

Rural School Health Services: An Assessment of Adolescents' Felt Needs

Carl L. Hanson, Ph.D., CHES¹; Mark Kittleson, Ph.D.;² Kathleen J. Welshimer, Ph.D.;² Dale O. Ritzel, Ph.D.;² Paula L. Woehlke, Ph.D.;³ Fred R. Isberner, Ph.D.⁴

¹ Montana State University - Billings; ² Health Education Programs, Southern Illinois University at Carbondale; ³ Educational Psychology, Southern Illinois University at Carbondale; ⁴ College of Applied Sciences and Arts, Southern Illinois University at Carbondale

Corresponding author: Carl L. Hanson, Associate Professor, Department of Health and Physical Education, Montana State University--Billings, 1500 North 30th Street, Billings, MT 59101; 406.657.2395 (phone); 405.657.2399 (fax); hpss_hanson@vino.emcmt.edu; homepage: <http://www.msubillings.edu/fac/hanson>

Received September 21, 1998; revised and resubmitted December 15, 1998.

Abstract

School-based health centers, have the potential of helping adolescents overcome the barriers that prevent them from receiving needed health services. The purpose of this study was to determine the felt needs for comprehensive school health services as perceived by adolescents in a rural high school.

Based upon a conceptual framework for health care utilization, an instrument called the Adolescent Health Services Inventory was developed to assess (1) what health services adolescents received, (2) what health services adolescents wanted but could not receive, (3) what school health services adolescents would likely use, and (4) how important they perceive it is to have various health services provided in their school.

Results of the study revealed that most students in this rural high school receive basic medical care in their community. Over three-fourths of adolescents reported they received physical exams during the past year yet one in ten students reported they wanted but were unable to receive stress management services, weight management counseling, counseling to treat depression, counseling on birth control methods, tests and treatment for sexually transmitted diseases, prescription and dispensing of birth control methods and job counseling.

The implications of this study suggest the need to not overlook health education and health counseling services when developing models for rural school health care delivery.

Introduction

Adolescents are faced with numerous health challenges. These challenges, labeled by health professionals as the social or new morbidities include youth suicide, homicide, sexually transmitted disease, unintended pregnancy and substance abuse (Glans & Blyth, 1990). As these morbidities have begun to impact the adolescent population and influence learning, many national, state and private organizations have made recommendations on how to improve the condition of adolescent health (Lavin, Shapiro, & Weill, 1992). These organizations (see: <http://www.gwu.edu/~mtg/related/>) have agreed that a more comprehensive approach to addressing child health problems is needed and that health promotion and education should be centered in and around the schools. The integration of comprehensive school health programs into schools has become one way of addressing child health problems. One critical

component of this comprehensive model is school health services (Allensworth & Kolbe, 1987).

Comprehensive school health services, offered through school-based health centers, have grown in popularity. From a single center in 1970, over 600 are located in schools throughout the United States today (Schlitt, Rickett, & Montgomery, 1995). Joycelyn Elders, former United States Surgeon General and long time advocate of school-based health services, outlined the components of a comprehensive school health services program (Elders, 1993). These comprehensive programs include medical, family planning as well as counseling services. However, planning for these programs should not simply follow preconceived outlines but should be based upon an understanding of the unmet health care needs of the student population (Advocates for Youth, 1995). Unmet health care needs of adolescents may be the result of poverty, lack of insurance, lack of trained providers to address adolescents' health concerns, lack of parental availability, and concerns about

confidentially (Office of Technology Assessment, 1991).

Program planners should resist the tendency to establish school-based health services based solely on their professional assessment of adolescent health needs. Such a projection of needs can lead to services being poorly received and under-utilized (Parcel, Nader, & Meyer, 1977). To avoid such problems, many professionals recommend an assessment of perceived or felt needs (Williams & Torrens, 1993). Few published studies have attempted to identify the felt needs of adolescents for specific school health services (Hawkins, Spigner, & Murphy, 1990; Making the Grade, 1996). Furthermore, while a number of school-based health centers are being established in rural areas (Riggs & Chin, 1988), only one published study has attempted to identify the felt needs of adolescents in rural areas (Rickert, Davis, Riley, & Ryan, 1997).

School-based services do offer a potential solution to eliminating the barriers that prevent adolescents from receiving needed services. Given this fact, the purpose of this study was to assess the felt needs for comprehensive school health services as perceived by adolescents in a rural high school.

