

Use of Behavioral Engagement Model to Improve Patient-Provider Relationship Applications for Patient-Centered Care

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Abstract

Person-centered medicine has shifted the focus of medicine from treating disease to placing the whole person at the center of their care. In today's health care market the focus on person-centeredness within health and social care at a global level challenge healthcare practitioners to develop communication skills that empower patients by seeing health from the patient's perspective and motivating and educating patients in health-related self-management.

Effective communication is the basis of a productive patient-provider relationship. Today's patient-centered care environment calls for a behavior change model that improves provider communication-skills to effectively engage and empower patients for sustained behavior change, improved satisfaction, compliance and outcomes. This study explores the effects of Behavioral Engagement with *Pure Presence*TM (BEPP) in the patient-provider relationship. The principle objectives are: 1) to examine what effects, if any, does introducing BEPP in the patient-provider relationship have on the patient's perception of relational empathy and 2) report on the provider's experience in overall workplace satisfaction.

This one-group pretest-posttest study recruited 40 adult patients at a high-volume private endocrine practice, utilizing the Consultation and Relational Empathy (CARE) Measure Survey, pre- and post-intervention. Provider data was obtained from provider self-reporting demographic and professional practice information and the Work Satisfaction Survey at pre- and post-intervention. Provider identified patient study population based on defined eligibility criteria. New patients only participated in the study, to eliminate potential bias from established relationships with provider. An endocrinologist was trained to apply the intervention (BEPP).

BEPP is a behavioral change model that applies an integrated approach to interpersonal communication engaging patients and providers, placing the whole patient at the center of care. Designed to enhance and transform patient-provider relationships, it serves as a best practice model of relationship-centered, patient education training for healthcare providers. Providers learn a communication skill-set that facilitates emotional shifting in patients altering subconscious brain state essential to sustained behavior change.

BEPP comprises 20 core relational dynamics that are multi-dimensional and Whole-Person focused and 12 steps of Pure Presence comprising physical, conscious and

unconscious neurological, hormonal, auditory and visual communications. The BEPP courses educate and train providers about the psychoneurobiology of communication and how the model's facilitation leads to sustainable behavior change.

Paired-samples t-tests were conducted on dependent variables against exposure to the intervention, the independent variable. Patient demographic and medical information were tested as covariates. Provider pre- and post-intervention Work Satisfaction Survey results on BEPP's effect on provider satisfaction in the patient-provider relationship and workplace were reported.

Results showed statistical significance ($p \leq .05$) on each dependent variable measured. Dependent variables measured: patient feeling valued, being fully present to patient, really listening to patient, addressing patient as a whole person, understanding patient's concerns, attentive eye contact, positive approach to care, explaining clearly to patient, facilitating patient to take control, and developing a plan of action with patient. Patient report on relational empathy in the patient-provider relationship increased through improved provider communication skills after applying BEPP.

The seasoned endocrinologist reported that he further developed communication skills improving empathy in the patient-provider relationship. Favorable changes in workplace satisfaction included: reduced stress, improved productivity, being a valued member in the workforce, and having enough time with patients.

This study confirmed that utilizing BEPP significantly improved the patient-provider relationship. BEPP supports: 1) national and global initiatives call for person-centered medicine to address escalating behavioral-related diseases through whole person health education and self-directed care, 2) provider communication-skills training to transform the patient-provider relationship under the challenging provisions providers must balance within patient care, and 3) supports healthcare consumerism advocating patient-provider partnership.

Results of this study demonstrate the effects of BEPP to improve patient-provider communications for implementation in clinical practice. Implications for improved provider-patient communication include: increased patient-provider satisfaction, improved patient compliance and outcomes, sustained patient behavior change, increased patient safety and reduction in medical errors, improved quality of provider relationships and workplace satisfaction, ability to overcome communication barriers in the healthcare environment and increased efficiency and financial viability of the healthcare organization. Future research is warranted to evaluate the effect of BEPP on disease outcomes in patients with chronic diseases and its impact on providers and healthcare organizations.

