

School Based Mental Health Promotion: Nursing Interventions for Depressive Symptoms in Rural Adolescents

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Abstract

Integrating health education and health promotion into practice is routinely done by nurses. According to a national survey, the need for mental health services has increased in over two thirds of school districts. This article describes the screening of 193 adolescents in Rural Western Pennsylvania's 9th, 10th, and 11th graders for depressive symptoms. Ten percent (N=19) of students had depressive symptoms, the majority of which were female. These students were interviewed by the research team. The outcome themes and referrals are reported as well as the discussion of implications for nurses in screening for depression and health promotion.

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Introduction

The discussion regarding the utility of school-based support interventions is not a new one. While the first generation of school-based interventional programs focused mainly on reproductive health counseling, there has been a growing consensus among mental health professionals that schools also represent the optimal site for providing mental health services (Adelman & Taylor, 1991). There are compelling arguments for this point of view. Schools provide a single point of access to services in a non-threatening atmosphere. Placing services in schools reduces barriers like transportation and financial problems or stigma related issues that constrain the use of community-based mental health services to students in need (Weist, Paskewitz, Warner, & Flaherty, 1996). Schools offer a valuable environment with opportunities to improve treatment outcomes (Evans, 1999), an important factor in maintaining therapeutic gains.

Another issue that must be addressed is the relative inequality of available services that exists in rural areas. Rural areas are notorious for their lack of health care services, especially the delivery of mental health services (Brown &

Herrick, 2002). Further, there is a lack of coordination of the few resources that are available to most rural areas (Anderson & Gittler, 2005). This underscores the need for services to be coordinated.

School-based mental health programs are becoming increasingly prominent (Weist, Ambrose, & Lewis, 2006) and although the numbers of empirical studies evaluating school-based mental health services are still relatively few, there is growing evidence that school-based mental health programs are effective. In a pilot study involving 73 inner-city Baltimore high school students, Weist et al. (1996) compared students not receiving mental health treatment with students who did receive school-based mental health services. Students in the treatment group showed improvement in self-concept and decreased depression scores while those in the comparison group showed an increase in depression scores. Students in the treatment group also showed a non-significant decrease in anger and anxiety.

In a randomized, controlled, clinical trial, Puskar, Sereika, & Tusaie-Mumford (2003) implemented the Teaching Kids to Cope (TKC)

intervention, a group administered cognitive-behavioral intervention aimed at improving psychosocial coping skills, to adolescents in rural southwestern Pennsylvania schools. An adolescent depression inventory and a coping inventory were administered pre and post intervention. Results showed improvement in depressive symptomology and certain coping skills for students in the intervention group.

Purpose

A federal grant from the National Institutes of Health (NIH), National Institute of Nursing Research (NINR) was obtained by researchers from the University of Pittsburgh School of Nursing. A goal of the project was to measure depressive symptoms in high school students. One in six rural families live in poverty; high unemployment and other economic pressures put stress on teens, leading to increased risk of delinquency, alcohol and substance abuse and depression. It is no surprise, therefore, that youth who reside in rural areas are susceptible to depressive symptoms. A specific aim was to describe depressive symptoms in rural youth.

Methods

Sample and Setting

Subjects were male and female students in the ninth, tenth or eleventh grade from three Western Pennsylvania rural-area public high schools. Students were enrolled in regular, college preparatory, or honor classes with the ability to read and write in English to order to meet the inclusion criteria. Consents were distributed and 193 consents were returned signed by the student and parent or guardian.

Subjects were predominantly white (86.5%, n=167) and ranged in age from 14 to 17 years (mean=15.57). Females (53.4%, n=103) slightly outnumbered males (46.6%, n=90). A majority of the students were in the ninth grade (57 %, n=110), next was tenth grade (26.4%, n=51) and the smallest proportion was eleventh grade (16.6%, n=32). Most were participating in academic programs (88.6%, n=171) with the remainder in other programs including vocational, business, and remedial. Over one fourth of the sample worked (28.5%, n=55) an average of 14.1 hours per week.

The two highest levels of the father's education, according to the student, were high school (39.4%) and bachelor's degree (9.8%). 24.4% of the students did not report the level of education of their father or mother. The highest levels of the mother's education, as reported by the student, were high school (35.2%) and bachelor's degree (17.1%). The specific jobs the father held varied widely, with mechanic being the most frequently reported (6.7%, n=13). Some other jobs reported were electrician/plumber, mill worker (3.6%, each n=7); construction (3.1%, n=6); dairy, executive, truck driver (2.6%, each n=5); and manager, maintenance, welder, steel worker (2.1%, each n=4). The most frequently reported job the mothers held was being a nurse (10.9%, n=21); then secretary (5.2%, n=14); teacher (5.2%, n=10); sales (3.6%, n=7); and waitress (3.1%, n=6).