Methods

Survey Population

Five hundred and thirty-five adolescents from a rural southern Illinois high school were surveyed during the Spring of 1994. The high school selected for the study was located in a town with a population of under 10,000 people with 87% being white and 11% being black. Seven-hundred and forty-four 9-12 grade students were enrolled in the school. Five-hundred and forty-five students responded to the survey. Of the 535 inventories, nearly 60% were completed by adolescents 16 years of age or under. Ninth graders represented the largest portion of adolescents completing the inventory (see Table 1).

Instrument Development

To fulfill the purpose of the study the Adolescent Health Services Inventory (AHSI) was developed based upon the conceptual framework for health service utilization (Aday & Anderson, 1974). The conceptual framework for health service utilization was initially developed as a guide for studying access to medical care and suggests that utilization of health care services depends on characteristics of the population.

These characteristics include predisposing, enabling and need characteristics.

Predisposing and enabling characteristics regarding adolescent use of health services were identified through a review of the literature. The identified predisposing factors included age, grade in

Table 1. Frequencies and Percentages of Survey Participants

Characteristic	Frequency	Percent
<i>Age</i>		
14 and under	51	9.5
15	138	25.8
16	131	24.5
17	215	40.2
<i>Grade</i>		
9 th	151	28.2
10 th	128	23.9
11 th	134	25.0
12 th	122	22.8
<i>Sex</i>		
Male	248	46.4
Female	286	53.6
<i>Racial Background</i>		
White	455	87.2
Non-White	67	12.8

school, race, sex, and perceived importance of health services located in the school (attitude). To assess perceived importance, a five point Likert scale was used with one representing not important and five representing very important. The identified enabling factors included family employment, living arrangement, Medicaid participation, income status, and reasons why adolescents may not be able to use health services. Need for health services were

assessed by determining which services (or those commonly offered in school-based health centers) adolescents wanted to use during the past year but for some reason couldn't.

Utilization of health services was characterized by the kind of health service received and the locations. Therefore, to assess utilization of services, adolescents were asked to select from a list which services they received over the past year and which of all available providers they received services from. A list of available adolescent health service providers was generated through discussions with local health professionals. Potential utilization of school health services in the future was then evaluated by assessing the perceived use of specific school health services (Hawkins, Spigner, & Murphy, 1990). Services were listed opposite a five point Likert scale and adolescents were asked to circle the best response between one (not likely) and five (very likely). The services listed in the AHSI were those commonly provided in schools with a school-based health center (Adelman, Barker, Nelson, 1993; Allensworth, 1994; Kane, 1993).

This instrument was divided into five primary sections that included: (1) health services received, (2) health service utilization, (3) health services wanted, (4) utilization of services, and (5) importance of services.

Readability

Using the Flesch-Kincaid readability test, the readability of the initial draft of the AHSI was determined to be at the seventh grade level. This is the preferred level of most readers. The Flesch reading ease score was 69. Flesch reading ease scores that range between 60 and 70 are considered of standard difficulty.

Pilot Study

A pre-pilot and pilot study was conducted. The pre-pilot was conducted with three students ranging from seventh grade to eleventh grade. The students were asked to take the AHSI in their home with a parent present in order to determine survey completion time. It took each student 10-11 minutes to complete the survey.

Following the pre-pilot, a pilot was conducted using two classes of health education students. Thirty-eight ninth grade students participated in the pilot. The teacher of the classes was instructed ahead of time as to the instrument administration procedures. As the instrument was administered, careful documentation of

teacher introduction time, student comments and completion time was recorded by the primary researcher. Based on the pilot, minor changes were made in the survey design and administration procedures.

Data Collection

Data were collected using the same procedures used in the pilot study. Teachers were trained during a faculty meeting as to the appropriate protocol for instrument administration. Each teacher was given a packet that included the appropriate number of surveys for students enrolled in their home room class. The protocol for administering the AHSI included an introduction that explained the importance of the study, a statement regarding the voluntary nature of participation, and procedures for administering the instrument. The procedures section instructed teachers to read verbatim to students the general instructions and specifics regarding the voluntary and anonymous nature of the survey. Other instructions for monitoring, answering questions, and completing the survey were included as apart of the protocol.