In recognition of the value of patient-centered care, policymakers and health industry stakeholders must also recognize its successful adoption is contingent on curricula enhancing provider communication-skills training. BEPP provides the platform in which health care professionals can effectively partner with their patients.

Keywords: communication skills, patient-provider relationship, patient-centered care, behavioral change model, empathy

Introduction

In today's health care market government mandates and healthcare consumerism challenge providers to develop communication skills that improve their practice of patient-centered care. Improving patient adherence and outcomes through healthier lifestyles will require a deeper understanding of how to effectively engage patients through the patient-provider relationship. Providers must develop communication skills that empower patients by seeing health from the patient's perspective and motivating and educating patients in health-related self-management [1]. The Institute of Medicine (IOM) Report on Health Professions and Training has called attention to the importance of communication training for healthcare professionals recognizing communication skills can be learned and improved upon through commitment and practice [2, 3].

Health behavior models place emphasis on patient-provider communication. However, the degree of communication-skills training reported is lacking [4]. Research evaluating behavior change methods based on numerous behavioral theories (i.e., Health Beliefs Model, Social Cognitive Theory, Theory of Planned Behavior, Transtheoretical Model, Self-Determination Theory, Self-Perception Theory and Motivational Enhancement) revealed only 67% of the content training for health professionals included communication skills training for rapport building, providing emotional support, and expressing empathy [4].

The National Institute of Whole Health (NIWH), a research, training and content provider organization, has pioneered the fields of relational communication, patient health education and sustainable behavior change [5]. In 1977, the organization saw a deficiency in healthcare that has fostered 40 years of evidence-based research, accredited training of credentialed medical and health professionals, and content provider of whole person care curricula.

Out of its decades of hospital-based research [5], the NIWH's whole person care model of Behavioral Engagement with *Pure Presence*[™] (BEPP) emerged to provide healthcare professionals with the communication skill-set necessary to transform the patient-provider relationship, increase quality of patient care, and improve the level of patient-provider satisfaction. BEPP was named as a *Best Practice Model of Relationship-Centered Care* by Boston's Union Hospital, a Harvard affiliate hospital, and was also nominated by the hospital for the Fetzer Institute's Norman Cousins Award [6].

NIWH pilot studies have demonstrated BEPP's transformational effects of whole health education incorporating disease prevention through demystified health information, respectful peer presence, shared decision making and whole health advocacy for patient wellness and self-directed care [7]. In a Harvard affiliate hospital pilot study with the NIWH, providers were trained in application of BEPP on 50 recalcitrant patients with varying cardiovascular disease. One of the most significant findings was the response of 94% of patients who stated, "Never before in my life have I been listened to like this" [8]. The principal investigator, Dr. Harvey Zarren, stated, "The relationship of educator [provider] with patient gave people a behavior model that, with the content of the education, allowed for persistent lifestyle changes" [8]. The purpose of this pilot study was to examine the effects of BEPP in patient-provider relationships, applied as the intervention.

Methodology

The one-group pretest-posttest pilot study collected quantitative pre- and post-intervention survey data. The research design was formulated to examine if there were any significant differences between patient study groups pre- and post-implementation of the intervention. A single provider participant was trained to apply the intervention. Provider survey responses, demographic and practice information are reported.

The quantitative approach was employed to answer the following research questions:

1. What effects, if any, does introducing BEPP in patient-provider relationships have on the patient's perception of relational empathy, as indicated by the Consultation and Relational Empathy (CARE) Measure survey instrument?
2. What effects, if any; do the healthcare providers who practices BEPP experience in overall workplace satisfaction, as indicated by the Work Satisfaction Survey?

The study was given human research protection approval on July 8, 2014 (reference number 509992-3) by Central Michigan University Institutional Review Board. Patient recruitment commenced on August 20, 2014 and concluded on October 7, 2014. Following pre-intervention visits, provider preparation for training began in November and training was completed in December. Patient post-intervention visits occurred in January 2015.

