JOURNAL OF ADOLESCENT HEALTH CARE 1988;9:46–51

Physicians' Values and Experience During Adolescence

Their Effect on Adolescent Health Care

J. DENNIS FORTENBERRY, M.D., DAVID W. KAPLAN, M.D., M.P.H., AND ROBERT F. HILL, PH.D.

The values and experience of physicians as adolescents can effect their care of adolescent patients. Eighty residents were studied using extensive personal data gathered from a structured interview, a questionnaire of perceived clinical skills, and a videotape with a simulated patient. A "values" and "risk-taking during adolescence" score was constructed and related to the resident's perceived skills for and attitudes about adolescent health care. Residents with higher values scores (more conservative) were more likely to be pediatric than internal medicine residents and less likely to prescribe birth control pills to an adolescent. Residents with higher risk-taking scores considered themselves more skilled in dealing with substance abuse and sexually transmitted diseases and in recognizing psychologic problems. Values or risk-taking scores were not related to the resident's perceived skill in areas such as evaluating hypertension or performing Tanner staging. These data suggest that certain values and experiences may be influential in the physician's ability and approach to dealing with certain issues related to adolescent health care.

KEY WORDS:
Physicians' values and experience
Patient care

From the Departments of Medicine (J.D.F.) and Pediatrics (R.F.H.), University of Oklahoma Health Sciences Center and the Department of Pediatrics, University of Colorado Health Sciences Center, Denver (D.W.K.).

Address reprint requests to: David W. Kaplan, M.D., Chief, Adolescent Medicine, The Children's Hospital, 1056 E. 19th Ave. Denver, CO 80218.

Manuscript accepted January 6, 1987.

Adolescence is traditionally described as a time of change and turmoil, and adolescent patients are typically viewed by health care providers as vehicles of that turbulence. Often described as hostile, unreliable, and noncompliant, the adolescent patient presents challenges to health care providers that transcend specific medical considerations. Many of the issues that are integral to adolescent health care, such as sexual activity, contraception, pregnancy, and substance abuse, have complex moral and ethical implications that may conflict with those of the health care provider. Although physicians are advised to be cautious of stereotypic expectations about adolescent behavior (1), the moral considerations and characteristics of an adolescent patient may pose significant barriers to effective physician–adolescent patient relationships. Thus, the physician's own feelings and response to a patient are of major importance in determining the quality of the doctor–patient interaction (2) and may be critical to the physician's ability to meet the health care needs of his or her adolescent patients.

Although teenagers are alarmingly overrepresented in a variety of morbidity and mortality statistics (motor vehicle accidents, suicide, homicide, sexually transmitted diseases, unintended pregnancy), their health needs are often considered minimal because they have passed beyond childhood diseases and are still generally free from the major health problems of the adult and geriatric population. In 1978, the American Academy of Pediatrics

0197-0070/88/$3.50

Published by Elsevier Science Publishing Co., Inc., 52 Vanderbilt Ave., New York, NY 10017

Task Force Report on Education reported that "the health needs of adolescents are being inadequately met" and recommended a more active role for pediatricians in providing health care for adolescents (3). A similar case could be made for other specialties that provide primary health care for adolescents including family practitioners, obstetricians, gynecologists, psychiatrists, and internists (4). Despite the call for a more realistic approach to the health needs of teenagers (5,6), barriers still exist between many adolescents and the health care delivery system, particularly physicians.

We were interested in examining the effect of two separate but related sets of factors in physicians' relationships with adolescent patients: 1) the sociodemographic, political, and religious backgrounds and current characteristics of the physicians; and 2) the physician's personal experience as an adolescent and young adult. We hypothesized that the personal values and adolescent experiences of the physician could affect his or her ability to work with the adolescent patient, especially teenagers with problems in such socially controversial areas as drug use, sexual activity, sexually transmitted diseases, and unintended pregnancy.