Instrument Reliability

Cronbach's Alpha coefficients were calculated using study data in order to determine internal-consistency reliability of the AHSI. Each section had an Alpha reliability of greater than 0.90. To ensure inter-rater reliability in this study, seven percent of the survey were recoded prior to data analysis.

Statistical Analysis

The Statistical Analysis System (SAS) was used to run descriptive, Chi-square, and Standardized Residuals. Descriptive statistics were calculated for each survey question. Statistical analysis using Chi-square and Standardized Residuals was conducted on the health services received and health services wanted sections of the AHSI. Standardized Residuals were calculated in order to determine which of the cells of the Chi-square contingency tables were major contributors to any identified significance.

Results

Health Services Received

To determine the utilization of specific health services, adolescents were asked what health services they received over the past year. Fifty-percent or more of the adolescents reported to have received physical exams (77.0%), dental exams (71.0%), shots (66.4%), care for the flu, colds, earaches, and sore throats (65.6%), and first aid care (53.3%) in the past year.

Less than 12% of the adolescents received such services as weight management counseling (11.6%), suicide prevention counseling (11.6%) and physical, sexual, or emotional abuse counseling (11.0%) (see Table 2). A summary of services only received by females is found at the bottom of Table 2.

Health Service Utilization

In order to better understand utilization of services, students were asked to indicate which health care providers they received health services from over the past year. Of the health service providers presented in the AHSI, 37.2% of the adolescents reported having received services from their private doctor within the past year and 21.9% from a private dentist. Twenty-eight percent of the adolescents reported having received services from the county health department while 32.1% received services from one of two community clinics in the region. Eighteen percent of the adolescents received services from a hospital emergency room while 6.2% reported having received services from the Family Practice Center at a regional hospital. Lastly, similar proportions of adolescents received services in the school from a school nurse (5.8%) as had received services from a regional Adolescent Health Center (6.0%).

Chi-square statistical procedure was used to analyze the difference between specific health services received by adolescents in the past year by the health service providers. For those Chi-square statistics that were significant at the .05 level, a Standardized Residual was calculated for each contingency table in order to determine which of the cells were major contributors to the significance. Even though Chi-square may indicate a significant difference, Standardized Residuals may reveal that the significance was in a cell that was not of interest to answering the research question. Table 3 illustrates a Chi-square contingency table, as produced by the SAS statistical program for the independent variable (hospital emergency room) by the dependent variable (physical exams). For example, in order to answer the research questions for this study, findings were analyzed using the data presented in cell three and cell four of the Chi-square contingency tables.

Table 2. Frequencies And Percentages of Health Services Received by Adolescents over the past 12 Months

Services	Frequency	Percent
<u>All Students</u>		
Physical Exams	412	77.0
Dental Exam	384	71.0
Shots	355	66.4
Care for the Flu, Colds, Ear Aches	351	65.6
First Aid Care	285	53.3
Information About STDs, Including AIDS	215	40.2
Blood Pressure Screening	196	36.6
Care for Skin Problems	177	33.1
Prescription and Dispensing of Birth Control Methods	131	24.5
Information about Injury Prevention	119	22.2
Counseling and Information for Drug Problems	113	21.1
Counseling and Information for Alcohol Problems	110	20.6
Counseling on Birth Control Methods	110	20.6
Counseling on Depression	87	16.3
Counseling to Improve Communication Between You and Your Parents/Family	84	15.7
Tests or Treatment for STDs	70	13.1
Stress Management	66	12.3
Quit Smoking Programs	65	12.1
Counseling to Improve Communication Between You and You and Your Teacher	65	12.1
Weight Management Counseling	62	11.2
Suicide Prevention Counseling	62	11.6
Job Counseling	59	11.0
Physical, Sexual, or Emotional Abuse Counseling	59	11.0
Parenting Classes	56	10.5
<u>Female Students</u>		
Gynecological Exams/Cancer Screening	61	24.5
Care for Menstrual Problems	57	22.9
Care for Minor Gynecological Problems	45	18.2
Pregnancy Testing	42	16.9
Prenatal Care	33	13.3
Women, Infant, and Children (WIC) Program	31	12.5
Unplanned Pregnancy Counseling	31	12.5

Table 3. Chi-Square Contingency Table for Hospital Emergency Room Use By Physical Exam Use

Physical Exams	Hospital Emergency Room	
	No	Yes
Frequency		
Percent		
Row PCT		
Col PCT		
	<i>Cell One</i>	<i>Cell Two</i>
	102	21
No	19.17	3.95
	82.93	17.07
	23.50	21.43
	<i>Cell Three</i>	<i>Cell Four</i>
	332	77
Yes	62.41	14.47
	81.17	18.83
	76.50	78.57

Chi-square analysis indicated a significant difference ($p < .05$) between several of the health care providers and the services adolescents received during the past year. Standardized Residual calculations revealed adolescents receiving treatment for sexually transmitted diseases, counseling on birth control methods, and dispensing of birth control methods, a significantly higher number of students were receiving services from a public health provider (i.e., community health center, county health department, adolescent health center).