Participants

A sample of 40 adult patients was recruited from a private endocrinology practice with two locations in southeastern Michigan. The study's participating provider is a board certified endocrinologist who established his practice and research center in 2003.

Identification of the patient study population was made through provider recommendation based on the study's defined patient eligibility criteria. Patient eligibility criteria included men and women at least 18 years of age that were new patients of the provider, were able to complete pre- and post-survey instruments, and speak and read English. Participant exclusion criteria included established patients and new patients with severe comorbidities, limited life expectancy, and cognitive dysfunction or severe mental illness that are under active psychiatric treatment with intensive psychotropic medications.

Intervention

BEPP applies an integrated approach to inter-person communication while engaging both patients and providers [5]. The model teaches health care professionals to treat the whole patient as opposed to their disease and to form relationships with their patients for sustained behavior modification and improved patient outcomes [9]. Centered on a state of being fully and wholly present to another person, BEPP comprises 20 core relational dynamics that are multi-dimensional and whole-person focused [5]. The 12 steps of *Pure Presence* comprise physical, conscious and unconscious neurological, hormonal, auditory and visual communications which affect trust and relaxation. In turn, this allows the patient to relax in their mind and body in a way that permits processing of conscious and unconscious information. The 12 steps of *Pure Presence* teach the provider to apply the 20 core relational dynamics. These transformational components work with the physiological brain state to facilitate emotional shifting that is essential to sustained behavior change. This shift is characterized by slowing the conscious beta brain down and promoting an environment for it to overlap with the subconscious alpha brain

inviting new insights, awareness and self-efficacy. This leads to a shift in beliefs, values and worldview for sustainable behavioral change to occur.

BEPP differs from patient-centered counseling, such as Motivational Interviewing, which uses prompts as a guide for the patient; assessing needs and integrating the stages of change, tailoring the intervention to the individual. BEPP uses no assessments, scripts or prompts. Nor does BEPP adapt the protocol to the individual. It is the transformative communication skills set learned by the provider that result in organic inner change for the patient, out of which sustainable change evolves. Organic inner change is characterized by the natural or innate development of change that occurs in the patient's belief system when new information is learned through enhanced communication with their provider.

Provider training

The NIWH provided online webinar BEPP training. The curriculum is designed to educate and train providers on the psychoneurobiology of communication and how the BEPP model of facilitation leads to sustainable behavior change.

In preparation for the training, the provider was required to read the book, *Changing Behavior: Immediately Transform Your Relationships with Easy-to-Learn, Proven Communication Skills* by Georgianna Donadio, MSc, DC, PhD. Training comprised an orientation and webinar series comprising four workshops; three video lectures to explore communication style, relationship with self and impact on others; interactive assignments including videos demonstrating applications of the model; supplemental readings to further the learners education and delve deeper into areas of data reporting and supportive research and a 10 minute recorded interview demonstrating the provider's application of the model at the completion of the training to assess the learners understanding of the curriculum.

The training curriculum has been approved by the American Academy of Family Physicians (AAFP) for 20 continuing education units. AAFP Prescribed credit is accepted by the American Medical Association (AMA) as equivalent to AMA Physician's Recognition Award (PRA) Category 1 Credit™ toward the AMA PRA.

Data collection

A pre-intervention, CARE Measure Survey was provided to patients meeting eligibility criteria at the time of their scheduled visit upon recruitment. The patients were asked to score each item on a 5-point Likert rating scale (0 = Does Not Apply, 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent). The provider was then trained in application of the intervention. A post-intervention, CARE Measure Survey was provided on the patient's return or follow-up visit. This study did not require additional visits outside the standard of care in frequency for regularly scheduled visits.

Dependent variables were extracted from each response item in the CARE Measure Survey defined in Table 1. Research supports the validity and reliability of this instrument as an empathy-based consultation process measure [10]. The intervention, BEPP, was analyzed as the independent variable.

