REGULAR ARTICLES

Pharmacist Gender and Drinking Behavior and Pharmacy Students' Perceptions of Pharmacist Credibility

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ABSTRACT. We examined the role of pharmacist gender and drinking behavior on pharmacy student perceptions of pharmacist credibility. Six written vignettes were developed in which we systematically varied three drinking behaviors and the gender of the pharmacist. We distributed questionnaires, each with one of the vignettes and the Counselor Rating Form-Short to measure perceptions of credibility in a randomized block fashion in a classroom setting. A total of 97 of 98 pharmacy students responded. Students perceived the heavy drinking pharmacist to be less attractive, expert, and trustworthy than the moderate or light drinking pharmacists regardless of pharmacist gender. Students may see female pharmacists as colleagues, ignoring sex role expectations. *[Article copies available from The Haworth Document Delivery Service: 1-800-342-9678.]*

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INTRODUCTION

Approximately 90 percent of college students consume alcohol annually (1). Though the annual prevalence of alcohol consumption in pharmacy students appears to be slightly less–about 77 percent–alcoholism is said to be the single largest cause of impairment and disability within the pharmacy profession (2,3).

A high level of alcohol consumption is the norm on college campuses (4). During these years, drinking becomes a means to meet social goals, such as peer acceptance and approval, as well as to display independence (5,6). Heavy drinking on college campuses is condoned; a high level of alcohol consumption is seen as normal (4).

Attitudes towards drinking alcohol significantly correlate with alcohol use and drinking behavior (4,7,8,9,10). Thus, to the extent that attitudes and behaviors are associated, understanding attitudes toward drinking behavior can lead to developing educational materials and/or prevention strategies that address this issue.

We particularly are concerned with attitude development during the professional and developmental socialization of pharmacy students. These attitudes about pharmacist drinking have significance from a professional socialization perspective in that the "pharmacist" reflects a role to which these students aspire. Thus, positive attitudes and perceptions would tend to reflect a degree of acceptability or tolerance of the alcohol consumption behaviors described.

The attitudes of college-age men and women toward drinking have been shown to be affected by negative outcomes of drinking, i.e., problem drinking, and type of drinking behavior. College students have associated problem drinking with negative outcomes such as fighting, breaking the law, or losing a job because of drinking (11,12). Absence of these negative outcomes has been associated with social or nonproblem drinking. "Drinking behaviors" comprise frequency and amount of consumption as well as the context of drinking. Excessive consumption and some examples of context, such as drinking in the morning, alone at home, while studying, or while driving, have been associated with problem drinking. We were interested in investigating pharmacy student attitudes towards pharmacist drinkers who vary in drinking behaviors and outcomes as defined.

Attitudes about drinking also have reflected sex role expectations; the sex of the drinker has affected how she or he is perceived by others (13). Women are expected to drink less than men and women who get drunk are perceived more negatively than men who get drunk (3,14,15). On the other hand, men who do not drink may be viewed negatively because drinking is

perceived to be a masculine activity (16). Though it is speculated that the difference in expectations of male and female drinkers is diminishing, there is evidence to support that it continues to exist (12). Thus, the issue of how the gender of the drinker affects attitudes toward the drinker is unresolved. We were interested in investigating gender differences in light of the influx of women into a predominantly male profession such as pharmacy.

In this study, pharmacy students' perceptions about attributes of interpersonal influence, such as the pharmacist's trustworthiness, expertness, and attractiveness, were hypothesized to be affected by the sex and drinking behavior of the pharmacist. Expertness has been defined as "the client's belief that the counselor possesses information and means of interpreting information which allow the client to obtain valid conclusions about and to deal effectively with his problems" (17). Trustworthiness has been defined as "the degree of confidence in the communicator's interest to communicate assertions he considers most valid" (18). It is a function of the communicator's perceived lack of motivation for personal gain (19). These first two attributes represent characteristics of professions reflecting a specialized body of knowledge and the application of that knowledge in the interest of the patient.

Finally, attractiveness has been defined as the "perceived similarity to, compatibility with, and liking for" a person or "positive feelings about the person," such as "liking and admiration for him, desire to gain his approval, and desire to become more similar to him" (20,21). It is this latter perception which reflects an identification with the pharmacist being evaluated. This would indicate that those who find the "heavy drinking" pharmacist attractive would tend to identify with that pharmacist.

These are attributes of pharmacists' capability to influence, e.g., to promote change in behavior or to promote compliance. The more an individual is trustworthy, attractive and expert, the less likely he or she will be discredited when presenting messages that are new or that are counter to one's perspective, i.e., the more credible he or she will be (22).

This study assessed pharmacy students' perceptions of male and female pharmacists' expertness, trustworthiness, and attractiveness across three drinking levels. We tried to assess at what drinking level or type of drinking behavior perceptions of pharmacists' credibility were adversely affected and whether these perceptions were affected by the gender of the drinker.