Health Services Wanted But Unable to Receive

In order to assess the need for health services, adolescents were asked which health services they wanted to use in the past year but could not. Table 4 illustrates the services that adolescents were unable to receive. The results indicated that less than 12% of the adolescents were unsuccessful at obtaining any of the given health services. The highest percentage (11.8%) indicated that they were unable to receive stress management services. Stress management services were followed by weight management counseling (11.4%), counseling to treat depression (11.4%), counseling on birth control methods (11.2%), tests and treatment for sexually transmitted diseases (11.2%), prescription and dispensing of birth control methods (10.1%) and job counseling (9.9%). Physical exams

Table 4. Frequencies and Percentages of Health Services Adolescents Wanted But Were Unable to Receive over the past 12 Months

Services	Frequency	Percent
<u>All Students</u>		
Stress Management	63	11.8
Weight Management	61	11.4
Counseling		
Counseling to Treat Depression	61	11.4
Tests and Treatment for STDs	60	11.2
Counseling on Birth Control Methods	60	11.2
Prescription and Dispensing of Birth Control methods	54	10.1
Job Counseling	53	9.9
Counseling to Improve Communication Between you and Your Parents/Family	53	9.9
Dental Exams	51	9.5
Parenting Classes	51	9.5
Care for Skin Problems	50	9.3
Quit Smoking Programs	49	9.2
Suicide Prevention Counseling	49	9.2
Physical, Sexual, or Emotional Abuse Counseling	46	8.6
Counseling to Improve Communication Between You and Your Teachers	44	8.2
Blood Pressure Screening	42	7.9
Counseling and Information for Alcohol Problems	42	7.9
Counseling and Information for Drug Problems	40	7.5
Information About STDs, Including AIDs	36	6.7
Information About Injury Prevention	29	5.4
First Aid Care	27	5.0
Care for Flu, Colds, Earaches, and Sore Throats	26	4.9
Physical Exams	21	3.9
Shots	15	2.8
<u>Female Students</u>		
Care for Menstrual Problems	33	13.3
Gynecological Exams/Cancer Screening	33	13.3
Unplanned Pregnancy Counseling	23	9.3
Care for Minor Gynecological Problems	23	9.3
Pregnancy Testing	22	8.9
Prenatal Care	19	7.7
Women, Infant, and Children (WIC) Program	18	7.3

(3.9%) and shots (3.8%) represented the two smallest percentages of services students were unable to receive. Chi square analysis revealed that there was no significant difference between male and female use of these services.

Chi square calculations did reveal a difference between grade level ($p < .05$) on a variety of issues. More specifically, there were more 9th graders than 10th, 11th, or 12th graders who wanted but were unable to receive care for skin problems; blood pressure screening; quit smoking programs; counseling to improve communication between themselves and teachers; physical, sexual, or emotional abuse counseling; suicide prevention counseling; and parenting classes.

Chi-square analysis indicated that all adolescent health services were significantly different ($p < .05$) by race with the exception of wanting physical exams and counseling to improve communication between parents/family. Twenty-seven of the 31 services were significantly different at the .001 level. Standardized Residual calculations revealed that without exception, more non-white adolescents indicated they wanted but were unable to receive health services than did white adolescents.

Importance of School Health Center Services

As a predisposing factor of future health service utilization, adolescents were asked to indicate on a five point Likert scale how important it is to have specific health services available in their school. Mean scores from the five point Likert scale were calculated for each of the health services (see Table 5). The six most important services as indicated by the mean scores were information about STDs, including AIDS (4.19), first aid care (4.01), counseling and information for alcohol problems (3.91), counseling and information for drug problems (3.90), physical exams (3.61), and shots (3.61).

