



Published in final edited form as:

J Adolesc Health. 2009 January ; 44(1): 48–54. doi:10.1016/j.jadohealth.2008.06.018.

Discussion of sensitive health topics with youth during primary care visits: Relationship with youth perceptions of care

Jonathan D. Brown, PhD, MHS and Lawrence S. Wissow, MD, MPH

Abstract

Purpose—Youth have concerns about sensitive health topics, such as drugs, sex, and mental health, and many wish to discuss those concerns with a primary care provider. Research has not determined whether the discussion of sensitive health topics during primary care visits is independently associated with youth perceptions of care. This study examined whether the discussion of sensitive health topics during primary care visits was associated with youth perceptions of the provider and feeling of participation in treatment.

Methods—Directly following visits to 54 primary care providers in 13 geographically diverse offices and clinics, youth age 11 to 16 years old (N = 358) reported whether the visit included the discussion of mood, behavior, getting along with others, drugs, tobacco, alcohol, sexuality, birth control, parent mood, or family problems. Youth also reported whether the provider understood their problems, eased their worries, allowed them to make decisions about treatment, gave them some control over treatment, and asked them to take some responsibility for treatment. Providers reported confidence in their ability to offer counseling for non-medical concerns and their beliefs and attitudes toward treating non-medical concerns.

Results—Youth had more positive perceptions of the provider and were more likely to report taking an active role in treatment when the visit included the discussion of sensitive health topics. Results from multivariate random effects logistic regression suggested that youth were more likely to report that the provider understood their problems (OR 3.62, CI 1.57–8.31), eased their worries (OR 2.13, CI 1.06–3.92), allowed them to make decisions about treatment (OR 2.71, CI 1.44–5.10), gave them some control over treatment (OR 2.51, CI 1.32–4.72), and asked them to take some responsibility for treatment (OR 2.00, CI 1.04–3.86) when the visit included the discussion of one or more sensitive health topics. The odds of each of these outcomes were also higher when the visit included the discussion of a greater number of sensitive topics. Youth also had more positive perceptions of female providers. Youth demographics, mental health status, and other provider characteristics were unrelated to youth perceptions of care.

Conclusions—The discussion of sensitive health topics during primary care visits may have a positive impact on youth perceptions of care. Future research is needed to understand the relationship between the discussion of sensitive health topics and health outcomes among youth.

Corresponding author and requests for reprints: Jonathan D. Brown, PhD, MHS, Researcher, Mathematica Policy Research, Inc., 600 Maryland Ave., Suite 550, Washington, DC 20024, Phone: 202-264-3446, Fax: 202-863-1763, E-mail: jbrown@mathematica-mpr.com. Second author: Lawrence S. Wissow, MD, MPH, Professor, Department of Health, Behavior, and Society, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, 624 N. Broadway, Room 794, Baltimore, MD 21205, Phone 410-614-1243, Fax 410-955-7241, E-mail: lwissow@jhsph.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Introduction

Youth often have concerns about sensitive health topics, such as drugs, sex, or mental health, and many wish to discuss such concerns with a primary care provider (PCP)[1–2]. Few youth, however, receive counseling or screening for sensitive health concerns [3–4]. Results from the Young Adult Health Care Survey, which was administered to over 4,000 youth enrolled in six public and private health insurance plans, suggested that only 36% received screening and counseling on sexual activity and sexually transmitted diseases (STDs) during the past year and 23% received screening and counseling for emotional health or relationship issues [5].

Conceptual models of physician-patient communication suggest that the failure of physicians to address patients' health concerns has a negative impact on patient satisfaction and the development of partnership between the patient and physician [6]. A range of physician and patient characteristics are believed to influence the content of their communication and the ability of physicians' to meet patient expectations. Characteristics of the physician that influence communication include demographics, training [7], confidence in treatment skills [8], and attitudes toward treating health problems [9]. Characteristics of the patient that influence communication include demographics, health status, experience with health services, familiarity with the physician [6], and confidence that the physician is a confidential source of care [10–11].

Limited research has applied conceptual models of physician-patient communication to encounters between physicians and youth [12]. The investigations of physician communication with youth suggest that physicians obtain medical information from youth [13–14] but frequently fail to discuss the management of health concerns directly with youth [15] and rarely allow youth to direct the visit [12,14]. Few studies have investigated physician-youth communication about sensitive topics. One retrospective survey found that youth who received screening or counseling for potentially sensitive health concerns were more likely to perceive that a provider listened carefully [5]. Another study investigated characteristics of physician communication with women age 15–21 years who were at risk for STDs and human immunodeficiency virus (HIV) in community health and family planning clinics [16]. These young women had generally positive perceptions of communication with the provider and most felt in control of visits that were for reproductive health. These studies, however, have not examined whether the discussion of sensitive topics in primary care is independently associated with youth perceptions of the PCP and participation in treatment, which are important determinants of the intention to keep appointments [17] and symptom improvement [18–19] among youth. Understanding the relationship between the discussion of sensitive topics and youth perceptions of primary care is particularly important since PCPs serve as a gateway to other services [20].

