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Observing Pediatric Residents' Communication Skills During Sick Visits: Do They Determine Concern and Their Reasons for Concern and Are Caregivers Satisfied?

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ABSTRACT

Fifty years ago, Dr. Barbara Korsch published her seminal work on pediatric resident communication skills, demonstrating that residents did not always ascertain the caregivers' main concern for the visit was and specifically, why those caregivers were concerned.

Repeating her study using a direct observation methodology, the authors evaluated 103 pediatric sick visits at a large children's hospital primary care clinic to determine 1) if residents elicited the caregiver's main concern about their child's acute illness, 2) why they were concerned, and 3) whether asking these questions was statistically associated with caregiver satisfaction, which was determined by an exit survey.

Results of the study revealed that residents determined the caregivers' main concern in 84.5% of visits. However, residents established why the caregiver was concerned in only 38.6% of visits. Caregiver satisfaction with the visits was high, with 90.3% rating it "one of the best" or "very

"very good." Higher satisfaction was associated with the resident asking why the caregiver was concerned ($z = 2.76, p = .006$).

We conclude that pediatric residents often ask caregivers about their main concern, but less frequently elicit why caregivers are concerned. Not understanding caregivers' reasons for concerns about their children, biologically based or not, may be related to unnecessary ongoing anxiety about the illness as noted in Korsch's studies. Probing the root of caregiver concern may be important for their satisfaction and should highlight this important aspect of communication to those responsible for medical student and pediatric resident communication skills training.

BACKGROUND

Effective communication skills are an essential part of establishing a meaningful relationship between doctors and patients.¹⁻³ Failing to establish this relationship results in poor patient adherence to and trust in medical advice, increased malpractice claims, decreased patient satisfaction, and safety concerns.⁴ Whereas medical schools in North America have robust curricula addressing these skills, there is little evidence of an organized effort to teach these skills in residency programs despite the fact that one of the six major ACGME competencies is doctor-patient communication.⁵

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The authors can only speculate why there is a current gap in reinforcing communications skills training in residency; i.e., perhaps these skills are lower priority in an already packed curriculum, perhaps faculty engaging residents in patient care perceive as lacking expertise in this area, and learning these skills as an undergraduate education can be viewed as pre-requisites to residency training and reinforcing them in residency is redundant.

Studies have shown that residents do not always communicate well with patients/ caregivers despite having mastered the content around the patient visit.⁶ In her seminal studies in the 1960s, Korsch et al demonstrated that in 24% of 800 sick visits to a pediatric clinic, residents did not ascertain what concerned caregivers most about their child and why that issue concerned them⁷⁻⁹. She postulated that not obtaining this information from caregivers contributed to their ongoing anxiety. Thus, although the resident's diagnosis and treatment plan might have been correct and appropriate, not assessing the caregiver's worries represented a major deficiency in communication, perhaps leading to mistrust and/or non-adherence to medical advice. Our study represents the first to duplicate the methodology of Korsch to assess how effectively residents communicate with caregivers. The overall goal of our study was to directly observe resident communicating with caregivers during sick visits. Specific aims were to assess whether residents in a pediatric ambulatory setting inquired what the main concern of the caregivers was during a sick visit and why the caregiver was concerned. We also aimed to determine if there were statistically significant associations between ascertaining these concerns and caregiver satisfaction.

