

Perceived Helpfulness of Physicians' Communication Behavior and Breast Cancer Patients' Level of Trust Over Time

Neeraj K. Arora, PhD¹ and David H. Gustafson, PhD²

¹Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, MD, USA; ²Center for Health Enhancement Systems Studies, University of Wisconsin, Madison, WI, USA.

OBJECTIVE: We evaluated the association between physicians' communication behavior and breast cancer patients' trust in their physicians.

DESIGN: Longitudinal survey conducted at baseline, 2-month, and 5-month follow-up during first year of diagnosis.

PARTICIPANTS: Newly diagnosed breast cancer patients (N=246).

MEASUREMENTS: We collected data on patient perceptions of the helpfulness of informational, emotional, and decision-making support provided by physicians and patients' trust. Linear regression models evaluated the association of concurrent and prior levels of physician support with patients' trust.

RESULTS: At baseline, patients who received helpful informational, emotional, and decision-making support from physicians reported greater trust ($p < 0.05$, $p < 0.001$, and $p < 0.01$, respectively). At the 2-month assessment, baseline informational support and informational and emotional support at 2-months were associated with greater trust ($p < 0.05$, $p < 0.01$, and $p < 0.05$, respectively). At the 5-month assessment, only helpful emotional support from physicians at 5 months was associated with greater trust ($p < 0.01$). Interestingly, while perceived helpfulness of all three types of physician support decreased significantly over time, patient trust remained high and unchanged.

CONCLUSIONS: Findings suggest that while informational and decision-making support may be more important to patient trust early in the course of treatment, emotional support from physicians may be important to maintain trust throughout the initial year of diagnosis.

KEY WORDS: breast cancer; trust; patient-physician communication; longitudinal analysis.

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Trust in physicians assumes great significance in the context of illnesses like cancer that are characterized by increased patient vulnerability and uncertainty.¹ Newly diagnosed cancer patients require support to understand complex medical information, cope with their diagnosis, and make difficult treatment decisions. The extent to which patients receive helpful informational, emotional, and decision-making support from physicians is thus likely to impact their trust perceptions.

Existing studies have shown physicians' communication behavior to be significantly associated with patient trust.²⁻⁶ Studies focusing on cancer, however, are limited.³ Moreover, virtually all studies are cross-sectional, presenting only a snapshot of the relationship between physician behavior and patient trust. Using longitudinal data during the first year of diagnosis, we examined the association between receipt of helpful informational, emotional, and decision-making support from physicians and ratings of trust among women newly diagnosed with breast cancer.

METHODS

Study Design

We conducted secondary analyses of survey data from a randomized trial of the Comprehensive Health Enhancement Support System (CHESS), a computer-based system designed to assist individuals facing a health crisis. Data collection was completed by January 1998. Details about the trial have been published elsewhere.⁷ We analyzed data from all 246 women who completed the trial (121 received CHESS, 125 were controls). Participants provided data at baseline prior to the trial and at 2-month and 5-month follow-up assessments.

Measures

Trust in physicians. We assessed women's trust in physicians using a single item asking them to rate the "confidence they had in their doctor(s)" during the past 7 days on a five-point scale ranging from not at all to very much. This item is part of the Functional Assessment of Cancer Therapy survey.^{8,9} Scores were linearly transformed to a 0-100 scale.

Physicians' Supportive Behavior. We assessed patient perceptions of the helpfulness of informational, emotional, and decision-making support received from physicians at each time point. For each type of support, we asked two questions:

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(1) did the patient receive support in the past 2 months from her physicians? and (2) how helpful was the support that she received (not at all, a little bit, somewhat, quite a bit, or very much)?

We created a measure of perceived helpfulness of support by combining the responses from these questions into a single dichotomous indicator. As described elsewhere,¹⁰ a score of 1 was given to women who received support from physicians and rated its helpfulness to be quite a bit or very much (this was the “received very helpful support” group), and a score of 0 was given to the rest of the sample, i.e., women who either did not receive support from physicians or they received support but rated it not at all, only a little, or somewhat helpful (this was the “not received/received, but not very helpful support” group).

Analyses

Linear regression models estimated the association between helpful informational, emotional, and decision-making support from physicians and patient trust. The baseline model controlled for patients’ age, race, income, education, living status, insurance status, days since diagnosis, cancer stage, type of surgery before baseline, and receipt of adjuvant therapy before baseline.

The 2-month model evaluated the association of both concurrent (2-month) and prior (baseline) physician support with patients’ trust at 2-month follow-up. Besides the covariates in the baseline model, we controlled for baseline trust and receipt of any treatment between baseline and 2-month follow-up. We also controlled for potential impact of the CHES intervention by including an indicator of group assignment (CHES v/s control) as a covariate.