The purpose of this study was to examine whether the discussion of sensitive topics during primary care visits was associated with youth perceptions of the PCP and participation in treatment. These sensitive topics included behaviors, mood, getting along with others, family problems, parent mood, drugs, alcohol, sexuality, and birth control. This research also examined whether characteristics of the PCP and youth were related to youth perceptions of care. Based on conceptual models [5] and previous research [1–2] we hypothesized that youth would have more positive perceptions of care when the visit included communication about sensitive topics.

Methods

This is a cross-sectional analysis of data collected to evaluate a cluster-randomized trial of a training to improve the ability of PCPs to communicate about issues related to mental health

[21]. Half of the PCPs were randomized to receive three didactic training sessions, followed by self-study and practice with simulated patients. Controls received a training manual and unstructured feedback on standardized patient interviews. Patients were unaware of whether the PCP received the training.

Sites were chosen to represent the specialties, payers, and practices that provide pediatric primary care in the United States and relate to geographic variation in youth mental health problems [22–23]. Sixteen sites were chosen and 13 participated.

Rural sites in upstate New York (n=7) included a solo pediatric practice, a hospital-based pediatric practice, four multi-specialty offices, and a small-town practice. Baltimore sites (n=4) included two community clinics, a group private practice, and a hospital-based family practice. Two Washington, DC sites included a private practice and a multi-service center that primarily served Latino families. None had collaborative arrangements with psychiatrists or psychologists, and all served populations (infant to 18 years) with a mix of insurance.

Eighty-three percent (N=54) of PCPs participated; 40.7% were male, 35.1% family practitioners, 64.8% pediatricians, 81.4% medical doctors, 16.6% nurse practitioners, and 1.8% physician assistants. Eighty-eight percent were Caucasian, 9.4% African American, and 1.8% “Other.” PCP gender was unrelated to specialty or age (results not shown). The number of participating PCPs from each site ranged from 1 to 13. PCPs in 9 sites were predominately female. Sixty-two percent (n=221) of visits included in these analyses were with female PCPs.

Population

Recruitment of families within the same region took place from December 2002 to August 2005. Interviewers approached all families in the waiting area. Families were eligible if the child scheduled for the visit was 5–16 years old, visiting a participating PCP, and reported pain of 4 or less on a scale of 1–10 (1=no pain). One child was randomly selected if more than one per family was eligible. The parent/caregiver (hereafter parent) and youth (age 11–16) provided written consent; youth age 5–10 provided assent. Parents were compensated \$15. The Johns Hopkins Bloomberg School of Public Health Committee on Human Research and the ethics boards of each clinic approved the procedures. Youth completed questionnaires in the waiting area following the visit. Spanish instrumentation was used when appropriate.

Of 871 families recruited, 4.9% refused or were ineligible. Of the remaining 828 families, 43.2% of youth (N=358) were age 11–16 years (M=13.4) and had complete data for inclusion in the analyses. Children younger than age 11 did not self-report and were excluded from these analyses.

Prior to the visit, parents (94.0% mothers) reported the reason for the visit, number of previous visits to the PCP, and youth demographics. Fifty-two percent of visits were for well-child appointments, 31.0% acute medical, 10.6% medical follow-up, and 5.8% mental health. Fifty-eight percent were non-Latino Caucasian, 30.4% non-Latino African American, 8.1% Latino “Other” race, and 3.6% non-Latino “Other” race. Latino “Other” and non-Latino “Other” youth were combined because the non-Latino “Other” sample was too small for valid inferences. Fifty-five percent had private insurance; the remaining had Medicaid or no insurance. Ten percent were visiting the PCP for the first time, 36.0% had 1–5 previous visits, 16.2% 6–10 visits, 17.2% 11–20 visits, and 20.1% more than 20 visits.