Table 1. Key Variables and Definitions

Variable	Descriptor	Explanation
Valued	Making the patient feel valued	Patient report on provider being friendly and warm, treating patient with respect; not cold or abrupt.
Present	Being fully present to the patient	Patient report on provider giving patient time to fully describe their illness in their own words without interrupting or diverting the patient.
Listen	Really listening to the patient	Patient report on provider paying close attention to what patient is saying; not looking at notes or computer as patient is talking.
Whole	Addressing the needs of the patient as a whole person	Patient report on provider asking or knowing relevant details about the patient's life and situation; not treating the patient as <i>just a number</i> .
Understand	Understanding the patient's concerns	Patient report on provider communicating that he/she accurately understands the patient's concerns; not overlooking or dismissing anything.
Eye Contact	Making consistent, attentive eye contact with patient	Patient report on provider seeming genuinely concerned with patient on a human level; not being indifferent or detached.
Positive	Being positive, caring and respectful to the patient	Patient report on provider having a positive approach and attitude while being honest, not negative about the patient's problems.
Explain	Explain information clearly to patient	Patient report on provider fully answering patient's questions, explaining clearly, providing adequate information; not being vague.
Take Control	Facilitating patient to take control	Patient report on provider discussing with patient what he/she can do to improve their health; encouraging rather than lecturing the patient.
Develop Plan	Developing a plan of action with the patient	Patient report on provider discussing options with patient, involving him/her in decisions as much as patient would like to be involved; not ignoring patient's views.

Patient demographic and medical information were derived from the patients' medical records and recorded on a data collection form by the provider. Information obtained included: age, gender, race, ethnicity, and current health status. These extraneous variables were indicated as covariates and tested as independent variables.

The participating provider completed a pre-intervention, Work Satisfaction Survey at the onset of the study. The provider completed the post-intervention survey after all the patient participant post-visits were completed. Response for each item on the 5-point Likert scale of the

Work Satisfaction Survey instrument was scaled as follows: Never, Almost Never, Sometimes, Fairly Often, Very Often. The Work Satisfaction Survey was developed by the NIWH to include evidence-based research in support of Whole Health Education that measures patient-provider satisfaction and job satisfaction.

Provider demographic and practice information was derived from a provider participation form completed by the provider. Information obtained included: age, gender, race, ethnicity, licensure, area(s) of specialty, practice type, length of time as a practicing healthcare professional, and degree and source of communication skills training.

Data analysis

The statistical analysis was conducted International Business Machines (IBM) Statistical Package for Social Sciences (SPSS) software version 22. Descriptive statistics were tabulated for dependent variables and independent variables. Data was screened for accuracy and missing values were coded as necessary. The analyses adjusted for covariates pertaining to patient participant demographic and medical information.

A paired-samples *t*-test was conducted to compare patient perception of relational empathy in the patient-provider relationship before and after applying the intervention. A level of significance of .05 was utilized to test the hypothesis: Patients who participate in BEPP will experience improved perception of relational empathy in the patient-provider relationship.

The effect size was calculated using Cohen's *d* to measure the magnitude or strength of mean differences. The effect size values of *d* are small ($d = .2$), medium ($d = .5$) and large ($d = .8$). In controlling for extraneous variables, covariates were assessed using one-way, repeated-measures multivariate analysis of covariance (MANCOVA).

Results

Participant characteristics

Participants were 15 male and 25 female aged 19 to 69 years. The average age of participants was 42.7 years ($SD = 14.89$). The age ranges of participants by gender are displayed in Table 2.

Table 2. Participant Age by Gender (n = 40)

		Participant Age Range					Total
		18 to 34	35 to 44	45 to 54	55 to 64	65+	
Male	Count	7	0	3	4	1	15
	% within Gender	46.7	0.0	20.0	26.7	6.7	100.0
	% within Participant Age Range	50.0	0.0	27.3	66.7	33.3	37.5
Female	Count	7	6	8	2	2	25
	% within Gender	28.0	24.0	32.0	8.0	8.0	100.0

% within Participant Age Range	50.0	100.0	72.7	33.3	66.7	62.5
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Participants were predominately Caucasian ($n = 37, 92.5\%$). African Americans comprised the remaining participant population ($n = 3, 7.5\%$). Participant ethnic origin was predominately non-Hispanic or Latino ($n = 39, 97.5\%$).