Similarly, the 5-month model evaluated the association of concurrent (5-month) and prior (2-month) physician support with patients’ trust at 5-month follow-up. Besides the covariates in the baseline model, this model also controlled for 2-month follow-up trust, receipt of any treatment between 2-month and 5-month assessments, and group assignment.

In all models, variables were entered hierarchically with covariates entered in the first block followed by physician support variables in the second block. To avoid over-fitting the models and to reduce type I error, we used the forward stepwise regression procedure in each block to identify the most parsimonious set of predictors for each model. Change over time in receipt of helpful physician support was evaluated by the non-parametric Cochran’s Q test. Change in patients’ trust was evaluated by a univariate repeated measures ANOVA with time as the main predictor.

RESULTS

Patient Characteristics

Table 1 describes the study sample. All women were ≤ 60 years old and had been diagnosed, on average, about 2 months prior to the baseline assessment.

Patient Trust and Physician Support Scores

As shown in Table 1, patients had relatively high levels of trust in their physicians; trust scores did not change over time ($P >$

Table 1. Sample Characteristics and Score Distribution (N=246)

Sociodemographics	
Age in years: Mean (SD), range	44.4 (6.8), 26–60
Race: % White	74.0
Income (annual): % \$40,000 or more	54.4
Education: % Bachelor’s degree	42.9
Living status: % Living with an adult	81.6
Insurance status: % Private insurance	85.3
Clinical characteristics	
Days since diagnosis at baseline: Mean (SD), range	51.2 (34.6), 4–184
Stage: % Early (0, I, or II)	80.4
% Surgery prior to baseline	83.7
% Mastectomy; % lumpectomy	46.3; 37.4
% Adjuvant therapy prior to baseline	29.3
% Chemotherapy; % radiation	22.8; 7.3
% Received treatment during the study	78.0
Trust in physician (P=0.09)*	
Baseline: Mean (SD)	83.6 (23.1)
2-Month follow-up: Mean (SD)	80.1 (24.6)
5-Month follow-up: Mean (SD)	80.9 (24.8)
Informational support from physician (P<0.001)	
Baseline: % Very helpful	80.5
2-Month follow-up: % Very helpful	63.0
5-Month follow-up: % very helpful	47.2
Emotional support from physician (P<0.001)	
Baseline: % Very helpful	62.3
2-Month follow-up: % Very helpful	42.7
5-Month follow-up: % Very helpful	36.6
Decision-making support from physician (P<0.001)	
Baseline: % Very helpful	72.9
2-Month follow-up: % Very helpful	53.4
5 Month follow-up: % Very helpful	39.0

*Trust scores were linearly transformed to a 0–100 scale

0.05). At baseline, a majority of women reported receiving helpful informational (81%), emotional (62%), and decision-making (73%) support from physicians. However, these figures decreased over time for all types of support ($P < 0.001$).

Correlates of Patient Trust

As shown in Table 2, at baseline, receipt of helpful informational, emotional, and decision-making support from physicians were all significantly associated with patients’ trust. At the 2-month follow-up, helpful informational and emotional support from physicians in the 2 months between baseline and 2-month follow-up were significant along with helpful informational support at baseline. At the 5-month follow-up, only helpful emotional support from physicians in the 2 months prior to the 5-month follow-up assessment was significantly associated with patients’ trust. As per Cohen’s effect size definitions,¹¹ effect sizes for the association between physician support and patient trust ranged from 0.26 (slightly more than a small effect) to 0.49 (almost a medium effect).

DISCUSSION

In the period closer to diagnosis, informational, emotional, and decision-making support from physicians were all significantly associated with patient trust. However, 2 months later, decision-making support was not associated with trust. By the time of the 2-month assessment most women had completed surgery. Perhaps physician support for subsequent decisions such as receipt of adjuvant therapy, while important, may not have been

Table 2. Linear Regression Model Estimates Showing Association Between Perceived Helpfulness of Support Received from Physicians and Patients' Trust at Baseline, 2-month, and 5-month Follow-up*

