

# Pharmacy Students' Attitudes Toward Chemical Dependency

Karen L. Rascati  
Joanne Richards

## *INTRODUCTION*

Chemical dependency, including alcohol and drug dependency, is a growing concern for all segments of the population. Previous pharmacy research has attempted to quantify the potential for chemical abuse among pharmacy students. Normark and colleagues reported that 17.6% of pharmacy students surveyed were potential or actual substance abusers (1). McAuliffe and colleagues found that about two-thirds of pharmacy students from a New England state reported using a controlled substance without a prescription at some time (about 40% within the past year) (2). Tuck and colleagues found that 44% of pharmacy students at 2 schools reported using psychoactive drugs at some time for nonmedical reasons (3). A study of pharmacy students at 8 southeastern schools found that more than 40% had used illicit drugs at some time (over 25% in the last year), while Rascati and colleagues found that about 30% of Texas pharmacy students used illicit drugs some time in their lives (10% in the past year) (4-6).

Various programs and instructional seminars have been developed in response to this problem (7). In our area alone, the Texas Pharmaceutical Association (TPA) has implemented a rehabilitation

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Karen L. Rascati, Ph.D., and Joanne Richards, Ph.D., are both at the University of Texas College of Pharmacy, Austin, TX 78712.

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program that has served about 400 pharmacists and students since 1983, and the University of Texas College of Pharmacy requires entering pharmacy students to attend an all-day seminar on chemical dependency which is subsidized by the TPA (8).

Although problems of chemical abuse among pharmacists and pharmacy students are now documented and many state associations and pharmacy schools have begun programs or instruction focusing on this issue, there is a dearth of literature assessing the impact of chemical dependency programs or instruction (9). The objectives of this paper, therefore, are to provide an outline of the required seminar and to assess the impact of this seminar on pharmacy student attitudes toward chemical dependency issues.

### THE SEMINAR

The College of Pharmacy at the University of Texas requires pharmacy students in their first semester of pharmacy school to attend a day-long seminar on chemical dependency topics. This seminar is conducted by chemical abuse counselors and is based in part on their book, *Help to Get Help* (10). Professionals and peers who are recovering addicts are also invited speakers. Seminar topics include:

- I. Definitions—the difference among use, abuse, and dependency
- II. Causes of alcohol and drug dependencies—the disease model
- III. Identification of the chemically dependent student—the pattern of deteriorating performance
- IV. Family interaction—enabling and codependency
- V. Intervention—the choices and skills required and how to confront a chemically dependent person
- VI. Sources of help—Alcoholics Anonymous, Narcotics Anonymous, Al-Anon, and the Texas Pharmacy Recovery Network (PRN)
- VII. Role-play—to demonstrate the power of an intervention.

### METHODS

A questionnaire was developed that included the Substance Abuse Attitude Survey (SAAS). This instrument has been adminis-

tered to medical students and practicing physicians and has been tested for reliability and validity (11). It includes 43 statements that are answered with a Likert scale (1 = strongly agree to 5 = strongly disagree). Researchers have found that the instrument includes five stable coherent factors regarding substance abuse: (1) permissiveness, (2) treatment intervention, (3) nonstereotypes, (4) treatment optimism, and (5) nonmoralism. One statement included in the nonmoralism scale was, "A physician who has been addicted to narcotics should not be allowed to practice medicine again." We added a similar statement to the scale which read, "A pharmacist who has been addicted to narcotics should not be able to practice pharmacy again." Three faculty members and five undergraduate students reviewed a draft of the instrument; consequently, minor modifications were made (e. g., the addition of the nonmoralism statement about a pharmacist).

Surveys were distributed to incoming students, first-year students in their second semester, and graduating seniors in fall of 1990, spring of 1991, and spring of 1992. (The University of Texas admits students twice a year.) The seminar was initiated in fall of 1988; therefore, some seniors had attended the chemical dependency seminar and some had not, depending on their semester of admittance and their progression through the curriculum. Surveys were distributed in required classes and completed during class time. Students recorded their response by "bubbling in" machine-readable forms. They were asked not to place any identifying marks on their answer sheets. The students were assured that their answers were anonymous and confidential. More than 90% of those attending each required course completed the survey. The answer sheets were scanned and the data were placed on a disk by the University of Texas Measurement and Evaluation Center. Because of the large sample size and multiple tests, analyses were performed using SAS-PC and a significance level of  $p < 0.01$ .

## RESULTS

### *Overall*

The first factor in the Substance Abuse Attitude Survey is referred to as "permissiveness" and included statements such as

"Marihuana should be legalized" and "Tobacco smoking should be allowed in high schools." Students, on average, "somewhat disagreed" with these statements (mean = 3.9).

The second factor is labeled "treatment" and included statements such as "Family involvement is a very important part of the treatment of alcoholism and drug addiction" and "Urine drug screening can be an important part of treatment for drug abuse." Students, on average, tended to "somewhat agree" with these statements (mean = 1.9).

The third factor is designated as "nonstereotypes" and contained statements such as "People who use marihuana usually do not respect authority" and "Anyone who is clean shaven with short hair probably does not use illegal drugs." Most of these statements were reverse-coded so that a lower score reflects nonstereotyping. Students, on average, were neutral toward these statements (mean = 2.8).