Methods

Subjects were pediatric and internal medicine residents assigned to a one-month adolescent medicine rotation at Oklahoma Children's Memorial Hospital, University of Oklahoma Health Sciences Center. Data were obtained during a one-year period from May 1984 to April 1985. At the beginning of each rotation, one of the investigators explained the nature of the study and requested participation. Informed consent was obtained. To ensure anonymity and confidentiality, all contact with potential subjects was conducted by a single researcher who was not associated with the Division of Adolescent Medicine or the Departments of Pediatrics and Medicine. The identity of participants was unknown to the attending staff. Volunteers were asked to respond to forced-choice questions using a series of clinical vignettes about adolescent patients. The vignettes depicted: 1) a 15-year-old male brought to the clinic by his mother for an evaluation of drug abuse; 2) a 15-year-old female with a nonlethal suicide attempt; 3) a 16-year-old female requesting contraception without parental consent; 4) a promiscuous 16-year-old female who is indifferent to contraception; and 5) a very hostile 16-year-old female with venereal warts. All of these videotaped vignettes were simulated interviews using clinic staff and volunteers from a local high school drama class. Participants then completed a 63-item Attitudes Toward Social Issues in Medicine (ATSIM) (7) questionnaire. Responding to the vignettes and completing the ATSIM required approximately 45 minutes. Each resident was then scheduled for a one-hour personal interview with a medical anthropologist (RFH). This interview consisted of three sections: 1) demographic data about the subject and his or her famiy; 2) specific questions related to his or her attitudes about adolescence as well as personal experiences during adolescence; and 3) a 31-item scale adapted from Slap (8) designed to measure perceived skill with a variety of adolescent health care issues, as well as how skilled the physician expected to be at the completion of his or her training. This study was approved by the Institutional Review Board of the University of Oklahoma Health Sciences Center.

Statistical analysis was performed using SAS version 5 (9) at the University of Colorado. Chi-square and two-tailed *t*-test were used for nonparametric and parametric variables, respectively. Multiple linear regression analysis was used when appropriate.

Results

A total of 82 of 97 residents participated in the study. Two residents did not begin the study after completing the informed consent; one resident completed approximately 90% of the study protocol before declining further participation. Complete data were available for the remaining 79 residents. No information was obtained from residents who declined participation. Tables 1–3 summarize the sociodemographic, personal–experiential, and attitude characteristics of the subjects. There were differences between the age when many subjects began certain activities and the age they considered to be most appropriate for adolescents to begin these activities. For example, 100% of subjects who began drinking alcohol before age 17 years felt that the drinking age should be 18 years or older.

Significant differences between the two specialty groups were found (Table 4). Pediatric residents identified themselves as religious fundamentalists and political conservatives more often than did medicine residents, but these differences were not significant ($p = 0.067$ and $p = 0.056$, respectively). Religious fundamentalism was defined by the interviewer according to the strictness of the subject's interpretation of his or her religious literature. The particular religion or denomination was not used in

Table 1. Sociodemographic Characteristics of Pediatric and Internal Medicine Residents (n = 80)

	n (%)		n(%)
Gender		Training Level	
Male	55 (68.8)	PG 1	37 (46.3)
Female	25 (31.3)	PG 2	23 (2.8)
		PG 3	20 (25.0)
Age (yr)		Religious background	
<25	10 (12.6)	Nonfundamentalist	40 (50.0)
26–30	54 (67.6)	Fundamentalist	37 (46.3)
>30	16 (19.8)	Other	3 (3.8)
Race		Religious orientation	
White	71 (67.5)	Nonfundamentalist	40 (50.0)
Other	9 (11.3)	Fundamentalist	16 (20.0)
		Other	10 (12.6)
Marital status		Political orientation	
Single	27 (33.8)	Democrat	22 (27.5)
Married	48 (60.0)	Republican	37 (46.3)
Divorced	5 (6.3)	Independent	15 (18.3)
		Other	6 (7.6)
Residence of origin		Speciality	
Rural	33 (41.4)	Pediatrics	42 (52.5)
Urban	47 (58.6)	Medicine	38 (47.5)

making this distinction. Political values were entered according to the subject's own classification as liberal or conservative on economic and social issues. Medicine residents were more likely to begin use of alcohol before age 21 years (p = 0.01) and to have experimented with drugs (p = 0.003). Medicine residents were also more likely to have begun sexual intercourse before age 21 years (p = 0.029) and to have experienced an unplanned pregnancy (p = 0.007). There were gender differences in the age of first intercourse, with the mean age for females being 20.3 years compared to 17.5 years for males (p = 0.018). Specialty was also important in subjects' self-perceived skills with medical issues without strong ethical or moral considerations (Table 5). Pediatric residents considered themselves more skilled in obtaining a developmental and immunization history and performing Tanner staging than did the medical residents. Medical residents considered themselves more skilled in evaluating hypertension and in evaluating and treating a diabetic patient than did the pediatric residents.