We hypothesized that pharmacists exhibiting higher-level alcohol consumption behaviors—as they relate to quantity and frequency of consumption, context and outcomes—would be perceived to be less credible than

pharmacists exhibiting lower-level consumption behaviors. The question regarding the potential impact of pharmacist gender on these attitudes was exploratory. We chose to investigate these questions by using written vignettes as the intervention and measuring students' perceptions of drinker credibility by questionnaire.

METHODS

Subjects

A total of 97 undergraduate pharmacy students in the second year of a 1-4 pharmacy program participated in the study which was conducted during class time in a required course. Participation in the study was not a formal part of the course and was voluntary. Though 98 students received the instruments, one student chose not to participate. Student ages ranged from 19 to 31; of those participants who provided information about their sex (n = 95), approximately 70% were female (n = 67).

Measurements

Vignettes: We used modified versions of the written vignettes developed by McNeil et al. as the framework for this study (8,23). Each vignette described a pharmacist, his/her degree of social integration, and his/her drinking behavior (see Appendix A). Six different vignettes varied only on two dimensions: gender of the pharmacist (male or female) and drinking behavior and outcomes (light, moderate, and heavy). Our vignettes were almost identical to McNeil's (23). The only change was to introduce the person as a community pharmacist who had been practicing pharmacy for five years in a town of 50,000 people. Gender of the pharmacist was indicated by the pharmacist's name, pharmacist description, and personal pronouns, e.g., "Mary C. Wilson is a 28 year old happily married white female. . . . " The three levels of drinking behavior varied mainly on quantity, frequency, and context of consumption. The third level included outcomes of drinking reflective of problem drinking, e.g., drinks to the point of drunkenness, stays home from work because of hangovers, blackouts, drives while intoxicated.

Questionnaire: Two sections comprised the questionnaire: the Counselor Rating Form-Short (CRF-S) which measured three dimensions of credibility (attractiveness, expertness, and trustworthiness) and a demographic section with questions about sex, marital status, age, and number of children (24).

Four items comprised each CRF-S subscale. Items were rated on a 7-point semantic differential-type scale ranging from "not very" honest (1) to "very" honest (7), for a possible range in scores from 4 to 28 for each subscale (see Appendix B). The form has demonstrated acceptable levels of reliability, ranging from 0.85 to 0.91 for a group of outpatients in a community health center and 0.87 to 0.93 for a group of undergraduate students evaluating educational-vocational counselors (24,25).

Attempts to validate a three-factor structure for the scale have been mixed. Some studies have supported the three factors: attractiveness, trust-worthiness, and expertness (24,25). Others have supported only two, that is, "trust" items have loaded on one or both of the other factors (26,27).

For this study, internal consistency reliabilities (Cronbach's alpha) of the three credibility subscales ranged from 0.78 to 0.91 (28). Subscale scores were moderately correlated; Pearson correlation coefficients ranged from 0.64 to 0.65 indicating some degree of consistency across the three subscales.

Procedure

We distributed copies of the six different vignettes in a randomized block fashion, one vignette and questionnaire per student. A statement regarding student anonymity and options not to participate or to discontinue to participate was read after the vignettes and questionnaires were distributed as required by the University Human Subjects Review Committee. We instructed students to read the vignette; and then respond to the questionnaire if they chose to participate.

Data Analyses

SPSS MANOVA was used to conduct a 2 × 3 between-subjects Multivariate Analysis of Variance. If overall significance was found at the 0.05 level, follow-up univariate F-tests for each of the three attitude dimensions were conducted (29). Analyses of the assumptions of the MANOVA model were deemed satisfactory.

RESULTS

Credibility subscale descriptive statistics (means and standard deviations) within gender and drinking behavior groups are presented in Table 1. For both males and females, there was a distinct pattern: the heavy

TABLE I. Descriptive statistics of credibility subscale scores by pharmacist gender and drinking behavior.

	Attractiveness			Expertness			Trustworthiness		
	$\bar{x}$	SD	n	$\bar{x}$	SD	n	$\bar{x}$	SD	n
Male Pharmacists									
Light Drinking	21.6	2.7	16	19.4	3.5	16	22.3	3.1	16
Moderate Drinking	23.4	2.5	16	20.3	3.4	16	21.9	2.8	16
Heavy Drinking	19.7	3.6	16	16.2	4.4	16	12.6	3.6	16
Female Pharmacists									
Light Drinking	22.7	2.4	17	19.6	2.7	17	22.4	3.1	17
Moderate Drinking	23.5	1.9	17	19.9	2.7	17	22.7	3.0	17
Heavy Drinking	19.1	5.0	15	16.8	3.5	17	12.3	3.7	17

drinkers had lower scores than both moderate and light drinkers on all three dimensions.