Likely Utilization of Future School Health Center Services

In order to assess future utilization of health services, adolescents were asked how likely it would be for them to use specific health services if they were offered in their school. Mean scores were calculated for each of the health services with 1=low likelihood of use and 5=high likelihood of use. Those services that adolescents are more likely to use include first aid care (3.52) and physical exams (3.29). The remaining services revealed mean scores of less than 3.0 indicating that adolescents would be less likely to use these services if they were offered in their school. The means and standard deviations of the likelihood of adolescent school health service use by service is presented in Table 6.

Discussion

Statistical analysis revealed that students in the study had received basic medical care (i.e., physical exams, dental exams, shots, care for flu., colds, earaches and sore throats) through various community service providers. Despite the potential barriers of receiving health services in this rural community,

Table 5. Health Services Adolescents Feel Are Most Important to Have Available in Their School: Mean Scores and Standard Deviations

Services	Means ^a	Standard Deviation
Information About STDs	4.18	1.21
First Aid Care	4.01	1.22
Counseling and Information for Alcohol Problems	3.91	1.34
Counseling and Information for Drug Problems	3.90	1.38
Physical Exams	3.61	1.36
Shots	3.61	1.46
Counseling on Birth Control Methods	3.52	1.39
Suicide Prevention Counseling	3.51	1.48
Prescription and Dispensing of Birth Control Methods	3.48	1.43
Tests or Treatment for STDs	3.48	1.52
Counseling of Treat Depression	3.47	1.42
Physical, Sexual, or Emotional Abuse Counseling	3.37	1.42
Care for Flu, Colds, Earaches, and Sore Throats	3.26	1.40
Unplanned Pregnancy Counseling	3.23	1.44
Quit Smoking Programs	3.20	1.44
Job Counseling	3.07	1.34
Counseling to Improve Communication Between You and Your Parents/Family	3.06	1.34
Stress Management	3.05	1.37
Pregnancy Testing	2.95	1.52
Counseling to Improve Communication Between You and Your Teacher	2.93	1.38
Women, Infant, and Children (WIC) Program	2.92	1.43
Dental Exams	2.89	1.44
Information About Injury Prevention	2.85	1.37
Parenting Classes	2.85	1.32
Prenatal Care	2.87	1.40
Blood Pressure Screening	2.75	1.36
Care for Skin Problems	2.61	1.40
Weight Management Counseling	2.60	1.32
Gynecological Exams/Cancer Screening	2.52	1.45
Care for Menstrual Problems	2.49	1.35
Care for Minor Gynecological Problems	2.45	1.41

^a Means ranged from 1 Not Important to 5 Very Important

adolescents were taking advantage of public health providers for the provision of sexuality related services (e.g., family planning, treatment of sexually transmitted diseases), however, over 1 in 10 adolescents were wanting but were unable to receive sexuality related services. Adolescents also reported that information about sexually transmitted diseases was the most important health service to have available in the school health center. As health professionals, it can not be assumed that if sexuality related services are provided in rural communities, they are also accessible to adolescents. In this study, barriers continued to exist that prevented adolescents from utilizing sexuality related services.

While this study indicated that the majority of adolescents were not wanting or were able to receive health services in the past year, over one in ten students reported unmet health care needs relating to health counseling and health education (see Table 4). Topping the list of wanted services included stress management, weight management counseling, and counseling to treat depression. These findings are consistent with the findings of the National Adolescent Student Health Survey (National Adolescent Student Health Survey, 1988). Dryfoos (1991) has also indicated that depression is one of the four major problems that are facing youth today. This becomes particularly important due to the fact that depression among adolescents is one of the primary emotional states associated with suicide attempts (Spirito, Brown, Overholser, & Fritz, 1989). Though not reported as one of the top services needed in this study, suicide prevention counseling was reported as being wanted by 49 students (9.2%). Over 16% of the adolescents reported having received counseling for depression within the past year. Findings related to weight management counseling are also consistent with the findings of Hawkins, Spigner, and Murphy (1990). In their study, health education services for being overweight or underweight were reported as the number one service adolescents felt they needed.