Measures

We examined five outcomes collected directly following the visit. Youth answered two questions to report their perceptions of the PCP. These questions were (1) “Overall, do you feel that during today’s visit your doctor/nurse practitioner understood the problem you wanted

to discuss at this visit?"; and (2) "Overall, do you feel that during today's visit your doctor/nurse practitioner helped ease your mind in terms of your worries?" Response options ranged from 1 (strongly disagree) to 5 (strongly agree). These questions were derived from a previous investigation of patient attitudes toward primary care [24] and were believed to reflect youth perceptions of care directly associated with communication with the PCP. Youth answered 3 additional questions that were intended to reflect "mutuality" [25] in physician-patient communication, which is characterized by partnership between the physician and patient and the active participation of the patient in treatment. These questions were (1) "If there were choices to make about any treatments that may have been discussed today, how often do you think this doctor would ask you to help make the decisions?"; (2) "How often does this doctor give you some control over your treatment?"; and (3) "How often does this doctor ask you to take some of the responsibility for your treatment?" Response options ranged from 1 (never) to 5 (very often). These questions have been used to assess physician-patient communication in previous primary care research [26]. Items were not constructed to form a scale.

Independent and control variables were selected based on conceptual models of physician-patient communication [5,25], and a review of factors that influence patient satisfaction [27].

The discussion of sensitive topics during the visit was the independent variable. Directly following the visit, youth completed 7 items to report whether the visit included the discussion of: (1) getting into trouble for behavior; (2) mood; (3) getting along with other people; (4) parent mood or feelings; (5) family stresses or problems; (6) sexuality or birth control; and (7) drugs, tobacco, or alcohol. Each item required a "Yes" or "No" response.

Youth reported whether they were alone with the PCP during the discussion of these topics and whether they would have liked to have more time alone with the PCP.

Youth self-reported mental health symptoms using the 33-item Strengths and Difficulties Questionnaire (SDQ), which has been used as a mental health-screening tool in clinical and community settings [28]. Symptoms are summed (range 0–40), with scores of 16 or higher identifying youth in the "high difficulties" range of the U.S. normative population or the 9% with the most difficulties [29].

PCPs completed the following measures two weeks prior to their randomization to participate in the training and six weeks prior to the recruitment of youth.

PCP beliefs and attitudes about treating "psychosocial" or non-medical problems were measured using the 14-item Physician Belief Scale (PBS)[9]. Response options range from 1 (disagree) to 5 (agree) on a Likert scale. Scores range from 14 to 70, with higher scores indicating less positive beliefs and attitudes. Scores in our sample ranged from 18 to 42 ($M=31.37$, $SD=5.52$) and demonstrated good internal consistency [30].

PCP confidence in his or her ability to provide counseling was measured using the 11-item Provider Confidence Scale (PCS)[30]. This scale measures comfort in the ability to counsel a parent for emotions, substance use, or an abusive partner, and counsel youth with for emotions, behaviors, hyperactivity/short attention, or trouble getting along with friends. Response options range from 1 (not at all comfortable) to 5 (extremely comfortable) on a Likert scale. Possible scores range from 11 to 55, with higher scores indicating greater comfort. Scores in our sample ranged from 11 to 53 ($M=32.05$, $SD=7.77$) and demonstrated good internal consistency [30].

Data Analyses

The distribution of each outcome was calculated. The five outcomes were then dichotomized for ease of interpretation. Responses were dichotomized into those who reported to "agree" or

“strongly agree” that the PCP “understood the problems that you wanted to discuss at the visit” and “helped ease your mind in terms of your worries” versus those who disagreed or were unsure. Responses were dichotomized into those who reported that the PCP “often” or “very often” asked the youth to make decisions about treatment; gave the youth control over treatment; and asked the youth to take responsibility for treatment, versus those who reported that the PCP “never,” “rarely,” or “sometimes” did so.

The PBS and PCS were z-transformed and centered. T-tests with equal variance were used to examine the relationship between the discussion of sensitive topics with scores on the PBS and PCS. Chi-square was used to examine relationships between the discussion of sensitive topics and PCP and youth characteristics.

Multivariate random effects logistic regression was used to model the odds ratio (OR) and 95% confidence interval (95% CI) of each outcome as a function of the discussion of sensitive topics and covariates. This method accounts for the clustering of youth within PCP by using the PCP identifier as a grouping variable [31]. Clustering within site was of interest, but the number of sites was too small for valid estimates. Five regression models (one for each outcome) were built in a step-wise fashion to examine the result of adding each variable in the following order: discussion of one or more sensitive topics, reason for visit, PBS, PCS, PCP receipt of intervention training, number of previous visits, PCP gender, specialty, SDQ, youth race/ethnicity, insurance status, age, and gender. The sample had adequate power and degrees of freedom to allow for the retention of variables that did not achieve statistical significance in order to demonstrate the absence of confounding. Sensitivity analyses were conducted to examine changes in the magnitude, direction, and statistical significance of coefficients when statistically non-significant variables were omitted and when continuous outcomes were modeled using multivariate random effects linear regression.