Evaluations for the attractiveness dimension fluctuated among the three drinking levels for both male and female pharmacists; there was no progressive decrease in score as was hypothesized. Scores on the attractiveness scale ranged from 19.7 to 23.4 for male and 19.1 to 23.5 for female pharmacists. A 19.1 is equivalent to a 4.8 on a 7-point scale; a 23.5 is equivalent to a 5.9. Thus, the pharmacists were deemed "attractive" no matter what level of drinking behavior (if we choose a 4.0 as the midpoint between "very attractive" and "not very attractive").

Scores for the expertness dimension ranged from 16.2 for male heavy drinkers to 20.3 for male moderate drinkers, equivalent to 4.1 and 5.1 on a 7-point scale, respectively. Finally, scores for trustworthiness scale had the widest range, from 22.7 to 12.3 for female pharmacists, equivalent to 5.7 and 3.1 on a 7-point scale, respectively. Heavy drinkers were not perceived to be very trustworthy by participants in this study.

Based upon Wilk's criterion from the MANOVA analysis, there was an overall significance for the drinking behavior main effect ($F_{6,178} = 26.43$, $p < 0.001$), but not for the gender main effect ($F_{3,89} = 0.06$, NS) nor for the interaction effect ($F_{6,178} = 0.63$, NS). In other words, students' perceptions of the pharmacists did not differ whether the pharmacist was male or female. However, the students' attitudes were affected by the pharmacists' drinking behaviors.

Univariate F-tests on each credibility subscale across drinking behaviors are presented in Table 2. The drinking behaviors elicited significantly different perceptions on all three credibility subscales. Results *of a priori*

TABLE 2. Univariate *F*-tests of credibility subscales for the drinking behavior main effect.

CREDIBILITY SUBSCALES	df	MS	P
Attractiveness			
Between Ss	2	144.55	14.07[a]
Within Ss	91	10.28	
Expertness			
Between Ss	2	122.57	10.79[a]
Within Ss	91	11.36	
Trustworthiness			
Between Ss	2	1039.33	101.14[a]
Within Ss	91	10.28	

[a]$p < 0.001$

TABLE 3. *A-priori* mean contrasts among three levels of drinking behavior for credibility subscales.

CREDIBILITY SUBSCALE	Light Drinking	Moderate Drinking	Heavy Drinking
Attractiveness	22.18	23.45	19.23[a,b]
Expertness	19.45	20.12	16.42[a,b]
Trustworthiness	22.21	22.30	12.32[a,b]

[a]Light Drinking vs. Heavy Drinking, $p \leq 0.05$
[b]Moderate Drinking vs. Heavy Drinking, $p \leq 0.05$

pair contrasts between drinking behaviors on each credibility subscale are presented in Table 3. The mean scores on the attractiveness, expertness, and trustworthiness subscales for the heavy drinking pharmacist were significantly less than those scores for both the moderate or light drinking pharmacist. Thus, the expectation that pharmacist credibility and potential for social influence would decrease at every level of drinking was not upheld. However, the heavy drinking pharmacist was deemed to be less attractive, expert, and trustworthy than both the moderate and light drinking pharmacist regardless of pharmacist gender.

SUMMARY, DISCUSSION, AND CONCLUSIONS

Six separate written vignettes, characterizing pharmacists by drinking behavior and gender, were developed. These vignettes were distributed in a randomized block fashion to undergraduate pharmacy students along with a questionnaire which included three credibility subscales. There was minimal threat to internal validity in this study; however, we caution generalizing the results to other students within the College, to other students at other colleges of pharmacy, or to college students in general. Pharmacy students did not view male pharmacists any differently than female pharmacists on attractiveness, expertness, and trustworthiness. Female students are the majority in most pharmacy schools; they likely are seen as colleagues, ignoring sex role expectations. Unfortunately, we were unable to assess the role of rater sex on perceptions because of insufficient sample sizes within subgroups. That question was left unanswered but needs to be considered in future research of this nature.

Pharmacy students did view "heavy" drinking pharmacists as less attractive, expert, and trustworthy than both the "moderate" and "light" drinking pharmacists. As for "moderate" and "light" drinking pharmacists, pharmacy students perceived them to be similarly attractive, expert, and trustworthy. In fact, scores for the moderate drinker often were higher than scores for the light drinker (though not significantly so).

The attractiveness dimension is of great interest from a socialization perspective. Theoretically, it reflects a degree of identification with the pharmacist described in the vignette. Even the heavy drinking pharmacist was deemed somewhat attractive to the raters.