Table 6. Likely Usage of School Health Services by Adolescents: Mean Scores and Standard Deviations

Services	Mean ^b	Standard Deviation
First Aid Care	3.52	1.46
A Physical Exam	3.28	1.52
Information About STDs, Including AIDs	2.97	1.55
Shots	2.88	1.54
Care for the Flu, Colds, Earaches and Sore Throats	2.86	1.52
Prescription and Dispensing of Birth Control Methods	2.66	1.61
Dental Exams	2.64	1.50
Stress Management	2.51	1.50
Job Counseling	2.51	1.53
Counseling on Birth Control Methods	2.48	1.53
Blood Pressure Screening	2.43	1.37
Counseling to Treat Depression	2.42	1.45
Counseling and Information for Alcohol Problems	2.40	1.52
Counseling and Information for Drug Problems	2.39	1.54
Pregnancy Testing	2.34	1.56
Tests or Treatment for STDs	2.33	1.54
Care for Menstrual Problems	2.33	1.52
Unplanned Pregnancy Counseling	2.29	1.54
Treatment for Skin Problems	2.28	1.39
Counseling to Improve Communication Between You and Your Parents/Family	2.25	1.45
Information About Injury Prevention	2.20	1.37
Suicide Prevention Counseling	2.19	1.48
Weight Management Counseling	2.16	1.43
Counseling to Improve Communication Between You and Your Teacher	2.10	1.42
Gynecological Exams/Cancer Screening	2.10	1.46
Quit Smoking Programs	2.09	1.43
Women, Infant, and Children (WIC) Program	2.06	1.42
Parenting Classes	2.05	1.40
Care for Minor Gynecological Problems	2.05	1.43
Prenatal Care	2.00	1.39

^b Means ranged from 1 Not Likely to 5 Very Likely

Consistently more 9th graders as compared to 10th, 11th, and 12th graders, wanted specific health services (e.g., skin problems, quit smoking programs, counseling to improve communication, abuse counseling, suicide counseling). These findings suggest that greater attention may need to be given to addressing the specific health care needs of adolescents who are just entering high school.

In this study, it was evident that many students were receiving basic health care services from community providers but also felt it was important to have some of these health care services also provided in the school. For example, the highest percentage of adolescents indicated that they had received physical exams. Also, adolescents reported that physical exams were the second school health service they would likely use. When comparing the health services adolescents felt were important to have in school with the school health services they would likely use, mean scores were generally lower for the likely usage of health services. This suggests that respondents felt that many of the services are important to have but they do not perceive they would ever use them.

These findings should be interpreted in light of the limitations to the study. For example, generalizability of the study could be limited because the students who participated in this study may or may not be representative of students in other rural town high schools. Also, needs reported by students were perceived/felt needs and may not be reflective of their actual needs. Actual needs are the needs of the target population as seen through the eyes of the health professional. Felt or perceived needs are those needs identified through the eyes of the target population. A common method of determining perceived/felt needs is through the self-report survey. Other methodologies such as focus groups or nominal group processes might also provide valuable findings but were not a part of this study.

Implications for Rural School Health Services

The purpose of this study was to determine the felt need for comprehensive school health services in a rural high school. These survey results have important implications for the establishment of rural school health services programs. First, emotional/mental health services should be a central focus of those services provided through a rural school-based health

center. Traditionally, the emphasis has been on addressing the physical needs of students. While the traditional perception may be that students are lacking the necessary services to meet their physical needs, emotional/mental health services are extremely important for the rural school health services program.

Students in this study saw stress management as the service they most wanted. While stress management is sometimes available through regular health education curriculum, it may not be meeting the need of students. Students at this rural high school receive one semester of health education from a health educator/coach sometime during their four years of matriculation. As health education programming within the classroom falls short of meeting the varied health needs of students, school-based health centers should be sensitive to these needs. For example, school-based health centers look to incorporate stress management programming into health center activities.

Second, while adolescents reported wanting emotional/mental health services made available at school, they also reported they would not be likely to use them if offered in their school. Two possible explanations may illustrate the reason for this discrepancy. One, many students see their friends struggling with health related issues but do not perceive themselves as ever having a need for health related services. Two, using emotional/mental health services may be uncomfortable due to the stigma often attached to using psychological services. Program planners would need to further explore this discrepancy in an effort to address the barriers to emotional/mental health services. To reduce anxiety and increase the likely usage of emotional/mental services as well as other services, educational-orientation programming for parents and administrators regarding school-based health center services would be an important activity to consider at the beginning of the school year. School health center orientation programs that introduce students and parents to the health center services would help to familiarize these stakeholders with clinic services and protocols. This may also require providing an awareness that treating health problems requires care for both psycho-social and physical illnesses (Parcel, Nader, & Meyer, 1977). Providing these orientations can ultimately help build a normative culture in which

all students would feel comfortable receiving physical and mental/emotional services through a school health center.