Table 2. Personal and Experiential Characteristics of Pediatric and Internal Medicine Residents (n = 80)

	n(%)		n(%)
Cigarette use		Age of first intercourse[a]	
Yes	4 (5.0)	Never	11 (13 9)
No	76 (95.0)	<16	18 (22.8)
		17–20	24 (30.4)
		>21	26 (32.9)
Alcohol use (drinks/week)		Unprotected intercourse[b]	
0	16 (20.0)	Yes	44 (55.8)
1–3	42 (52.6)	No	25 (31.3)
4–6	15 (18.8)		
>6	7 (8.8)		
Age of first alcohol use		Unplanned pregnancy[b]	
Never	6 (7.5)	Yes	13 (16.3)
<16 yr	38 (47.5)	No	56 (70.0)
17–20 yr	28 (35.0)		
>21 yr	8 (10.0)		
Considered suicide		Suspected VD[b]	
Yes	27 (33.8)	Yes	22 (27.5)
No	53 (66.2)	No	47 (58.8)
Suicide attempt			
Yes	4 (5.0)		
No	76 (95.0)		

[a]One subject did not complete this portion of interview.
[b]Virgins not included.

Table 3. Attitudes About Adolescents

Age at which adolescent should do the following	Mean age (yr)	SD
Have definite career plans		
Male adolescents	19.6	2.4
Female adolescents	19.4	2.4
Achieve financial independence		
Male adolescents	21.5	1.6
Female adolescents	21.5	1.7
Be able to use alcohol socially		
Male adolescents	19.6	1.6
Female adolescents	19.4	1.7
Initiate sexual intercourse[a]		
Male adolescents	18.3	1.5
Female adolescents	18.2	1.4
Be cognitively capable of use of contraceptives		
Male adolescents	16.9	1.2
Female adolescents	16.1	1.5
Transfer care from pediatrician to internist[b]		
Pediatric residents	18.3	1.9
Medicine residents	16.9	2.3

[a]Excludes subjects who stated intercourse should not occur before marriage.
[b]p = 0.005 by t-test.

The subjects' background and their own experiences of adolescence appeared to be associated with their attitudes about adolescents. Of subjects classified as religious fundamentalists, 46.8% were virgins as adolescents versus 6% of those identifying themselves as nonfundamentalists. Of the fundamentalists, 56% versus 6% of nonfundamentalists thought that adolescent males should wait until marriage to begin sexual intercourse (p = 0.001), with similar responses toward adolescent females (p = 0.003). Subjects classifying themselves as politically conservative were more likely to have been virgins

Table 4. Differences in Background and Experience as Adolescents of Pediatric and Medicine Residents

	Pediatric residents (n = 42) n(%)	Medicine residents (n = 38) n(%)
Religious orientation		
Nonfundamentalist	31(73.8)	33(86.8)
Fundamentalist	11(26.2)	5(13.2)
Political values		
Social		
Conservative	25(59.5)	15(39.5)
Liberal	17(40.5)	23(60.5)
Economic		
Conservative	36(85.7)	28(73.7)
Liberal	6(14.3)	10(26.3)
Began Alcohol Use[a]		
Never	5(11.9)	1(2.7)[b]
<16 yr	16(38.1)	22(57.9)
17–20 yr	14(33.3)	14(36.8)
>21 yr	7(16.7)	1(2.8)
Began drug use		
Never	30(71.4)	14(36.8)[b]
<16 yr	6(14.3)	7(18.4)
>16 yr	6(14.3)	17(44.8)
Began sexual intercourse		
Virgin	8(20.0)	3(7.9)[b]
<16 yr	8(20.0)	10(26.3)
17–20 yr	8(20.0)	16(42.1)
>21 yr	16(40.0)	9(23.7)
Unintended pregnancy		
Yes	2(5.9)	11(31.4)[b]
No	32(94.1)	24(68.6)

[a]Never or >21 yr versus <21 yr of age.
[b]$p < 0.05$.

Table 5. Self-Perceived Skills in Various Medical Care Issues—By Specialty[a]

	Pediatrics	Medicine
Insert and remove an IUD	1.07[b]*	1.63
Discuss substance abuse	2.95	3.42
Diagnose, evaluate, and treat diabetes[c]	3.48	4.03
Recognize school phobia[c]	3.00	2.47
Differentiate normal from abnormal growth[c]	3.43	2.84
Discuss VD with an adolescent	3.82	4.18
Differentiate constitutional delay and congenital short stature from underlying pathology[c]	3.47	2.50
Obtain a developmental history[c]	3.60	2.55
Diagnose, evaluate, and treat hypertension[d]	3.00	3.82
Diagnose and treat VD	3.83	4.18
Obtain an immunization history[c]	4.27	3.27
Complete an immunization series[c]	4.17	3.50

[a]$p < 0.05$ for each category.
[b]1 = unskilled, 5 = very skilled.
[c]Issues emphasized in pediatric training.
[d]Issues emphasized in medicine training.

as adolescents and to have begun intercourse at an older age (mean age of first intercourse of conservatives 20.2 years, liberals 18.7 years; $p = 0.0005$). Twelve percent of the study subjects were virgins. Of these individuals, 97.6% classified themselves as conservatives, and all believed that teenagers should wait until marriage to begin sexual intercourse.