In hindsight, perhaps the three levels of drinking behavior were too broad and are in need of further differentiation, possibly by quantity and frequency of alcohol consumption. For example, both "binge drinking" (imbibing large quantities on one drinking occasion) and having six to ten drinks a week over several occasions, both potentially could be labeled as heavy drinking. Research is needed to explore how differentiating drinking levels further affects perceptions of credibility, particularly in light of the extent of binge drinking on college campuses. Also, drinking behavior should be evaluated separately from negative outcomes of alcohol consumption, i.e., are the negative attitudes reflective of the drinking behavior in and of itself or of the negative outcomes usually associated with heavy drinking? These two sources of potential influence on attitudes need to be differentiated.

Finally, we should explore how a pharmacy student's own drinking behavior affects his or her perception of another pharmacist's or student's credibility. This seems particularly on the attractiveness dimension, since

it reflects an identification with the person evaluated. Understanding the pharmacy student's drinking patterns, motivations, and attitudes toward drinking behaviors could help in developing intervention strategies that educate and inform students about alcohol use and abuse.

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APPENDIX A

Mary C. Wilson is a 28 year old happily married white female with no children. She is a pharmacist who has been practicing pharmacy for five years in a community pharmacy in a town of approximately 50,000 people. She is reasonably well satisfied with her job and has no plans for a career change or further training in the near future.

Mary is about average in intelligence. She is a neat, orderly person who is often compulsive in her approach to problems. She is about as ambitious as most people although some of her aspirations are fairly unrealistic. Mary has a tendency to indulge in daydreams but she still does not fail to be actively involved in her environment. She has the ability to perform well in her job but has some unused potential.

Emotionally, Mary is a fairly cheerful person who finds life rewarding. At times she worries about things, but she is usually not so anxious that she is unable to fulfill her responsibilities. Mary gets moderately depressed occasionally because she is overcritical of herself. Difficult life events also tend to make her feel low. During adolescence, Mary had difficulty in controlling her impulses and temper, but now she is generally easy going. She has a need to be liked by her peers and so is usually a sociable person. Like most people, Mary sometimes has moments when she is worrisome and insecure, but most of the time she is comfortable in social situations. Mary generally gets along fairly well with her family. She enjoys being with friends in her spare time and particularly likes outdoor activities.

Mary began drinking alcoholic beverages at age 18. Her first experiences with alcohol occurred at parties where she drank beer and wine with friends. A year or two after this time, she switched to having a few mixed drinks at parties more often than beer or wine.

DRINKING BEHAVIOR INTERVENTIONS

Female, Light Drinker

Mary now very rarely drinks with other people at social gatherings or in cocktail lounges, and never drinks alone at home. When she does drink, she never gets drunk. Mary drinks only on very special occasions like holidays. During the past year, Mary has never had to stay home from work on Mondays because of hangovers that occurred as a result of drinking over the weekend. Mary has not experienced any alcoholic blackouts and has not had any experiences in which she has done or said things

which she has not remembered afterwards. Mary has never been in trouble with legal authorities because of her drinking. Mary generally drinks 1 or 2 times per year. On those occasions when she drinks, she usually consumes 1 or 2 mixed drinks.

Female, Moderate Drinker

Mary now drinks with other people at social gatherings or in cocktail lounges, and never drinks alone at home. When she begins drinking, she always stops short of the point of drunkenness. Mary drinks on occasions like parties. During the past year, Mary has never had to stay home from work on Mondays because of hangovers that occurred as a result of drinking over the weekend. Mary has not experienced any alcoholic blackouts and has not had any experiences in which she has done or said things which she has not remembered afterwards. Mary has never been in trouble with legal authorities because of her drinking. Mary generally drinks 2 or 3 times per month. On those occasions when she drinks, she usually consumes 3 or 4 mixed drinks.

Female, Heavy Drinker

Mary now drinks with other people at social gatherings or in cocktail lounges, but also often drinks alone at home. When she begins drinking, she usually drinks to the point of drunkenness. During the past year, Mary has sometimes had to stay home from work on Mondays because of hangovers that occurred as a result of drinking over the weekend. Mary has experienced alcoholic blackouts over the past three years. During these times, she has done or said things which she has not remembered afterwards. Mary has been in trouble with legal authorities several times for driving while intoxicated. Mary generally drinks every day. On those occasions when she drinks, she usually consumes 5 or more mixed drinks.

APPENDIX B

Counselor Rating Form-Short

Please mark an "X" at the point on the scale that best represents how you perceive the person you read about. <u>Please place your mark in between colons and answer every question.</u>

Friendly

1. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Experienced

2. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Honest

3. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Likeable

4. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Expert

5. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Reliable

6. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Sociable

7. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Prepared

8. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Sincere

9. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Warm

10. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Skillful

11. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY

Trustworthy

12. NOT VERY ____ : ____ : ____ : ____ : ____ : ____ : ____ : VERY