MATERIALS

Study Population and Data Collection From May-August 2015, we directly observed sick-child visits with pediatric residents at an urban, outpatient, primary care clinic serving children 0-12 years in a large children's hospital. The residents who conducted the visits consented to participate as did the caregivers of the sick children. All walk in visits by caregivers of sick children were eligible for inclusion and visits were selected as a convenience sample based on clinic flow; no visits were excluded unless the family or resident declined participation. Twenty-seven pediatric residents rotated through the clinic during the study period. Four research assistants (RAs)-rising second-year medical students-conducted observations and post-visit surveys with the caregivers. All RAs participated in the same standardized training, including practice cases of likely scenarios they would encounter when observing the residents. Whereas we did not conduct a formal inter-rater reliability study with the RAs during their training, we guided them through numerous iterations, with rich discussion when there were differences of opinion. We instructed the Ras to prospectively ask the residents' permission to observe them during the visits with no mention of the purpose of the study, which was couched as assessing the general communication skills during the interactions. Upon the caregivers registering their child in the clinic, the administration staff recorded the caregiver's chief complaint for the visit, available for residents to see before beginning the interaction. Prior to the visit, RAs asked the caregiver, "What is your main worry about your child today?" to allow them to determine if the resident elicited the primary concern during the observation. The RA then observed the visit and completed an observation matrix to describe the resident's communication with the caregiver (Table 1). The RAs were trained to record whether the resident

Behavior	Responses
Resident Introduced himself/herself by providing his/her name and position ('I am the resident doctor')	Yes / No
Asked what the parent's main concern about their child?	Yes / No
Resident asked questions to determine why the parent was concerned	Yes / No

Table 1: Resident communication observation matrix that research assistants completed while directly observing sick child visits

1) ascertained the caregiver's main concern about the child and 2) probed why the caregiver was concerned about their presenting complaint. The RAs were instructed to actively listen to the content of conversation and not base their assessments on only whether the resident used specific language, such as, "Why are you concerned?" In few instances where the RAs were uncertain of the caregiver response, the exact wording of the resident's inquiry was transcribed, and a final determination was made in discussion with the principal investigator (KS).

Following the clinic visit, the RA conducted an exit interview with the caregiver, which included the following question to assess satisfaction: "How satisfied were you with your visit with the doctor today?" The caregiver could respond: "one of the best," "very good," "neither good or bad," "very bad," or "one of the worst." Caregivers were not aware that the authors were assessing the possible relationship between residents asking the key questions of the study and caregiver satisfaction.

For visits conducted in languages other than English, phone translation was used by the resident and RAs. This study was approved by the Institutional Review Board of Children's National Health Systems, and all caregiver participants provided verbal informed consent and were provided an informational sheet describing the study, while resident physicians provided written consent.

RESULTS

Analysis

We assessed the proportion of visits where the residents asked the caregiver's main concern and the proportion where the residents asked both the main concern and why the caregiver was concerned. The distribution of the caregiver satisfaction responses was non-normal so to test the association of this outcome with whether the questions were asked, we used the nonparametric Wilcoxon rank-sum test, supplemented by descriptive statistics to explore the possible impact of multiple visits by the same resident. To determine whether year of resident training might be a confounding factor, we measured its association with whether the questions were asked using Fisher's exact test and with caregiver satisfaction using Spearman correlation coefficients. All analysis was conducted using SAS 9.4 (SAS Institute, Cary, North Carolina).

A total of 103 sick visits were observed and evaluated; 27 residents were recruited and participated during the study period and saw from 1-13 patients each (median=2; IQR=1-5). There were no participant declinations. Ten of the residents were in their first year of post graduate training, 10 in their second and 7 in their third. Approximately half (50.5%) of the visits were conducted by third-year residents and a quarter each by first-years (24.3%) and second-years (25.2%). Other characteristics of the visits are shown in Table 2.

Characteristic	n (%)
Total Visits	103 (100.0%)
Resident Year	
Year 1	25 (24.3%)
Year 2	26 (25.2%)
Year 3	52 (50.5%)
Caregiver relationship to patient	
Mother	65 (63.1%)
Father	11 (10.7%)
More than one caregiver	21 (20.4%)
Other	6 (5.8%)
Caregiver language	
English	96 (93.2%)
Spanish	5 (4.9%)
Other	2 (1.9%)
Interpreter Phone Used	
Yes	6 (5.8%)
No	97 (94.2%)