Multivariate logistic regression was also used to model the OR and 95% CI of each outcome as a function of the number of sensitive topics that was discussed and covariates. Variables were entered in the same order for these regressions. Stata 9 was used for the analyses [32].

Results

Youth mental health symptoms: Youth reported an average of 11.02 (SD=6.3) symptoms and 23% scored within the “high difficulties” range. This average was slightly higher than among youth in non-clinic community settings [33–34].

Discussion of sensitive health topics: Twenty-nine percent (n=107) of visits included the discussion of behavior, 43.3% (n=155) mood, 46.4% (n=166) getting along with others, 30.2% (n=108) parent mood, 32.7% (n=117) family problems, 29.1% (n=104) sexuality or birth control, and 33.2% (n=119) drugs, tobacco, or alcohol.

Seventy percent (n=253) of visits included the discussion of one or more sensitive topics. Among visits that included the discussion of at least one sensitive topic, 19.3% (n=49) included the discussion of one additional topic, 17.3% (n=43) two additional topics, 12.2% (n=31) three additional topics, 12.6% (n=32) four additional topics, 7.1% (n=18) five additional topics, and 10.2% (n=26) six additional topics. Twenty-one percent (n=53) of visits included the discussion of only one topic. Therefore, the outcomes were examined as a function of the discussion of one or more sensitive topics in order to estimate stable regression models and avoid colinearity.

Among youth who reported the discussion of one or more sensitive topics, 44.3% (n=112) reported that the discussion occurred when alone with the PCP. Eight percent (n=30) of all youth wanted to have more time alone with the PCP.

Youth perceptions of care: Youth perceptions of care were widely distributed (Table 1). When responses were dichotomized, 76.2% agreed or strongly agreed that the PCP understood his or her problems, 64.5% agreed or strongly agreed that the PCP eased his or her mind, 60.3% reported that the PCP often or very often allowed the youth to make treatment decisions, 56.9% reported that the PCP often or very often gave the youth control over treatment, and 61.4% reported that the PCP often or very often asked the youth to take responsibility for treatment.

Chi-square suggested that a larger proportion of youth reported each outcome when the visit included the discussion of one or more sensitive topics (Table 2). Chi-square also suggested that a larger proportion of youth who visited a female PCP reported to “agree” or “strongly agree” that the PCP understood his or her problems (85.6% versus 73.2%; $p=.006$) and eased his or her mind (73.4% versus 59.3%; $p=.007$). A larger proportion of youth who visited a female PCP reported that the PCP “often” or “very often” asked the youth to make treatment decisions (68.7% versus 55.0%; $p=.022$), gave the youth control over treatment (64.3% versus 52.7%; $p=.035$), and asked the youth to take responsibility for treatment (71.9% versus 55.5%; $p=.004$). No other PCP or youth characteristics were associated with the outcomes in bivariate analyses (results not shown).

Multivariate random effects logistic regression suggested that youth had higher odds of agreeing or strongly agreeing that the PCP understood his or her problems or eased his or her mind when the visit included the discussion of one or more sensitive topics (Table 3). Youth also had higher odds of reporting that the PCP “often” or “very often” asked the youth to make treatment decisions, gave the youth control over treatment, and asked the youth to take responsibility for treatment when the visit included the discussion of one or more sensitive topics. Youth who visited a male PCP had lower odds of reporting that the PCP understood his or her problems and asked the youth to make treatment decisions.

Youth with a higher number of mental health symptoms had slightly lower odds of agreeing or strongly agreeing that the PCP understood his or her problems and of reporting that the PCP often or very often asked the youth to make treatment decisions. The direction and statistical significance of coefficients did not appreciably change when non-Latino “Other” youth were excluded (to examine the effect of language) or when continuous outcomes were used.

Youth also had higher odds of each outcome when more sensitive topics were discussed. That is, after accounting for covariates, each additional sensitive topic that was discussed was associated the increased odds that the PCP understood his or her problems (OR:1.40 95% CI: 1.14–1.72), eased his or her mind (OR:1.31 95% CI:1.13–1.53), asked the youth to make treatment decisions (OR:1.32 95% CI:1.14–1.52), gave the youth control over treatment (OR: 1.25 95% CI:1.09–1.43), and gave the youth responsibility for treatment (OR:1.12 95% CI: 1.01–1.29). No other coefficients achieved statistical significance ($p < .05$) in these regressions.