The first factor is referred to as "treatment optimism" and contained statements like "Drug addiction is a treatable illness" and "Alcoholism is a treatable illness." Students, on average, "somewhat agreed" with these statements (mean = 2.2).

The fifth and last factor is labeled "nonmoralism" and contained such statements as "Alcoholism is associated with a weak will" and "Angry confrontation is necessary in the treatment of alcoholics or drug addicts," and the two statements mentioned in the methods section indicating that physicians and pharmacists should not be allowed to practice if once addicted. Again, most of these statements were reverse-coded so that a lower score indicated nonmoralism. Students, on average, were neutral about these statements (mean = 3).

### **Comparisons**

A breakdown of scores by subscale factors for attenders and nonattenders is shown in Table 1. When comparisons were made of the five factors between those who attended the seminar (attenders) and those who did not (nonattenders) and among the different classes (entering, second semester, and graduating seniors), only one factor indicated consistent differences. That factor was nonmoralism. Table 2 shows the nonmoralism scores by class and seminar

TABLE I  
SCORES FOR ALL RESPONDENTS BY SUBSCALE FACTORS

Subscale Factors	No. of Items	Alpha-Coeff. Reliability	Mean (S.D.) For attenders <sup>1</sup>	Mean (S.D.) For non-attenders <sup>2</sup>
Permissiveness	10	.64	39.4 (6.0)	39.6 (5.2)
Treatment	8	.67	14.9 (3.9)	15.0 (3.7)
Non-stereotypes	10	.73	27.1 (5.6)	28.0 (5.7)
Treatment Optimism	5	.61	10.8 (2.9)	11.0 (2.8)
Non-moralism	11	.77	32.1 (7.3)	34.7 (7.0)*
Total Instrument	44	.78	124.4 (15.2)	128.3 (14.6)*

<sup>1</sup> N = 323 - 338

<sup>2</sup> N = 417 - 439

\*Significant difference at  $p < .01$

attendance. The nonmoralism score consisted of the summation of 11 Likert statements (negative items were reverse-scored). Therefore, the possible range of this score was from 11 for the least moralistic attitude to 55 for the most moralistic attitude. The actual range was 14 to 55, with an average score of 33.6 (SD = 7.1).

As can be seen in Table 2, attenders consistently scored lower than nonattenders. Scores of graduating seniors are especially pertinent. Because of variations in their progression through pharmacy school or semester of admittance, some had attended the seminar and some had not. Seniors only took the survey once; this controls for retest effects. When the scores of all graduating seniors who attended the seminar are compared with the scores from all seniors who did not attend the seminar, a statistically significant difference is found (mean 30.8 vs. 33.5;  $T = 2.65$ ,  $DF = 210$ ,  $p < .01$ ).

## CONCLUSIONS

When the results of this study are interpreted, some limitations should be kept in mind. These findings only reflect responses from students in one college of pharmacy. Also, there are certain threats to validity for which the design does not account. It was not pos-

TABLE 2  
NON-MORALISM SCORES<sup>1</sup> BY ATTENDANCE<sup>2</sup> AND CLASS  
WHEN SURVEY WAS DISTRIBUTED

	Fall '90	Spring '91	Fall '91	Spring '92
	Score (N)	Score (N)	Score (N)	Score (N)
CLASS				
Entering (1st semester) All non-attenders	35.5 <sup>a</sup> (91)	34.9 <sup>b</sup> (42)	34.5 <sup>c</sup> (86)	37.1 (47)
First-year (2nd semester) All attenders	31.0 (40)	33.9 <sup>a</sup> (86)	31.6 <sup>b</sup> (18)	32.2 <sup>c</sup> (71)
Graduating seniors (6th semester) attenders/non- attenders	28.1/34.1 (11/28)	28.2/33.2 (7/35)	31.2/32.4 (46/5)	31.4/34.8 (46/14)

<sup>1</sup> Non-moralism scores consist of the summation of responses to 11 Likert statements, with a possible range of 11 to 55, where a lower score indicates a less moralistic attitude.

<sup>2</sup> Attendance refers to the students' attendance at a chemical dependency seminar.

<sup>a-c</sup> Matching superscripts indicate a cohort of students. These students completed the survey upon entering pharmacy school and during their second semester of the curriculum.

sible to assign randomly which students would go to the seminar and which would not. The students attended the seminar as a class. Also, only those who attended a particular class on the day the survey was distributed completed the survey. It could be argued that those with alcohol- or drug-related problems might be less likely to attend class.

The results indicate that one of the five factors was affected by the seminar. Students who attended the seminar were less moralistic or judgmental than those who did not. Results also indicate that this change in attitude persisted into students' senior year. The most likely reason for this change in attitude is the contact during the seminar with professionals and peers who were recovering addicts. The faculty and sponsors involved with the seminar have reported that students have joined the recovery program as a result of this seminar. Because of the confidential nature of this issue and the

possible time lag involved between the seminar and help-seeking behaviors, it is hard to document precisely the number of students affected, but most of those involved with the seminar, including the students, consider the program a success.

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