Current health status was obtained from the patient's medical history. Participant health status by diagnosis indicated 31, or 77.5%, of participants had a thyroid condition. Six, or 15%, were being treated for diabetes. The remaining three, or 7.5%, were being treated for Polycystic Ovary Syndrome, Hashimoto's Disease, or hormones.

Report on patient effect

Forty patients completed pre- and post-intervention surveys. A paired-samples t -test indicated that the mean scores were statistically significant for each measure as shown in Table 3. Cohen's d values showed a medium effect size of .5 or greater for 8 of the 10 paired samples. The largest effect size was observed in paired samples variable Listen ($d = .7$). The paired samples variables Understand and Positive each had the smallest effect size ($d = .4$). Results indicate when the provider was trained to improve his communication-skills through the application of BEPP, patient perceived relational empathy in the patient-provider relationship improved.

Table 3. Paired-Samples t -Test Results for Patient Mean Scores on Relational Empathy Pre- and Post-Intervention

Variable Pairs	Patient Mean Scores		t	df	p	Cohen's d
	Pre-Intervention	Post-Intervention				
Valued	4.70 (.52)	5.00 (.00)	-3.67*	39	.001	.58
Present	4.78 (.48)	5.00 (.00)	-2.97*	39	.005	.47
Listen	4.58 (.64)	5.00 (.00)	-4.23*	39	.000	.67
Whole	4.65 (.58)	5.00 (.00)	-3.82*	39	.000	.60
Understand	4.75 (.54)	4.98 (.16)	-2.68*	39	.011	.42
Eye Contact	4.63 (.63)	4.95 (.22)	-3.34*	39	.002	.53
Positive	4.78 (.48)	4.95 (.22)	-2.21*	39	.033	.35
Explain	4.68 (.62)	4.98 (.16)	-3.37*	39	.002	.53

Take Control	4.60 (.71)	4.98 (.16)	-3.55*	39	.001	.56
Develop Plan	4.60 (.93)	4.98 (.16)	-2.94*	39	.005	.46

Note. * = $p \leq .05$. Standard deviations appear in parenthesis below means.

The outcomes did not vary by participant characteristics. In controlling for extraneous variables, covariates were assessed using one-way, repeated-measures MANCOVA. The MANCOVA evaluated the influence of the independent variables (i.e., Age, Gender, Ethnicity, Race, Health Status) on the dependent variable, pre- and post-intervention measures, while removing the effect of covariate factors [11]. In repeated-measures MANCOVA, two or more dependent variables are measured over a series of within-group time points [12]. The independent variables pertaining to patient participant demographic and medical information (i.e., Age, Gender, Ethnicity, Race, Health Status), pre- and post-intervention, were not significant.

Report on provider satisfaction

The participating provider was a 48 year old male, Caucasian, non-Hispanic or Latino. He was a board-certified, medical doctor specializing in endocrinology for 24 years. He reported his highest level of patient-provider communications skills training completed was basic, core curriculum. His source of communications-skills training was in medical school and residency training.

Provider rating on a 5-point Likert scale, survey measuring workplace satisfaction pre- and post-intervention is reported. On 9 out of 21 measures the provider reported a favorable change in workplace satisfaction. Favorable changes were reported on: concern of occurrences at work, feeling stressed, dealing successfully with problems, feeling tired, feeling productive in providing care, feeling valued, feeling fulfilled and appreciated, feeling pleased and being a valued member in the workforce, and having enough time with patients. The provider indicated no change on the remaining measures.

Discussion

Patient-centered communication or patient-centered care has become the new standard of practice. This relationship-centered focus is “based on the concept that the patient’s viewpoint needs to be incorporated into all aspects of the healthcare experience” [13]. The findings of this pilot study indicate when the provider applied the BEPP model, patients’ perceived their provider improved in making them feel valued, being fully present, really listening, treating them as a whole person, understanding their concerns, maintaining eye contact, showing compassion, explaining information clearly, inviting them to participate in their care, and developing a plan of action with their doctor. The potential for sustainable patient behavior change is outside the scope of this study.