Discussion

Youth had more positive perceptions of the PCP and reported taking a more active role in treatment when sensitive topics were discussed. These findings advance the literature by demonstrating that the discussion of sensitive topics during primary care visits had an independent and robust relationship with youth perceptions of care, which was not explained by other characteristics of the youth or PCP.

These findings have several implications for primary care practice. Although these data were cross-sectional, in the context of conceptual models of physician-patient communication [5] and previous research [1–2], these findings suggest that the discussion of sensitive topics may meet youth expectations for care and have a positive impact on perceptions that are associated with satisfaction and participation in treatment. Such positive perceptions may improve the

intention to follow through with treatment [17], willingness to seek treatment in the future, and actual health outcomes [18–19].

PCP specialty, confidence in counseling skills, and attitudes toward treating non-medical concerns were unrelated to the discussion of sensitive topics or youth perceptions. Although not the focus of these analyses, youth had less positive perceptions of male PCPs. The role of PCP gender in communication with patients is complex and dynamic [34] and a thorough review of this field of research is outside the scope of this report. It is noteworthy, however, that previous research has suggested female PCPs are more likely to discuss emotions and “psychosocial” or non-medical information, and are more likely to communicate in ways that build partnership with the patient [34]. Research is needed to understand whether the quality of communication about sensitive topics with youth differs according to PCP gender and whether PCP gender is independently associated with a range of youth perceptions of care.

Few youth reported the discussion of only one sensitive topic and youth had more positive perceptions of care when a greater number of sensitive topics were discussed. Strategies are likely needed to help PCPs efficiently discuss a range of topics in a short amount of time. Approaches to discussing youth mental health problems in primary care [21] could be adapted to address a broader range of topics. Such strategies seem particularly necessary considering that nearly 30% of visits did not discuss even one sensitive topic.

There are several limitations. PCPs were participating in a training to improve their ability to communicate about mental health related concerns. Participation in the training was unrelated to the outcomes or the proportion of visits that included the discussion of sensitive topics, but it did have a positive impact on the emotional distress of mothers and the mental health functioning of racial and ethnic minority youth [21]. The measurement of the training and the discussion of sensitive topics may have been too crude to detect a relationship. Participation in the research, regardless of the training, may limit generalizability.

The majority of visits that included the discussion of one sensitive topic included the discussion of other topics. It is possible that outcomes were differentially associated with specific topics. For example, youth may have had more positive perceptions when family problems rather than mood was discussed. This study was unable to examine this question. Future research is necessary to understand the acceptability of discussing specific topics. Qualitative methods may be particularly useful for such research.

We did not measure whether youth perceived PCPs as a confidential source of care. Only youth who reported the discussion of sensitive topics were asked whether they were alone with the PCP. Thus, we were not able to examine whether time alone with the PCP was associated with the discussion of sensitive topics or the outcomes. Future research should examine whether there are differences in PCP communication about sensitive topics in the absence of parents. Finally, there was inadequate variability to examine PCP race and ethnicity.

The findings suggest that the discussion of sensitive topics had a positive and independent relationship with youth perceptions of care. Future research is needed to understand whether communication about sensitive topics improves the adoption of healthy behaviors and health outcomes.

Acknowledgements

The primary data collection and analysis was supported by National Institute of Mental Health (NIMH) grant RO1MH62469 (Dr. Wissow). NIMH grant F31MH75531 also supported Dr. Brown's work. We thank the families, providers, and staff of participating clinics. The research team included Carmen Ivette Diaz, Mark Celio, O'Neil Costley, Anne Gadomski, Xianghua Luo, Lucia Martinez, Alexandra Suchman, Nancy Tallman, Mei-Chen Wang, Nancy Weissflog, and Ciara Zachary.