Table 2: Characteristics of sick-child visits

Overall, the residents ascertained the caregivers' main concerns in 84.5% of visits (87/103), and the proportion was similar regardless of the number of visits conducted by the resident (Table 3). By contrast, residents followed up to explore why the caregiver was concerned in only 38.6% (39/101, data missing for two visits). Furthermore, the likelihood of asking the follow-up question decreased markedly with the resident's number of visits, from 50% for those who saw only a single patient to 21.7% for those who conducted more than 10 visits. In terms of consistency, residents who conducted more than 2 visits usually asked the main concern question (85.7% of visits); however, they were not consistent in following up with why, with only 8.3% always asking the question and none consistently not asking the question (Table 4). Caregiver satisfaction with visits was high, with 90.3% (93/103) rating their visit as "one of the

best" or "very good" and 9.7% (10/103) rating it neutral or bad. Table 5 shows the distribution of caregiver responses by whether the two research questions were asked. Caregiver satisfaction was not affected by whether the resident asked the main concern ($z = -0.62$, $p = .53$) but was noticeably higher when the resident asked both the main concern and why the caregiver was concerned ($z = 2.76$, $p = .006$). For these visits, 97.5% were rated in the top two categories, and only a single visit was rated as "Neither good nor bad".

Year of resident training was not associated with whether the main concern was asked ($p = .18$), whether both questions were asked ($p = .14$), nor with caregiver satisfaction ($r_s = .17$, $p = .09$).

DISCUSSION

It has been more than 50 years since Korsch's seminal studies identified communication disparities in the resident-patient relationship. Korsch used audio recordings, interviews and chart reviews in observing and assessing 800 consecutive outpatient visits to pediatric residents in an acute care clinic. She found that the length of the visit and severity of the diagnosis were not related to caregiver satisfaction. One of the major foci of her study was to assess how resident communicate and its relationship to patient adherence to medical advice. The variables in her study related to caregiver satisfaction included determining the caregiver's perceptions of their child's illness and anxieties about that illness. This was the inspiration for the current study.

As to determining the methodology of the study, based on Kirkpatrick's and Miller's work that identified observation as the highest level of evaluation^{10,11} the authors chose to directly observe the resident-caregiver interactions instead of audio-recording as was done in the previous study. Comparing the two studies, residents identified what most concerned the caregiver 85% of the time as opposed to 74% in the Korsch study. However,

Resident Group	Resident	Visit	Asked Main	Visit	Asked Main Concern
	s	s	Concern Only	s	and Why
	n	n	n (%)	n ^a	n (%)
All Residents	27	103	87 (84.5)	101	39 (38.6)
Residents with 1 visit	27	11	8 (72.7)	10	5 (50.0)
Residents with > 1 visit	16	92	79 (85.9)	92	34 (37.0)
Residents with > 2 visits	12	84	72 (85.7)	83	29 (34.9)
Residents with > 10 visit	4	47	37 (78.7)	46	10 (21.7)

^aData missing for 2 visits about whether resident asked why.

Table 3: Resident behavior by number of visits per resident

Resident Group	Proportion of Residents				
	Never Asked	Rarely Asked ^a	Sometimes Asked ^a	Usually Asked ^a	Always Asked
	%	%	%	%	%
All Residents	25.9	18.5	18.5	7.4	29.6
Residents with 1 visit	50.0	0.0	0.0	0.0	50.0
Residents with > 1 visit	6.3	31.3	31.3	12.5	18.8
Residents with > 2 visits	0.0	41.7	33.3	16.7	8.3
Residents with > 10 visit	0.0	75.0	25.0	0.0	0.0

^aRarely defined as 1% - 20% of visits, (actual 9% - 20%). Sometimes defined as 21% - 79%, (actual 33% - 66%). Usually defined as 80% - 99%, (actual 80% - 92%).