There is a direct relationship between a provider’s satisfaction level and their ability to build a rapport and express empathy with their patients [3]. Additionally, there is a direct correlation between provider satisfaction and patient satisfaction [9, 14]. The measures signifying

positive response changes in the provider experience of this study are reflective of the positive change in patient relational empathy experienced.

The Institute of Medicine (IOM) Report on Health Professions and Training has reported providers lack adequate training in providing high quality, patient-centered care [3]. Patient-centered care encompassing a Whole Health approach rests on the quality of communication in the patient-provider encounter. The study's participating provider acquired basic communication-skills training as part of his core curriculum and learning experiences while in medical school and residency training. After training in the BEPP model the provider was able to further develop and improve his communication skills resulting in the statistical significant results of pre- and post-intervention scores of new patients.

Strengths and limitations of the study

The participating provider of this study was a seasoned health practitioner who was communicative, personable and mindful while engaging with his patients. The patient inclusion criteria therefore included new patients only to eliminate potential bias from patients with established relationships with the provider.

Threats to internal validity using a one-group pretest-posttest research design without a control group can include potentially confounding extraneous variables. Extraneous events could occur to confound the effects of the intervention in study participants such as provider time constraints that impede how much they engage with their patient or the level of attention given by the provider to learn the curriculum as required during training. The provider or patient may experience a change throughout the study's duration within themselves that effects their complete participation such as inattention due to life events. Testing can result in a learning effect that influences the responses of study participants when they take the survey a second time.

There was a potential for bias in the selection process as the study participants were not drawn from a random sample of the general population. A purposive sample of potential participating practice sites were selected based on practice specialty to satisfying the duration and design of the study. Patients who frequent their provider more regularly due to management of a chronic health condition or emergent acute condition, as opposed to an annual health check-up with a general practitioner, would permit a reasonable time frame to conduct the pretest-posttest study.

The small sample size of patient participants drawn from the endocrinology practice is not representative of the general population. Further, data obtained from a single provider participant was not large enough to conduct a statistical analysis where results may be generalizable across provider types or areas of specialty as a whole or within the practice of endocrinology.

Conclusion

The research has demonstrated the patient's perception of relational empathy in the patient-provider relationship increases through improved provider communication skills in applying the BEPP model. Utilization of findings is applicable to how the patient-provider relationship may be supported. This can be useful in enhancing educational programs or specialized training to improve patient-provider communication.

Delivering effective patient-centered care is contingent on curricula enhancing provider communication-skills training. Future research is warranted to evaluate the effect of BEPP on disease outcomes in patients with chronic diseases and its impact on providers and healthcare organizations. Examining the impact of patient-provider communication for sustainable self-management intervention programs on health-related quality of life, patient outcomes, and cost-effectiveness can provide information to guide healthcare management and health policy initiatives as the rise in chronic illnesses and population health needs converge in an ever dynamic, patient-centered healthcare industry.

International and Managerial Implications

BEPP supports industry and policy initiatives call for a transformation of our healthcare system to address escalating behavioral-related diseases in a patient-centered environment through whole person health education and self-directed care. Utilization of findings is applicable to how the patient-provider relationship may be supported to improve patient-provider communications for reduction in the prevalence of behavior-related diseases. This can be useful in enhancing medical education programs or specialized training. Implications include: increased patient-provider satisfaction, improved patient compliance and outcomes, sustainable patient behavior change, increased patient safety and reduction in medical errors, improved patient perception of quality of care, transformation in cultural environment of health organization, improved workplace relationship satisfaction, reduction in costs of care and staff turnover, ability to overcome communication barriers in the healthcare environment, increased efficiency and financial viability of institution, and increased reimbursements in value-based care, pay for performance environment.

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