References

1. Malus M, LaChance PA, Lamy L, Macaulay A, Vanasse M. Priorities in adolescent health care: The teenager's viewpoint. *J Fam Pract* 1987 Aug;25(2):159–62. [PubMed: 3612039]
2. Steiner BD, Gest KL. Do adolescents want to hear preventive counseling messages in outpatient settings? *J Fam Pract* 1996 Oct;43(4):375–81. [PubMed: 8874373]
3. Halpern-Felsher BL, Ozer EM, Millstein SG, Wibbelsman CJ, Fuster CD, Elster AB, et al. Preventive services in a health maintenance organization: How well do pediatricians screen and educate adolescent patients? *Arch Pediatr Adolesc Med* 2000 Feb;154(2):173–9. [PubMed: 10665605]
4. Goodwin MA, Flocke SA, Borawski EA, Zyzanski SJ, Stange KC. Direct observation of health-habit counseling of adolescents. *Arch Pediatr Adolesc Med* 1999 Apr;153(4):367–73. [PubMed: 10201719]
5. Bethell C, Klein J, Peck C. Assessing health system provision of adolescent preventive services: The Young Adult Health Care Survey. *Med Care* 2001 May;39(5):478–90. [PubMed: 11317096]
6. Perloff RM, Bonder B, Ray GB, Ray EB, Siminoff LA. Doctor-patient communication, cultural competence, and minority health. *Am Behav Scientist* 2006;49:835–852.
7. Leaf PJ, Owens PL, Leventhal JM, Forsyth BW, Vaden-Kiernan M, Epstein LD, et al. Pediatricians' training and identification and management of psychosocial problems. *Clin Pediatr (Phila)* 2004 May; 43(4):355–65. [PubMed: 15118779]
8. Hickson GB, Altemeier WA, O'Connor S. Concerns of mothers seeking care in private pediatric offices: Opportunities for expanding services. *Pediatrics* 1983 Nov;72(5):619–24. [PubMed: 6634264]
9. McLennan JD, Jansen-McWilliams L, Comer DM, Gardner WP, Kelleher KJ. The Physician Belief Scale and psychosocial problems in children: A report from the pediatric research in office settings and the Ambulatory Sentinel Practice Network. *J Dev Behav Pediatr* 1999 Feb;20(1):24–30. [PubMed: 10071942]
10. Klein JD, McNulty M, Flatau CN. Adolescents' access to care: Teenagers' self-reported use of services and perceived access to confidential care. *Arch Pediatr Adolesc Med* 1998 Jul;152(7):676–82. [PubMed: 9667540]
11. Jacobson L, Richardson G, Parry-Langdon N, Donovan C. How do teenagers and primary healthcare providers view each other? an overview of key themes. *Br J Gen Pract* 2001 Oct;51(471):811–6. [PubMed: 11677704]
12. Tates K, Meeuwesen L. Doctor-parent-child communication. A (re)view of the literature. *Soc Sci Med* 2001 Mar;52(6):839–51. [PubMed: 11234859]
13. Meeuwesen L, Kaptein M. Changing interactions in doctor-parent-child communication. *Psychology and Health* 1996;11:787–95.
14. van Dulmen AM. Children's contributions to pediatric outpatient encounters. *Pediatrics* 1998 Sep; 102(3 Pt 1):563–8. [PubMed: 9738177]
15. Pantell RH, Lewis CC. Talking with children: How to improve the process and outcome of medical care. *Medical Encounter* 1993;10:3–7.
16. Woods ER, Klein JD, Wingood GM, Rose ES, Wypij D, Harris SK, et al. Development of a new Adolescent Patient-Provider Interaction Scale (APPIS) for youth at risk for STDs/HIV. *J Adolesc Health* 2006 Jun;38(6):753.e1, 753.e7. [PubMed: 16730606]
17. Freed LH, Ellen JM, Irwin CE Jr, Millstein SG. Determinants of adolescents' satisfaction with health care providers and intentions to keep follow-up appointments. *J Adolesc Health* 1998 Jun;22(6):475–9. [PubMed: 9627818]
18. Garland AF, Aarons GA, Hawley KM, Hough RL. Relationship of youth satisfaction with mental health services and changes in symptoms and functioning. *Psychiatr Serv* 2003 Nov;54(11):1544–6. [PubMed: 14600318]
19. Hawley KM, Weisz JR. Youth versus parent working alliance in usual clinical care: Distinctive associations with retention, satisfaction, and treatment outcome. *J Clin Child Adolesc Psychol* 2005 Mar;34(1):117–28. [PubMed: 15677286]
20. Stiffman AR, Pescosolido B, Cabassa LJ. Building a model to understand youth service access: The Gateway Provider Model. *Ment Health Serv Res* 2004 Dec;6(4):189–98. [PubMed: 15588030]