Table 4: Resident consistency in asking both main concern and why

only 39% of the trainees in our study asked why the caregiver was concerned, thereby potentially missing key information about the caregiver's underlying concern about their child's illness. Not asking the 'why' question promotes assumptions and biases that often are not in concert with caregivers' concerns, a concept couched in transformational learning theory.¹²

In our study population, caregivers who were asked why they were concerned expressed higher satisfaction with the visit. Because in our methodology we did not randomly assign participants to intervention and control groups, this association may have been impacted by other

factors. However, if probing further into the reasons for the main concern does indeed improve caregiver satisfaction, teaching residents to incorporate this question into their communication skillset could represent away to increase family satisfaction. Probing main concerns allows the physician to better understand the caretakers' belief systems, biologically based or not, and this kind of patient-centered communication can lead to more effective interactions between health care professional and patient/family¹³ (See Appendix 1). While this study was conducted in a pediatric ambulatory setting, it is possible that use of these basic communication skills may be applicable to

trainees and attending physicians caring for patients and families in a variety of settings and disciplines, such as clinic settings in other disciplines, pre-operative areas where anesthesiologists communicate with patients prior to surgery and emergency departments. This study was limited by several factors. It was a convenience sample of small size collected at a single site and the visits were observed based on the flow of walk-in patients. Some residents were observed more often than others due to each resident's patient volume, assignment to the acute care clinic, and research assistant availability. Since there were multiple visits for some residents, our observations were not theoretically independent; however, residents who conducted multiple visits were not very consistent in whether they asked the why question, so any effect of correlations was likely small. While our data does not allow us to analyze the reasons behind these inconsistencies, this would be an interesting area for future study. It is possible that time constraints, the type of chief complaint, or other family or resident factors impact the consistency of probing further into caregiver concerns. Based on the small sample size of the resident group, the authors were unable to adjust for resident level of training; however, in bivariate analysis, level of training was not statistically associated with whether the questions were asked, nor with caregiver satisfaction. Additionally, we did not collect identifying information including the severity of the patient's medical condition and other factors that could affect caregiver satisfaction. Parenthetically, these factors did not impact caregiver satisfaction in Korsch's study. Because each visit was evaluated by only one of four observers, our results may be affected by variability between observers. In a small number of observations, yes/no determinations were unable to be concretely concluded and were left to the discretion of the principal investigator in concert with RAs. In these cases, RAs discussed the specific language used with the principal

investigator and a determination of score was made. However, there still could have been variability in the RAs' ratings.

The residents were aware that they were being observed, and this may have altered their behavior; i.e., the Hawthorne effect; however, they did not know the focus of the study. There was also the possibility, although unlikely, that residents have had varying exposure to Korsch's work during residency and/or medical school education and we did not seek this information. Finally, caregiver satisfaction was obtained via interview. This method may have led to over reporting of satisfaction from caregivers, despite reassurances of anonymity and the assurances that there would be no retribution for any constructive comments about the visit.

Areas for future studies could include: 1) further observation of communication between residents and caregivers, assessing other barriers to effective communication; 2) study of length of stay, acuity of illness and return visits and their correlation to addressing the caregiver's primary concern and why; 3) conducting a randomized controlled study to assess the impact of Korsch's work compared to a control group, and 4) expanding settings, such as comparing primary care clinic vs emergency department or comparing different specialties (internal medicine and pediatric residents) to determine communication differences.

CONCLUSION

Our observational study revealed improved resident communication skills in determining what caregivers were most concerned about with their ill child as compared with the residents reported in Korsch's studies more than 50 years ago. However, in more than 60% of interactions, the residents did not probe why the caregiver was concerned, perhaps meriting the need for more focused communication skill training in the resident curricula.