Only one of the variables derived from responses to the videotaped clinical vignettes was statistically significant by univariate analysis. This variable was derived from the vignette about a 16-year-old female requesting contraception without parental consent. Subjects with fundamentalist religious backgrounds were less likely to prescribe oral contraceptives than those with nonfundamentalist backgrounds ($p = 0.001$). Similarly, subjects perceiving themselves as less skilled in prescribing oral contraceptives were less likely to prescribe them without parental permission ($p = 0.027$).

Five of six variables derived from the ATSIM (recognition of social factors, paramedical cooperation, preventive medicine, doctor–patient relations, government role in medicine) did not discriminate among subjects grouped according to specialty or perceived skill with adolescent issues. The sixth variable (general liberality) was highly significantly related to the subjects' stated political values on economic and social issues ($p < 0.001$).

To examine the effect of several of these variables on their perceived skill with adolescent patients, the subjects were given two related scores: a "values" score, with one point each for religious fundamentalism, political conservatism, avoidance of sexual intercourse before age 21 years, nonuse of drugs and avoidance of alcohol before age 21 years; and a "risk-taking" score, with one point each for the initiation of sexual intercourse before age 17 years, having had a period considered to be promiscuous at less than 17 years of age, giving a history of contraceptive nonuse, a history of possible venereal disease, use of alcohol or drugs before age 17 years, and attempting suicide. Multiple linear regression analysis (Table 6) showed that residents whose adolescence was characterized by high-risk behaviors were politically liberal ($p = 0.004$) and religious nonfundamentalists ($p = 0.001$). This risk-taking group was also more likely to characterize their own adolescence as "typical" than those with a high (i.e., conservative) score ($p = 0.025$). The conservative scorers were more likely to be pediatric than medicine residents ($p =$

Table 6. Multiple Linear Regression Analysis of Variables Associated with Values and Risk-Taking Scores[a]

Variable	Regression coefficient	SE
VALUES		
Specialty (ped/med)	−1.24	0.33
Recognizes substance abuse	−0.58	0.18
Discusses venereal disease	−0.41	0.19
Prescribes birth control pills without consent (yes/no)	1.37	0.56
Describes own adolescence as typical (yes/no)	0.69	0.35
General liberality	−0.12	0.04
RISK-TAKING		
Specialty (ped/med)	1.45	0.45
Fundamentalist (yes/no)	2.1	0.55
Liberal on social issues (yes/no)	−1.65	0.44
Recognizes substance abuse	0.46	0.25
Discusses venereal disease	0.57	0.26
Prescribes birth control pills without consent (yes/no)	−1.79	0.77
Describes own adolescence as typical (yes/no)	−1.07	0.47

[a]Specialty, nonfundamentalism, prescription of birth control pills, social liberality, and description of adolescence were entered as dichotomous variables; other variables listed were continuous. All values are significant at $p < 0.05$.

0.003), and the high-risk scorers more likely to be medicine than pediatric residents ($p = 0.002$).

We then compared the values and risk-taking scores to variables related to the care of adolescent patients (Table 6). Conservative residents rated themselves as less skilled in recognizing substance abuse in an adolescent ($p = 0.002$), in discussing venereal disease with the patient ($p = 0.034$), and less likely to prescribe birth control pills to an adolescent without parental consent ($p = 0.018$). Residents with a high-risk score tended to consider themselves more skilled in recognizing substance abuse ($p = 0.068$) and in discussing venereal disease with an adolescent patient ($p = 0.032$). They were also more likely to prescribe birth control pills to a sexually active adolescent without parental consent ($p = 0.022$).

Discussion

Rather than focus on specific patient characteristics affecting the physician–patient relationship, this study attempted to evaluate the potential influence of physicians' political and religious values, as well as their personal experiences as adolescents, on their skill in caring for adolescent patients. Initially, we expected to find specialty-based differences. The major differences in the types of adolescent experiences between medicine and pediatric residents were unexpected. These differences may reflect temporal or regional characteristics of the individuals choosing one specialty over another. The finding that particular values or experiences may be related to a physician's perceived skill in caring for specific kinds of problems deserves special comment. Although it has been shown that highly conservative individuals report a lower frequency of sexual experiences and are more likely to believe that certain types of sexual activity are morally wrong (10), we are unaware of previous studies linking such attitudes to these issues in adolescent patient care. It seems clear that one cannot conclude that a given physician's values or experiences will impair or enhance his or her ability to care for adolescent patients, even when the patient exhibits characteristics that violate the physician's personal norms (11). On the other hand, our study suggests that it is unrealistic to expect that professional training and integrity are sufficient to ensure that the controversial and challenging aspects of adolescent patient care are given skilled attention.

