, ranging from “strongly disagree” to “strongly agree”. One-fifth of the items are reverse coded, such as “the concept of recovery is equally relevant to all phases of treatment” and “not everyone is capable of actively participating in the recovery process”. This measure has been tested as both a valid and reliable scale ($\alpha = .83$; Bedregal et al. 2006; Meehan and Glover 2009), and reliability coefficients (alpha) of .87 were found within the present study.

PCCP Behavior—The *Person-Centered Care Questionnaire* (PCCQ) is a 32-item measure designed to assess the extent to which service planning practices are consistent with PCCP. Respondents rate their own or their staff's service planning behaviors on a five-point Likert

scale, ranging from “strongly disagree” to “strongly agree,” with higher scores indicating a more person-centered treatment plan. Statements include “I write treatment goals in each person’s own words” and “I include each person’s strengths, interests, and talents in his or her plan”. A full copy of the measure is available upon request.

Tondora and Miller of the Yale Program for Recovery and Community Health developed this measure in 2009, which has been used nationally to evaluate the adoption of PCCP in community mental health centers, including state-wide training and implementation initiatives (Lodge et al. 2017). The questionnaire was found to be a reliable measure within our sample ($\alpha = .95$). Both administrative and provider versions were used, and scores were dichotomized into “high” and “low” implementers. The “high” implementer category was defined as any provider indicating “agree” or “strongly agree” to *all* items on the PCCQ, which reflects the perception that one is incorporating all components of PCCP into practice.

Implementation Barriers—Study participants were asked to select the top three most relevant implementation barriers from a list of 10 common implementation concerns (Tondora et al. 2012). Included in this analysis were three implementation barriers that specifically reflect provider attitudes counter to recovery principles. These barriers include the following provider beliefs: if given increased choice, consumers may make bad ones; consumers are not motivated and I cannot get them to participate in PCCP; and clients are too sick/impaired to partner with us in the planning process. Survey respondents indicated whether each statement represented one of the top three barriers to implementation through a dichotomous “yes” or “no” response.

Control Variables—The following provider covariates were measured by items in the baseline survey: years in mental health services; role within the organization (direct care, provider, or supervisor); level of education (high school or less, college, or graduate); and the type of program in which they were employed. Program type was dichotomized to community support programs (case management, assertive community treatment, and peer support) and other programs.

Analysis

Univariate statistics were utilized to describe the study sample. The sample was stratified by whether a respondent identified as a high or low implementer of PCCP. The association between recovery knowledge and self-assessed PCCP implementation was analyzed using a logit mixed effects model, which included a random component at the site level. This methodology allowed for adjustment in variation of PCCP implementation that may be accounted for by between-site differences. Control variables were also included as fixed effects covariates in this model. All analyses were conducted using SPSS software (v. 24).

Results

Characteristics of Study Participants

Table 1 shows demographics for all participants in the supervisory ($N = 81$) and direct care ($N = 143$) staff roles. The large majority of providers had either bachelor’s degrees (36.6%)

or master's degree (49.6%). The mean number of years in participants' position and role was approximately 3 and 6 years, respectively. Within the sample, participants predominantly identified as working within community-based support (including ACT; 24.6%, $N = 55$), case management (18.3%, $N = 41$) residential (15.6%, $N = 35$), or outpatient services (15.2%, $N = 34$).

Recovery Knowledge and Implementation Barriers

The first research question of this study related to the extent to which recovery knowledge was associated with implementation barriers that run counter to core concepts of recovery and PCCP. About half (52%) of staff endorsed at least one of these three barriers of interest (see Table 2). The fully adjusted model indicated that increases in recovery-related knowledge decreased the likelihood of endorsing non-recovery-oriented implementation barriers (OR .57; $p < .05$). In addition, staff with an undergraduate education were more likely to endorse one of these barriers than those with a graduate education (OR 2.29; $p < .05$; see Table 1).

Recovery Knowledge and PCCP Behavior

The relationship between recovery knowledge and perceived level of PCCP implementation was also examined. Study participants demonstrated wide variation in levels of recovery knowledge, with a mean RKI score of 3.6 (SD = 0.57, range 2–4.8). Overall, 15% of participants rated themselves as high PCCP implementers (see Table 1). Increases in recovery knowledge predicted a lower likelihood of self-reporting as a high implementer (OR .35; $p < .01$), such that individuals with greater recovery knowledge were less likely to perceive their practices as person-centered most or all of the time (see Table 2).

Discussion

The findings of this study reinforce the notion that provider knowledge plays an important role in the implementation of a new practice. Within the context of PCCP, a lack of knowledge about the recovery principles underpinning this practice predicted the endorsement of non-recovery-oriented implementation barriers and, interestingly, was negatively correlated with the extent to which providers reported implementing PCCP in routine care. A lack of knowledge therefore proved to be an implementation barrier in numerous ways, with some providers concluding that the intervention was not suitable for their consumers and others insisting that they were already implementing the practice, despite having a low level of relevant core knowledge. Finding also indicated that providers without graduate training were more likely to endorse non-recovery-oriented implementation barriers, suggesting that additional clinical training may impact baseline knowledge and openness to recovery-oriented practices.

One inner-setting factor that can influence uptake at the initial stages of an implementation effort is the extent to which all stakeholders, including leaders and direct service providers, perceive the relative advantage of an intervention (Damschroder et al. 2009). This study indicates that providers' initial determination of these potential benefits is shaped by their baseline knowledge of a practice and is often made before receiving organized training. This

evaluative process has been described by Normalization Process Theory as coherence and cognitive participation (May et al. 2009), which refers to how organizations and individuals make sense of what is being proposed to them and, based on their understanding, decide to reject or embed an innovation into their routine work.