Procedure

Consent was received from the school administrators and the University of Pittsburgh Institutional Review Board to conduct this study. The research team presented information at each school site. The students reported to the auditorium where the research team introduced themselves and described the project. Questions were addressed and consents were distributed that included designated dates of when and where to return signed consents. After both student and parent/ guardian returned the signed the consents, they were given to the research team for review. Only those students with consents completely signed and initialed by both student and parent/guardian were in the study. The measures, including an instrument that screened for depressive symptoms, were administered in a group setting during school time and took approximately two hours to complete. The students were paid \$10 for completing the battery of measures.

Instrument

A total of 193 students at three rural high schools were screened using the Reynolds Adolescent Depression Scale-2nd edition (RADS-2) (Reynolds, 2002). The RADS-2 is a self-report measure of depressive symptoms via

30 items with a Likert response format. Dysphoric mood, anhedonia/negative affect, negative self-evaluation and somatic complaints are descriptive components that are measured by the tool and are clinically meaningful for depression. Item # 14 is identified as a critical measure for the risk of self injury which requires prompt evaluation for suicidal ideation. The tool has been tested on more than 9,000 adolescents and has an internal consistency reliability coefficient of 0.93 (strong). Over three months, the retest reliability is 0.79. A raw score cutoff of 77 was found to be a clinically relevant level of depressive symptomatology, not a formal diagnosis of depression (Reynolds, 2002). Our team recommends that anyone who scored 77 or above or positively answered a critical item #14 on the RADS-2 should be seen within two days of testing to assess for clinical depression and suicidal intent.

High Risk Follow-up Interviews

An Advanced Practice Clinical Nurse Specialist and a Research Specialist performed the follow-up interviews. A structured interview form was used that was adapted from the KIDDIE-SADS-PRESENT EPISODE (K-SADS-P) to assess for risk of depression (Puig-Antich & Ryan, 1986). The interviews covered depressive symptoms, mood, suicidal ideation, self esteem and neuro-vegetative symptoms.

Results

Descriptive statistics, including measures of central tendency and frequencies, were run on the baseline data using SPSS for Windows. A total of 193 teens completed the Reynolds Adolescent Depression Scale-2nd edition (RADS-2). Ten percent (10%, n=19) reported depressive symptoms while the majority (90%, n=174) were within normal range. Of the 10% requiring follow up evaluation, most were female (n=15).

After the testing and scoring of the RADS-2, the team interviewed all students who reported

depressive symptoms, self harm ideation, or who requested to see a counselor. Nineteen students were identified as high risk, due to a RADS-2 score of 77 or above, and four additional students were identified at risk for self harm (item #14). From the demographic questionnaire, eight students indicated they wanted to talk to someone right away about problems, adding seven interviews (due to one previously interviewed as high risk on RADS-2). A total of 30 students were interviewed.

The major theme focused around family stressors (Table 1). Some examples of family stressors were: having an abusive father, parent's divorce, a parent favoring a sibling, brother with drug and alcohol problem, and moving. One student expressed a family stressor as transition from foster home to being adopted. Some emotional problem examples were reported as being "sad", "depressed", or "angry". There were students that reported "I feel like hurting myself" as sometimes; two students reported misreading the question; four of these students did not have a depressive score; and seven had high risk depressive scores. The interview outcomes revealed that none of the students wanted to die. Three had a history of self cutting; while three were limited to thoughts of wanting to cut themselves. The other ways they would hurt themselves were reported as throwing up, punching legs, or stabbing self. Table 1 contains the themes expressed from the interviews in rank order.

Those interviewed and found depressed or at risk for hurting themselves were referred for further evaluation (Table 2). The majority of the students were referred to the school nurse and guidance counselor as needed. Eight were currently in treatment for mental health problems or were in school support programs. Six mothers were contacted. In Table 2, the health promotion follow-up outcomes and referrals delineate how many students were referred and where they were referred.

Table 1
Frequencies of Themes Expressed in 30 Follow-up Interviews*

Themes from Interview	Number of Times Reported
Family stressors	11
Sometimes feel like “hurting myself”	11
Emotional problems	9
School concerns (e.g., failing)	7
Misread question	6
Somatic issues: Cancer, cerebral palsy, headache	5
Loneliness, social withdrawal	4
Low self esteem	3
Grief	2
Friend issues	1
Rejection by boyfriend	1

* Note: Some subjects expressed more than one theme.

Table 2
Health Promotion Follow-up Outcomes and Referrals of High Risk Students (n = 30)

Outcomes & Referrals	Number of Subjects
Referred to school nurse and guidance counselor	10
Misread question and required no intervention	6
Currently in treatment	5
Called parent and referred to outside agency	4
Currently in school support	3
Called parent and child currently in treatment	1
Called parent, in vocational support, referred to outside agency	1
All encouraged to utilize support from school nurse and school guidance counselor as needed	30

According to the Substance Abuse and Mental Health Services Administration (SAMHSA) (2006), the need for mental health services has increased in over two thirds of school districts surveyed. Top mental health problems for males reported were: social/interpersonal or family problems (66%), aggression or disruptive behavior (54%), and alcohol/drug problems (34%). Top mental health problems of females were: social/interpersonal or family problems (74%), depression/grief (47%), and anxiety (36%). We found ten percent with high risk depressive symptom scores. The major themes expressed during the follow up interviews were family stressors, emotional problems and school

concerns. Low self esteem theme was reported during several interviews.