21. Wissow LS, Gadowski A, Roter D, Larson S, Brown JD, Zachary C, Bartlett E, Horn I, Luo X, Wang MC. Improving child and parent mental health in primary care: A cluster randomized trial of communication skills training. *Pediatrics* 2007 Jan;121:266–75. [PubMed: 18245417]
22. Cherry DK, Woodwell DA. National Ambulatory Medical Care Survey: 2000 summary. *Adv Data* 2002 Jun 5;328:1–32. [PubMed: 12661586]
23. Simpson GA, Bloom B, Cohen RA, Blumberg S, Bourdon KH. U.S. children with emotional and behavioral difficulties: Data from the 2001, 2002, and 2003 National Health Interview surveys. *Adv Data* 2005 Jun 23;(360):1–13. [PubMed: 16004071]
24. Hulka BS, Zyzanski SJ, Cassel JC, Thompson SJ. Scale for the measurement of attitudes toward physicians and primary medical care. *Med Care* 1970 Sep-Oct;8(5):429–36. [PubMed: 4920640]
25. Roter DL, Hall JA. *doctors Talking with Patients/Patients Talking with Doctors: Improving Communication in Medical Visits*. Westport, CT: Auburn House; 1993. Models of the doctor-patient relationship; p. 21-38.
26. Cooper-Patrick L, Gallo JJ, Gonzales JJ, Vu HT, Powe NR, Nelson C, et al. Race, gender, and partnership in the patient-physician relationship. *JAMA* 1999 Aug 11;282(6):583–9. [PubMed: 10450723]
27. Sitzia J, Wood N. Patient satisfaction: A review of issues and concepts. *Soc Sci Med* 1997 Dec;45(12):1829–43. [PubMed: 9447632]
28. Goodman R. The extended version of the Strengths and Difficulties Questionnaire as a guide to child psychiatric caseness and consequent burden. *J Child Psychol Psychiatry* 1999 Jul;40(5):791–9. [PubMed: 10433412]
29. Bourdon KH, Goodman R, Rae DS, Simpson G, Koretz DS. The Strengths and Difficulties Questionnaire: U.S. normative data and psychometric properties. *J Am Acad Child Adolesc Psychiatry* 2005 Jun;44(6):557–64. [PubMed: 15908838]
30. Brown JD, Riley AW, Wissow LS. Identification of youth psychosocial problems during pediatric primary care visits. *Adm Policy Ment Health* 2007 May;34(3):269–81. [PubMed: 17226090]
31. Diez-Roux AV. Multilevel analysis in public health research. *Annu Rev Public Health* 2000;21:171–92. [PubMed: 10884951]
32. StataCorp. *Stata Statistical Software: Release 9*. College Station, TX: StataCorp LP; 2005.
33. van Widenfelt BM, Goedhart AW, Treffers PD, Goodman R. Dutch version of the Strengths and Difficulties Questionnaire (SDQ). *Eur Child Adolesc Psychiatry* 2003 Dec;12(6):281–9. [PubMed: 14689260]
34. Muris P, Meesters C, van den Berg F. The Strengths and Difficulties Questionnaire (SDQ)—Further evidence for its reliability and validity in a community sample of Dutch children and adolescents. *Eur Child Adolesc Psychiatry* 2003 Jan;12(1):1–8. [PubMed: 12601558]
35. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: A meta-analytic review. *JAMA* 2002 Aug 14;288(6):756–64. [PubMed: 12169083]

Table 1

Youth Perceptions of Care

Outcome	M	SD	Range of Responses	Dichotomized Responses n (%)
Overall, do you feel that during today's visit your doctor/nurse practitioner understood the problems you wanted to discuss at the visit?	4.19	1.03	1-5	273 (76.2%)*
Overall, do you feel that during today's visit your doctor/nurse practitioner helped ease your mind in terms of your worries?	3.89	1.17	1-5	231 (64.5%)*
If there were choices to make about any treatment that may have been discussed today, how often do you think this doctor would ask you to help make the decision?	3.77	1.08	1-5	216 (60.3%)**
How often does this doctor give you some control over your treatment?	3.63	1.19	1-5	204 (56.9%)**
How often does this doctor ask you to take some responsibility for your treatment?	3.68	1.25	1-5	220 (61.4%)**

* Number and percent who responded "agree" or "strongly agree"

** Number and percent who responded "often" or "very often"

Table 2
Youth Perceptions of Care and Discussion of Sensitive Health Topic

Outcome	Visit included the discussion of sensitive topic* n = 253	Visit did not include discussion of sensitive topic n = 105	χ^2_3
Provider understood problems**	85.3%	69.9%	11.05
Provider eased worries**	74.5%	52.5%	15.71
Youth made treatment decisions†	70.4%	47.0%	16.70
Youth took control over treatment†	66.9%	43.5%	16.17
Youth took responsibility for treatment†	70.7%	52.0%	10.68

* Visit included discussion of one or more of the following: getting into trouble for behavior, youth mood, getting along with other people, parent mood or feelings, family stress or problems, sexuality or birth control, and drugs, tobacco, or alcohol. All chi-square values are statistically significant ($p < .001$).