Educating stakeholders about a new innovation during the initial stages of an implementation effort has been identified as an effective implementation strategy (Powell et al. 2015). Such education is particularly important for recovery-based models such as PCCP, which challenge some of the fundamental assumptions of the medical model that still inform behavioral health services today. Adoption of these practices requires a deeper shift in personal values and beliefs to improve service quality, as opposed to the simple acquisition of new technical skills. This process is further complicated by the ongoing challenge to operationalize these principles clearly in practice. Therefore, when implementing PCCP one cannot assume that there is agreement or full understanding of the principles underlying a recovery-oriented practice. Because of this, building foundational knowledge in the early stages of training may be a particularly essential tool to increase provider buy-in and overcome negative attitudes or beliefs about this practice.

Attending to provider knowledge not only informs decision-making around adoption but also plays an important role throughout the training effort and ongoing evaluation of fidelity to the practice. According to the Normalization Process Theory, the process of sense-making should be incorporated into the knowledge development stage of training, which precedes concrete behavior change (May et al. 2009). This becomes especially important when practices incorporate a shift in values and rely more on a set of principles rather than a prescribed set of actions. When providers understand and agree upon shared principles about ways of being with people, this may in fact lead to greater fidelity to a practice rather than focusing on specific instructions.

The study's finding that providers with less knowledge reported greater perceived adherence to the PCCP also has implications for fidelity measurement and ongoing quality improvement efforts. Fidelity to clinical best practices, including PCCP, is often measured by providers self report, however, our findings confirm previous research demonstrating that knowledge and self-assessment are often misaligned. Kruger and Dunning (1999) posited that the type of knowledge that promotes competence in a particular practice is also necessarily employed in the process of self-assessing proficiency, a phenomenon since labeled the "Dunning-Kruger Effect". In sum, this theory asserts that practitioners must know what they are supposed to be doing to accurately report on their success at doing so. For this reason, those with the lowest levels of knowledge or mastery are most vulnerable to inflating their own levels of proficiency, as it is "nearly impossible...for one to surmise what one does not know" (Dunning 2005), making it difficult to obtain an accurate understanding of how a practice is actually being implemented in clinical care.

Another complicating factor in measuring fidelity to a practice by self-report is social desirability, which is particularly prevalent for practices such as person-centered care; the intuitive and ethical appeal of this practice makes it hard for people to say they do not practice in this way. Therefore, self-reported measures, which rely on perceived rather than

objective accounts of behavior, may be ineffective for measuring the actual implementation of a skill or practice. Because most people cannot accurately assess their own competence, there is a need for more objective sources of assessment for ongoing evaluation (e.g., client satisfaction measures), observations of practice, and documentation review.

Limitations

There are several limitations to the present study. First, scores on the *Person-Centered Care Questionnaire* (PCCQ) suggested a ceiling effect, with survey respondents highly rating their overall PCCP practices. The PCCQ measure has been widely utilized in both state level evaluations and other large-scale research studies, but has yet to undergo a systematic check for validity. Given respondents' high ratings, this may be an important next step to further the utility of the measure. In addition, although the reported model provides insight into the relationship between recovery knowledge and self-reported PCCP implementation, the association between knowledge and actual behavior remains unknown. Exploring the relationships between knowledge, perceived practice, and practice behavior will be an important next step in understanding how knowledge ultimately affects PCC and PCCP implementation. Lastly, the convenience sampling technique used to recruit study participants into the study may limit the representativeness of the sample. This paper explored the relationship between knowledge and perception within individuals only, and therefore cannot be used to draw conclusions about agency-level differences or similarities in the understanding or implementation of PCCP.

Conclusion

This study demonstrates the fundamental yet complex role that knowledge plays in implementing a new practice, particularly one that embodies paradigmatic shifts in values and practice traditions. Lack of knowledge can impair providers' openness to adoption, the way they make sense of a practice when embedding it into their work, and their ongoing evaluation of fidelity to practice. This suggests that investing upfront in understanding the principles that underlie a practice before focusing on the associated skills is a vital step in successful implementation. Moreover, the ability to assess fidelity or overall effectiveness will be greatly impeded if providers cannot accurately rate their own adherence and if measures rely solely on subjective judgments. Although possibly more demanding for agencies in the short term, an early focus on knowledge acquisition holds much promise for moving beyond the implementation conundrum of providers not knowing what they do not know.

Funding

The funding was supported by National Institute of Mental Health.

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Table 1

Recovery knowledge and implementation challenges

	N	%	Mean	At least one nonrecovery barrier ^a	High perceived implementation ^a
Recovery knowledge	221	-	3.6 (0.57)	0.57 *	0.35 **
Mental health years	222	-	11.6 (8.67)	1.00	1.00
Role					
Direct care	143	63.8	-	0.95	0.69
Supervisor	81	36.2	-	Ref.	Ref.
Education					
High school or less	6	2.7	-	0.98	1.55
College	100	44.6	-	2.08 *	1.52
Graduate degree	115	51.3	-	Ref.	Ref.
Community support program	55	24.6	-	1.37	1.88

* $p < .05$;** $p < .01$ ^aFigures represent adjusted odds ratios

Table 2

Implementation challenges

	N (224)	%
Non-recovery barriers		
Consumers aren't motivated	84	37.5
Consumers are too sick	56	25.0
Consumers make bad choices	32	14.3
At least one barrier	117	52.2
Perceived implementation		
High implementer	34	15.2
Low implementer	190	84.8