	B	SE	95% CI	P-value	Effect Size [†]
Trust in Physicians at baseline [‡] (model R ² =0.32, P<0.001)					
1. Stage of cancer (0=early, 1=late)	-14.98	3.97	-22.81, -7.15	<0.001	0.65
2. Race (0=non-white, 1=white)	8.66	3.44	1.89, 15.43	0.01	0.37
3. Informational support at baseline	8.18	3.83	0.62, 15.73	0.03	0.35
4. Emotional support at baseline	11.42	3.15	5.22, 17.62	<0.001	0.49
5. Decision-making support at baseline	9.97	3.44	3.19, 16.76	<0.01	0.43
Trust in Physicians at 2-month follow-up [§] (model R ² =0.38, P<0.001)					
1. Trust in physicians at baseline	0.59	0.06	0.47, 0.71	<0.001	0.59
2. Information support at baseline	8.08	3.62	0.96, 15.21	0.03	0.33
3. Information support at 2-month	8.41	3.07	2.37, 14.45	0.01	0.34
4. Emotional support at 2-month	6.44	3.05	0.43, 12.46	0.04	0.26
Trust in Physicians at 5-month follow-up (Model R ² =0.39, P<0.001)					
1. Trust in physicians at 2-month	0.56	0.06	0.45, 0.67	<0.001	0.56
2. Race (0=non-white, 1=white)	8.08	3.08	2.01, 14.16	0.01	0.33
3. Emotional support at 5-month	8.71	2.81	3.17, 14.25	<0.01	0.35

*Estimates are shown for only those predictor variables that were significant at P<0.05

[†]Effect sizes for dichotomous predictor variables were calculated by dividing the regression coefficient (B) by the standard deviation of the dependent variable. For the continuous predictor variables of trust at baseline and 2-months, the regression coefficients are indicators of the effect size. As per Cohen's definitions, a small effect is 0.2, medium effect is 0.5, and a large effect is 0.8.

[‡]Baseline model controlled for patients' age, race, income, education, living status, and insurance status, days since diagnosis, stage of cancer, type of surgery before baseline, and receipt of adjuvant therapy before baseline; main predictors were physician support scores at baseline

[§]In addition to covariates in the baseline model, the 2-month follow-up model also controlled for baseline trust score, receipt of treatment in the period between baseline and 2 month assessment, and intervention assignment (CHESS v/s Control); main predictors were baseline and 2-month physician support scores

^{||}In addition to covariates in the baseline model, the 5-month follow-up model also controlled for 2-month trust score, receipt of treatment in the period between 2-month and 5-month assessment, and intervention assignment CHESS v/s Control; main predictors were 2-month and 5-month physician support scores

as critical to patients' trust perceptions as the initial "big" surgery decision.

While informational support continued to be associated with trust at 2-month follow-up, it was not significant at the 5-month assessment. Given that cancer patients/survivors report a number of information needs months and even years after diagnosis,¹² this lack of association at 5-months needs further exploration.

Emotional support from physicians was most consistently associated with patient trust. Addressing patient emotions, however, remains an infrequently conducted task in oncology.¹³ Our findings underscore the need for skills training of health professionals and perhaps patients as well to ensure patients' emotional needs are adequately addressed.

Interestingly, while perceived helpfulness of all types of physician support decreased over time, trust remained high and unchanged. We offer several potential explanations. First, it is possible that in the period closer to diagnosis when patients are the most vulnerable, receipt of any support from physicians is considered helpful and results in high trust. Over time, once past the initial crisis, patients might make more nuanced assessments of the helpfulness of support they receive from physicians. Perceptions of trust once formed, however, might remain invariant to such changes in perceived support. Second, it is possible that patients themselves may not expect as high levels of support from their physicians over time as they expected in the period closer to their diagnosis. Thus, decrease in support over time may not impact their trust ratings. Third, given that we lack information on responsiveness to change of our trust item, it is possible that the item could not detect actual changes in trust resulting from declining physician support. Future studies need to evaluate the reasons for these differential patterns of change in trust and support.

We note two major study limitations: (1) Our data were collected a decade ago; to what extent our findings may change in the current environment of increased consumerism needs examination. Our findings were, however, confirmed in a recent study that demonstrated an association between informational and emotional support from physicians and patient trust.¹⁴ (2) We were limited to assessing trust using a single item that was included in the original dataset of the CHESS trial. This item had good face validity as it assessed patients' confidence in their physician, a core element of several definitions of trust;¹⁵⁻¹⁷ however, it has not been validated against existing multi-item trust scales. We do note that the score distribution of our item was similar to that reported for other trust scales,^{18,19} and the ceiling effect was less than that reported in another study that used a similar single item to assess patient trust.⁴ We acknowledge the need to replicate our findings with more comprehensive assessments of patient trust.

Despite potential limitations, we know of no other longitudinal study that has examined the association between physicians' behavior and patient trust. Our findings suggest that the role of physician support in building and maintaining trust may change over time, with emotional support likely to be the most consistent long-term determinant of trust. Our study provides important insights for future longitudinal research needed to disentangle this relatively complex yet critical driver of quality of care.

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Corresponding Author: Neeraj K. Arora, PhD; Division of Cancer Control and Population Sciences, National Cancer Institute, 6130 Executive Blvd, MSC 7344, Executive Plaza North #4005, Bethesda, MD 20892-7344, USA (e-mail: aroran@mail.nih.gov).

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