** Youth responded “agree” or “strongly agree” to question

† Youth responded “often” or “very often” to question

Table 3
Multivariate Logistic Regression of Youth Perceptions of Care

Independent Variable	Provider understood problems OR (95% CI)	Provider eased worries OR (95% CI)	Youth made treatment decisions OR (95% CI)	Youth took control over treatment OR (95% CI)	Youth took responsibility for treatment OR (95% CI)
Discussion of sensitive topic [†]	3.62** (1.57, 8.31)	2.13* (1.06, 3.92)	2.71** (1.44, 5.10)	2.51** (1.32, 4.71)	2.00* (1.04, 3.86)
Reason for visit [‡]					
Acute medical	1.13 (.484, 2.65)	1.04 (.531, 2.06)	.725 (.380, 1.38)	.523* (.277, .987)	.525 (.271, 1.10)
Mental health	2.32 (.402, 13.51)	3.36 (.937, 12.05)	1.15 (.386, 3.46)	.637 (.221, 1.83)	.712 (.234, 2.16)
Follow-up medical	.617 (.216, 1.76)	1.06 (.434, 2.58)	1.01 (.421, 2.38)	1.01 (.429, 2.40)	.664 (.276, 1.59)
Physician Belief Scale	.703 (.435, 1.13)	1.07 (.748, 1.55)	1.01 (.715, 1.43)	.854 (.604, 1.20)	.866 (.604, 1.24)
Provider Confidence Scale	.890 (.623, 1.27)	1.16 (.883, 1.53)	1.12 (.865, 1.46)	1.05 (.816, 1.32)	1.08 (.830, 1.41)
PCP received intervention training	1.48 (.684, 3.24)	1.58 (.863, 2.91)	.691 (.367, 1.26)	.533 (.291, 1.02)	.933 (.500, 1.74)
Number of previous visits [§]					
None	2.23* (1.46, 4.63)	.657 (.253, 1.70)	2.80* (1.02, 7.72)	1.04 (.417, 2.60)	.537 (.209, 1.37)
6–10	1.75 (.632, 4.88)	.551 (.253, 1.71)	1.29 (.595, 2.81)	1.56 (.727, 3.36)	.618 (.286, 1.33)
11–20	1.65 (.629, 4.34)	.655 (.297, 1.44)	1.09 (.510, 2.33)	1.70 (.799, 3.64)	1.57 (.694, 3.57)
More than 20	1.59 (.647, 3.92)	.707 (.332, 1.51)	1.33 (.658, 2.71)	1.47 (.736, 2.94)	.981 (.473, 2.03)
Male PCP	.400* (.191, .835)	.554 (.306, 1.00)	.473* (.264, .847)	.638 (.363, 1.12)	.730 (.405, 1.31)
Family practice PCP	.647 (.232, 1.77)	.821 (.399, 1.69)	1.65 (.826, 3.32)	1.35 (.676, 2.71)	1.24 (.608, 2.55)
Strengths and Difficulties Questionnaire	.903* (.853, .959)	.963 (.921, 1.00)	.951 (.909, .992)	.971 (.931, 1.01)	.959 (.917, 1.00)
Non-Latino African American ^{//}	.249* (.100, .619)	1.92 (.912, 4.07)	1.02 (.500, 2.10)	.805 (.406, 1.59)	.584 (.284, 1.20)
Latino/Other ^{//}	.928 (.271, 3.18)	1.92 (.744, 4.99)	1.37 (.549, 3.46)	2.06 (.839, 5.09)	2.65 (.934, 7.52)
Private insurance [¶]	.619 (.285, 1.18)	1.04 (.574, 1.90)	1.18 (.667, 2.11)	1.64 (.936, 2.89)	.812 (.448, 1.47)
Age	.887 (.726, 1.08)	.890 (.766, 1.03)	.970 (.837, 1.12)	.958 (.834, 1.10)	.853 (.729, 1.02)
Male youth	1.42 (.715, 2.83)	1.25 (.724, 2.18)	1.08 (.636, 1.85)	1.10 (.654, 1.86)	1.37 (.797, 2.37)
Model fit	<.0001	.0075	.019	.015	<.0001

* $p < .05$
 ** $p < .001$
[†] Includes discussion of one or more of the following: getting into trouble for behavior, mood, getting along with other people, parent mood or feelings, family stress, sexuality or birth control, and drugs, tobacco, or alcohol. Reference is no discussion of any of these topics.
[‡] Reference is well-child
[§] Reference is 1–5 visits.
^{//} Reference is non-Latino Caucasian youth.
[¶] Reference is uninsured or Medicaid.