To expand clinical services in school, many initiatives have emerged according to a policy and practice analysis of the current status of mental health in school (Center for Mental Health in Schools, n.d.). Some professionals suggest that schools should not do screening because they believe it infringes on the rights of families and students when students are identified “at risk”. On the contrary, the formal *pro* position argues that schools have personnel that are capable and well situated to quickly provide privacy and confidential help. The authors agree that screening and referrals, to

ensure safety and timely mental health interventions, far outweigh any negative effects (Center for Mental Health in Schools, 2006). Health promotion is a role for school nurses, guidance counselors, health teachers, and the other members of the school's support team.

School nurses are in key positions to assess for mental health symptoms. They are an integral member of the school team. Mandatory screening for physical health gives them an opportunity to be in contact with all students. Their holistic education provides them with the skills to assess mental health needs while performing routine tasks. Administering medications during the school day also gives them an opportunity to assess their student's mental health needs. Teachers and staff have daily access to the nurse's expertise. They are a trusted, vital, and dependable resource for students, families, faculty and staff.

Surgeon General's Conference and the President's Freedom Commission

Mental health is fundamental to overall health and well-being is well established (U.S. DHHS, 2000). What is not clear is whether our current system is providing appropriate and effective treatment. The state of mental health services for children and how those services can best be delivered has been the focus of two prominent commission studies. Both the Surgeon General's Conference on Children's Mental Health (U.S. DHHS, 2000) and the President's New Freedom Commission on Mental Health (2001) examined the spectrum of mental health problems facing children today, how well these problems are being addressed by the current system, and how the existing systems that serve children can be improved. Concerning findings have emerged from these comprehensive evaluations but so have many thoughtful recommendations for promising strategies to improve the quality and the way in which mental health services are delivered to our children.

The need for a continued emphasis on school-based programs was a finding common to both commissions. Findings from the Surgeon General's conference (U.S. DHHS, 2000) specifically identified school-based programs as

a way to develop cost effective, proactive systems that improve access to services, especially in rural areas where schools can act as primary conduits for mental health services where children and their families congregate. An outcome of the conference was the Action Agenda for Children's Mental Health. This agenda outlines key goals and initiatives for nurses to focus on. Among these is the need to continue development, dissemination, and implementation of scientifically proven prevention and treatment services, improve the assessment and recognition of mental health needs in children, and train frontline providers to recognize and manage mental health issues as well as educate them about scientifically-proven prevention and treatment services (U.S. DHHS, 2000). Nurses are primarily educated on a prevention and health promotion model. Their practice is based on scientifically proven treatment and as a patient advocate they can educate and screen for mental health problems. Nurses are key members of an interdisciplinary team who can promote screening and intervention with students needing mental health services.

The report of the President's New Freedom Commission on Mental Health (2001) recommends the need for new evidence-based treatments to be tested in real world practice settings with diverse populations to identify programs that work and can be disseminated. It calls for university-based-training and in-service training for those professionals that are in the "front line of treatment". During presentations to the commission, evidence was provided in support of putting mental health services in the school systems. It was suggested that school-based programs improved access, minimized stigma issues, and offer the opportunity to observe and intervene directly in the setting where most of the student's time is spent (President's New Freedom Commission on Mental Health, 2001).

Conclusion

The findings of our study add credence to the importance of having nurses involved in screening mental health issues and teaching mental health promotion in the schools. Nearly

three quarters (73%) of the schools reported that “social, interpersonal, or family problems” were the most frequent mental health problems for males and females reported in the study, *School Mental Health Services in the United States, 2002-2003* (SAMHSA, 2006). Other findings included: one-fifth of students on average received some type of school-supported mental health services in the school year prior to the study; school nurses spent approximately a third of their time providing mental health services; and almost half of school districts (49%) used contracts or formal agreements with community-based individuals and or organizations to provide mental health services to students. The outcomes of our study’s health promotion follow

up interviews reflected 1) the use of school-supported mental health services, 2) nurse role, and 3) community based organizations to promote mental health in adolescents, which are similar to the SAMHSA findings.

Early detection and intervention are health promoting activities that can be accomplished in schools by nurses. Nurses in schools need to be cognizant of youth with depression. Some important suicide protective factors are social support, optimism, and resilience which can be fostered by the nurse through screening and referrals. Nurses are in a crucial position to be able to screen for depression, promote mental health teaching and mental health promotion.

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