Some attention has been given over the past 15 years to physician characteristics that may modify the quality of the doctor–patient relationship. Gorlin and Zucker (2) emphasized the importance of a physician's feelings and response to patients in defining the character of the doctor–patient relationship. Smith (12) reported that unrecognized feelings toward the patient impair the patient-interview performance of a majority of the second- and third-year medical-student subjects. No attempt was made to identify the sources of these students' feelings, although some potentially harmful outcomes of these interview failures were noted.

Little appears to be known about factors that may affect a physician's relationships with specific groups of patients. Resnick (13) reported that pediatricians who had higher self-assessed competency in issues relating to adolescent health care were significantly less likely to use an age-cutoff policy for their practice that would exclude adolescents. Our study did not attempt to assess factors that may have influenced our physician's competency. In contrast to our study, Slap (8) found that pediatric residents were more confident of their skills in adolescent care than medical residents, but that the presence of a psychosocial disorder negatively influenced the willingness to care for an adolescent by

both groups of residents. Our data agree with Slap that pediatric residents feel the appropriate age to transfer from pediatric to internist care is age 18 years, whereas medicine residents feel that age 16 years is the appropriate age for the transfer of care. Slap has subsequently reported that the exposure of pediatric house staff to adolescent patients did not significantly improve their interest or skill in adolescent medicine (14), suggesting that other factors may be important barriers to a physician's willingness to care for adolescents. Other investigators, however, have found that clinical exposure to adolescents improves the attitude toward and skill in caring for adolescents (15,16).

Our findings do not suggest that individuals with certain types of backgrounds be eliminated from providing care for adolescent patients. But they do suggest that simply providing clinical exposure to adolescents may not be sufficient. As teachers, we should help our students recognize those characteristics about themselves that may influence their relationship with patients.

References

1. Johnson RL, Tanner NM. Approaching the adolescent patient In: Hoffman A, ed. Adolescent medicine. Menlo Park, CA, Addison-Wesley Publishing Company, 1983.
2. Gorlin R, Zucker HC. Physicians' reactions to patients: A key to teaching humanistic medicine. N Engl J Med 1983;308:1059–63.
3. American Academy of Pediatrics. The Future of Pediatric Education, A Report by the Task Force on Pediatric Education. Evanston, IL, 1978.
4. D'Angelo LJ, Delozier J. Who provides care for adolescents: A reappraisal of the National Ambulatory Care Medical survey. (abstr.) J Adolesc Health Care 1986;7:290.
5. Strasburger VC. Who speaks for the adolescent? JAMA 1983;249:1021.
6. Rapp CE: The adolescent patient. Ann Intern Med 1983;99:52–60.
7. Parlow J, Rothman AI. ATSIM: A scale to measure attitudes toward social factors in health care. J Med Educ 1974;49:385–7.
8. Slap, GB. Adolescent medicine attitudes and skills of pediatric and medical residents. Pediatrics 1984;74:191–7.
9. SAS Institute Inc. SAS User's Guide, 1982 Edition. Cary, NC: SAS Institute Inc., 1982.
10. Joe VC, Brown CR, Jones R. Conservatism as a determinant of sexual experience. J Pers Assess 1976;40:516–21.
11. Klein D, Naman J, Kohrman A, et al. Patient characteristics that elicit negative responses from family physicians. J Fam Pract 1982;14:881–8.
12. Smith RC: Teaching interviewing skills to medical students: The issue of "countertransference." J Med Educ 1984;59:582–8.
13. Resnick MD. Use of age cutoff policies for adolescents in pediatric practice: Report from the Upper Midwest Regional Physician Survey. Pediatrics 1983;72:420–7.
14. Slap GB. Effect on an adolescent clinic on housestaff perceived skill. (abstr.) J Adolesc Health Care 1986;7:290.
15. Bohannon WE, Harpin RE, Phillips S, et al. The Effect of an adolescent rotation on resident's attitudes. (abstr.) J Adolesc Health Care 1982;3:144.
16. Neinstein LS, Shapiro J, Rabinovitz S. Effect of an adolescent medicine rotation on residents at one year followup. (abstr.) J Adolesc Health Care 1986;7:296.