Third, a number of adolescents in this rural high school reported wanting to receive a variety of sexuality related services and felt they would be important to include in a school health center. When looking at these data, again there was a discrepancy between the school-based health services students wanted to receive or felt was important and what school-based health services they would likely use. During program planning, planners would again be wise to thoroughly explore this discrepancy to determine the need for sexuality related services. Certainly, if sexuality services are implemented, confidentiality would need to be insured in order to facilitate usage.

In conclusion, school-based health centers offer one strategy for combating the social morbidities that threaten the health and education of adolescents. Helping adolescents receive comprehensive health services within the school can ultimately help them remain healthier and ultimately achieve their academic potential. Based on the self-reported responses, adolescents in this study indicated a need for the provision of certain services within their rural high school.

Acknowledgment

This study was partially funded by a grant from the Center for Rural Health and Social Service Development at Southern Illinois University at Carbondale.

References

- Advocates for Youth. (1995). *A Guide to School-Based and School-Linked Health Centers Volume IV: Assessing and Evaluating School Health Center*. Washington, D.C.: Advocates for Youth
- Aday, L.A. & Andersen, R. (1974). A framework for the study of access to medical care. *Health Services Research*, 9, 208-220.
- Adelman, H.S., Barker, L.A., & Nelson P. A. (1993). A study of a school-based clinic: Who uses it and who doesn't? *Journal of Clinical Psychology*, 22(1), 52-59.
- Allensworth, D.D. (1994). *The comprehensive school health challenge, volume one: Promoting health through education*. Santa Cruz, CA: ETR Associates.
- Allensworth, D.D. & Kolbe, L.J. (1987). The comprehensive school health program: Exploring an expanded concept. *Journal of School Health*, 57, 409-412.
- Dryfoos, J.G. (1991). School-based social and health services for at-risk students. *Urban Education*, 26, 118-137.
- Elders, J.M. (1993). Schools and health: A natural partnership. *Journal of School Health*, 63, 312-315.
- Glans, J.E. & Blyth, D.A. (1990). *Education research: Competencies for analysis and application*. Chicago, IL: American Medical Association.
- Hawkins, W.E., Spigner, C., & Murphy, M. (1990). Perceived use of health education services in a school-based clinic. *Perceptual and Motor Skills*, 70, 1075-1078.
- Kane, W.M. (1993). *Step by step to comprehensive school health: The program planning guide*. Santa Cruz, CA: ETR Associates.
- Lavin, A.T., Shapiro, G.R., & Weill, K.S. (1992). Creating an agenda for school-based adolescent health care program. *Journal of Adolescent Health*, 62(6), 212-228.
- Making the Grade. (1996). *Access to comprehensive school-based health services for children and youth*. Washington, DC: Making the Grade.
- National Adolescent Student Health Survey. (1988). NASHS: Highlights of the survey. *Journal of Health Education*, 19(4), 4-8.
- Office of Technology Assessment. (1991). *Adolescent health - Volume I: Summary and policy options*. Washington, DC: US Government Printing Office.
- Parcel, G.S., Nader, P.R., & Meyer, M.P. (1977). Adolescent health concerns, problems, and patterns of utilization in a triethnic urban population. *Pediatrics*, 60(2), 156-164.
- Rickert, V.I., Davis, S.O., Riley, A.W., & Ryan, S. (1997). Rural school-based clinics: Are adolescents willing to use them and what services do they want? *Journal of School Health*, 67, 144-148.
- Riggs, S. & Chin, T. (1988). Adolescents' willingness to use school-based clinic in view of expressed health concerns. *Journal of Adolescent Health Care*, 9, 208-213.
- Schlitt, J.J., Rickett, K.D., Montgomery, L.L., et al. (1995). State initiatives to support school-based

health centers; A national survey. *Journal Adolescent Health, 17(2)*, 68-76.

Spirito, A., Brown, L., Overholser, J., & Fritz G. (1989). Attempted suicide in adolescence: A review and critique of the literature. *Clinical Psychology Review, 9*, 335-363.

Williams, S.J. & Torrens, P.R. (1993). *Introduction to health services*. Albany, NY: Delmar Publishers Inc.

Copyright © 1999 IEJHE