REFERENCES

1. Makoul G. MSJAMA. Communication skills education in medical school and beyond. *JAMA*. 2003;289(1):93.
2. Levinson W, Lesser CS, Epstein RM. Developing physician communication skills for patient-centered care. *Health Aff Proj Hope*. 2010;29(7):1310-1318. doi:10.1377/hlthaff.2009.0450
3. Beck RS, Daughtridge R, Sloane PD. Physician-patient communication in the primary care office: a systematic review. *J Am Board Fam Pract*. 2002;15(1):25-38.
4. Mauksch LB, Dugdale DC, Dodson S, Epstein R. Relationship, communication, and efficiency in the medical encounter: creating a clinical model from a literature review. *Arch Intern Med*. 2008;168(13):1387-1395. doi:10.1001/archinte.168.13.1387
5. Blatt B, Spinazzi N, Greenberg L. Communication skills training for resident physicians: A physician-educator's perspective. In: Hamilton HE, Chou WS, eds. *The Routledge Handbook of Language and Health Communication*. Routledge handbooks in applied linguistics. London; New York: Routledge, Taylor & Francis Group; 2014:294-326.
6. Levetown M, American Academy of Pediatrics Committee on Bioethics. Communicating with children and families: from everyday interactions to skill in conveying distressing information. *Pediatrics*. 2008;121(5): e1441-1460. doi:10.1542/peds.2008-0565
7. Korsch BM, Negrete VF. Doctor-patient communication. *Sci Am*. 1972;227(2):66-74.
8. Korsch BM, Gozzi EK, Francis V. Gaps in doctor-patient communication. 1. Doctor patient interaction and patient satisfaction. *Pediatrics*. 1968;42(5):855-871.
9. Francis V, Korsch BM, Morris MJ. Gaps in doctor-patient communication. Patients' response to medical advice. *N Engl J Med*. 1969;280(10):535-540. doi:10.1056/NEJM196903062801004
10. Yardley S, Dornan T. Kirkpatrick's levels and education "evidence." *Med Educ*. 2012;46(1):97-106. doi:10.1111/j.1365-2923.2011.04076.x
11. Miller GE. The assessment of clinical skills/competence/performance. *Acad Med J Assoc Am Med Coll*. 1990;65(9 Suppl): S63-67.
12. Mezirow J. *Transformative Dimensions of Adult Learning*. San Francisco: Jossey-Bass; 1991.
13. Epstein RM, Mauksch L, Carroll J, Jaén CR. Have you really addressed your patient's concerns? *Fam Pract Manag*. 2008;15 (3):35-40.

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APPENDIX

The authors present two case studies in the Appendix to illustrate application and importance of Korsch's findings.

Case 1: An 11-year old female and her mother presented to the acute care clinic with the chief complaint of 'a tender lump in one breast'. One of the authors, realizing before seeing the patient that this was likely the onset of adolescent thelarche, interviewed and examined the patient. The patient had a firm and tender mass under the areola of one breast with slight asymmetric breast enlargement. He asked the mother what her main concern was, and she replied initially that she 'just wanted to have this checked out.' With further inquiry, asking her what she thought could be the cause and what she was most worried about, she stated 'cancer'.

The author assured mother and child that this was not cancer and explained why. This illustrates the importance of why addressing the main concern was critical to discuss with the dyad; it would not have been enough to say that this was the onset of puberty. Not discussing cancer, the mother's main concern, could have resulted in lingering anxiety.

Case 2: A 9-month-old male presents with his mother to the acute care clinic with fever and fussiness for 3 days. The physical examination reveals a bulging tympanic membrane of the left ear, leading to the diagnosis of acute suppurative otitis media. The resident discusses the diagnosis and then probes what most worried the mother and prompted her to come to clinic. She replied that she was worried about the fever. Further probing revealed that she had missed 3 days of work at a new job because the child's daycare would not allow him to return with fevers and worried, she may receive disciplinary action. Knowing this, the resident discussed the likely course of the illness and expected duration of fever after starting antibiotics and provided a doctor's note. In the case of ear pain, caregivers may be concerned that an ear infection could prompt potential hearing loss, sleeplessness, and/or unmanageable pain for his/her child. They may also be concerned about their fussiness in reaction to the pain could disrupt the routines of other household members or the possibility of missed work, school or daycare and job retention. Establishing the root of the main concern can help physicians identify family distress, provide education, and address social determinants of health.